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The Edge of Time: The Critical Dynamics of Structural Chronotopes in the Utopian Novel

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Abstract

This thesis takes a structural approach, based on systems theory, to the interpretation of literary utopias: it argues that examples of utopian fiction are best understood as science-fictional thought experiments determined by dynamism-based Bakhtinian chronotopes. Initially, it draws on Cannon's work on homeostasis and that of Maturana and Varela on autopoiesis to argue that utopian texts from premodern periods – including Plato's *Republic*, More's *Utopia*, Bellamy's *Looking Backward*, Wells's *A Modern Utopia*, and Morris's *News from Nowhere* – generally embody a 'homeostatic chronotope'; this explains the social stasis, spatiotemporal isolation, and presentism characterising these works, enhancing modern understandings of how utopias fall short regarding the functioning of a social system, e.g. through coercive practices. The thesis then argues that a later group of utopian novels – Piercy's *Woman on the Edge of Time*, Russ's *The Female Man* and Le Guin's *The Dispossessed* (Moylan's 'critical utopias') – are conversely based on a 'complexity chronotope', informed by the work of complexity theorists such as Prigogine and Cilliers: the narrative fragmentation, dynamism, and socially charged nature of these texts is understood through their depiction as self-organising, self-optimising complex adaptive systems, characterised by an inherent structural dynamism. The thesis suggests that the critical utopias therefore hold a unique position in the history of utopian literature – not only through their non-hierarchical inclusion of women and marginalised groups, but because their utopianism is inherently sustainable and autopoietically self-generating or 'living'. The final chapter confirms this hypothesis through analysis of two temporally separate feminist utopian novels, Mitchison's *Memoirs of a Spacewoman* and Slonczewski's *A Door into Ocean*, which attempt to apply the complexity chronotope beyond the human realm, but reintroduce internal boundaries within the feedback mechanisms determining complex functioning. Overall, the homeostatic and complexity chronotopes are thus presented as enlightening interdisciplinary tools for a more holistic and sustainability-based understanding of utopia.

The Edge of Time:
The Critical Dynamics of Structural Chronotopes in the Utopian Novel

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To my family, including my dear departed grandparents, who believed in me.

Introduction

Defining Utopia:

The neologism 'utopia', coined by Thomas More in 1516 to designate the island described in his genre-launching eponymous book, is famously ambiguous. Designated 'one of the most successful such inventions in linguistic history'[1] by Carl Freedman, utopia replaced the name More had originally intended for his island, Nusquama, meaning 'no place', in order to instead signify presence or possibility as well as absence: the final term is constituted from the Greek word οὐκ (shorted to u), meaning 'not', and *topos*, 'place' (as well as the ending – ia, also meaning 'place'), thus overall indicating 'no place'; however, it also sounds like 'eutopia', meaning 'good place', thus ultimately signifying both.[2] As Fatima Vieira points out, More's combination of lexical (utopia) and derivation (eutopia) neologisms thereby 'created a tension that has persisted over time and has been the basis for the perennial duality of meaning of utopia'[3]— both good and non-existent at the same time, thus 'simultaneously constituted by a movement of affirmation and denial'.[4] She also notes that this tension can 'never be eliminated' given that the two terms are pronounced in precisely the same way.[5] As such, the name generally indicates some kind of ideal society or state of being, though at least one well-known definition does not restrict it to positive content: Lyman Tower Sargent writes that utopia is merely 'a non-existent society described in considerable detail and normally located in time and space',[6] which thereby also includes negative manifestations such as the dystopia and anti-utopia.[7] More in line with popular perception and the term's linguistic history, Darko Suvin, on the other hand, restricts his definition to positive depictions, designating utopia as 'the verbal construction of a particular quasi-human community where sociopolitical institutions, norms, and individual relationships are organized according to a more perfect principle than in the author's community'.[8]

In addition, Freedman notes that in current usage, the term utopia in fact has three distinct, though related, principal meanings: 'a generic meaning, a political-economic meaning, and a philosophical and hermeneutic meaning';[9] of these, the generic meaning refers to the history of the literary genre that followed More's inaugural text, whereas the political-economic sense 'refers mainly to the polemical writings of Marx and Engels in which the founders of historical materialism deprecate certain alternative conceptions of socialism as "utopian," in contrast to their own scientific version'.[10] The philosophical and hermeneutic meaning, lastly,

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[1] Carl Freedman, *Critical Theory and Science Fiction*, p. 62.
[2] See Fatima Vieira, 'The Concept of Utopia' in Gregory Claeys, ed., *The Cambridge Companion to Utopian Literature*, p. 4.
[3] Vieira, p. 5.
[4] Vieira, p. 4.
[5] Vieira, p. 5.
[6] Lyman Tower Sargent, 'Three Faces of Utopianism Revisited', p. 9.
[7] See Peter Fitting, 'Utopia, Dystopia and Science Fiction' in Gregory Claeys, ed., *The Cambridge Companion to Utopian Literature*, p. 135.
[8] Darko Suvin, *Metamorphoses of Science Fiction: On the Poetics and History of a Literary Genre*, p. 63. In a more recent discussion of utopia (1997), Suvin in fact concedes that his definition might have been 'too narrowly focused' (81) in restricting his (Blochian) analysis to utopian texts rather than texts and practices, as opposed to Ernst Bloch's own 'pan-utopianism' (79), which I will explore later on in this introduction; for our present purposes, however, this debate is of no further interest, as we are in any case only concerned with texts.
[9] Freedman, *Critical Theory and Science Fiction*, p. 62.
[10] Freedman, p. 63.

pertains to the work of a group of philosophers, known as the Frankfurt School, who were active in or around the original Institute for Social Research in Frankfurt am Main (founded in 1923): this includes, among others, Walter Benjamin, Theodor Adorno, Herbert Marcuse, Fredric Jameson (later on), and Ernst Bloch. Of all these influential utopian thinkers, Freedman particularly singles out Ernst Bloch, the author of the monumental *Das Prinzip Hoffnung* or *The Principle of Hope* (1959), as 'far and away the most important philosopher of utopian interpretation',[11] and I will be returning to Bloch's thoughts on utopia shortly. For now, though, I will merely indicate that it is the 'generic' sense of utopia that I am primarily concerned with in this thesis, though this literary history is in itself fundamentally informed by political-economic and philosophical thought, as we shall see. In doing so, I will align myself with Glenn Negley and Max Patrick's understanding of utopia as expressed in *The Quest for Utopia: An Anthology of Imaginary Societies* (1952): a contemporary review notes that 'according to their definition utopia is, first of all, fictional; secondly, its theme must be the political structure of that fictional state or community'.[12] Tom Moylan acknowledges this as 'an early step in the development of an analysis of utopian writing that approached it as a literary practice rather than as unmediated moral or political philosophy'.[13]

Utopia As Science Fiction:

Within the literary history of utopia, moreover, I would like to draw particular attention to the relationship of utopian texts to the genre of science fiction (or 'SF'). The two stand in an interesting genealogical tension: Utopian Studies scholars tend to claim SF as a sub-genre to utopia, given the chronological primacy of the former,[14] while SF scholars are more likely to believe the opposite. Suvin in particular claims that 'strictly and precisely speaking, utopia is not a genre but the *socio-political subgenre of science fiction*',[15] though he also paradoxically notes that 'conversely, SF is at the same time wider than and at least collaterally descended from utopia; it is, if not a daughter, yet a niece of utopia – a niece usually ashamed of the family inheritance but unable to escape her genetic destiny'.[16] Nevertheless, Suvin's classification is not uncontroversial:[17] Peter Fitting, for example, states that Suvin's initial subordination of utopia to SF is 'a dubious categorisation which complicates our understanding of the relationship between the two genres', particularly given that he applies his concepts of 'cognition' and 'estrangement' to both genres, which Fitting claims 'introduce a normative element into the

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[11] Freedman, p. 63.

[12] Sylvia T. Wargon, review of Glenn Negley and J. Max Patrick, *The Quest for Utopia: An Anthology of Imaginary Societies* in *The Canadian Journal of Economics and Political Science,* p. 262.

[13] Tom Moylan, *Demand the Impossible*, p. 32.

[14] This is particularly the case if one accepts Brian Aldiss' widely recognised claim in *Billion Year Spree: The History of Science Fiction* that Mary Shelley's *Frankenstein* from 1818 represents 'the first seminal work to which the label SF can be logically attached'.

[15] Suvin, *Metamorphoses*, p. 76 (italics in original).

[16] Suvin, *Metamorphoses*, p. 76.

[17] In fact, Mark Bould and Sherryl Vint point out that 'disagreeing with [Suvin] is a considerable part of SF scholarship' (*The Routledge Concise History of Science Fiction*, p. 17).

definition'.[18] He sees this as entirely unhelpful and unwarranted for the study of utopian literature, stressing that 'either a work meets the formal criteria of the utopian genre or it does not', and noting that Sargent, for example, 'does not exclude works based on literary merit' in his authoritative bibliography *British and American Utopian Literature*.[19] However, it does not seem evident that Suvin is indeed judging utopian texts to be more or less part of their own genre by virtue of their science-fictionality – instead, he is unpacking the tools and inner workings of SF in order to indicate how they can help us to understand utopian writing, with the explanation that 'all cognition can become the subject matter of an estranged verbal construction dealing with a particular quasi-human community treated as an alternative history',[20] and the reminder that utopia remains merely 'a literary genre induced from a set of man-made books within a man-made history'.[21] Indeed, as Freedman points out, 'utopias today are typically written within an explicitly science-fictional context';[22] and though Fitting may be correct in stating that 'there is not a necessary connection between utopia and science fiction, and in recent years the two have drifted apart',[23] I would nevertheless argue that the confluence of the two genres is both widespread (though not absolute) and in fact a very useful tool indeed for our understanding of what makes certain utopian literary texts particularly valuable and effective in critical terms.

Specifically, not only does SF possess an 'innate optimism and hope for change'[24] that Fitting himself acknowledges and that surely lends itself particularly to the idealism of utopia, but Suvin's own model of SF as 'cognitive estrangement' is arguably ideally suited to also illustrate the intimate connection between utopia and our own world, as well as the important role that this link plays. As Suvin adds, the utopian 'quasi-human community' being organised 'according to a more perfect principle than in the author's community' is 'based on estrangement arising out of an alternative historical hypothesis', which in turn directly links it to his basic definition of SF:

> *SF is [...] a literary genre whose necessary and sufficient conditions are the presence and interaction of estrangement and cognition, and whose main formal device is an imaginative framework alternative to the author's empirical environment.*[25]

Elsewhere, Suvin explains that he is using the theoretical term 'estrangement', borrowed from the Russian Formalists ('ostranenie', Viktor Shklovsky) and Bertolt Brecht ('Verfremdungseffekt'), to indicate that the reader ends up 'confronting a set normative system [...] with a point of view or look implying a new set of norms'.[26] 'Cognition', meanwhile, provides the scientifically and intellectually traceable link between these two sets or viewpoints: 'SF sees

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[18] Peter Fitting, 'Utopia, Dystopia and Science Fiction' in Gregory Claeys, ed., *The Cambridge Companion to Utopian Literature*, p. 136.
[19] Fitting, p. 136.
[20] Suvin, *Metamorphoses*, p. 76.
[21] Suvin, *Metamorphoses*, p. 76.
[22] Freedman, *Critical Theory and Science Fiction*, p. 63.
[23] Fitting, 'Utopia, Dystopia and Science Fiction', p. 149. To illustrate this latter point, Fitting cites non-science-fictional utopias such as B. F. Skinner's *Walden Two* (1948), Ernest Callenbach's *Ecotopia* (1975), and Sally Gearhart's *The Wanderground* (1979).
[24] Fitting, 'Utopia, Dystopia and Science Fiction', p. 141.
[25] Suvin, *Metamorphoses*, p. 20 (italics in original).
[26] Suvin, *Metamorphoses*, p. 18.

the norms of any age, including emphatically its own, as unique, changeable, and therefore subject to a *cognitive* view'.[27] Regarding utopia, then, 'estrangement' elegantly frames the otherness of utopia as fundamentally picking out elements of our own society as problematic and alterable, while 'cognition' provides the fundamentally informative connection between our own world and that of the shifted utopia. The result is, as Suvin writes in further explanation of the term 'cognition' yet in perfect applicability to utopia, 'not only a reflecting *of* but also *on* reality', and thus 'a creative approach toward a dynamic transformation rather than a static mirroring of the author's environment'.[28] To my mind, no other utopian theorist has provided a more enlightening and serviceable theoretical framework for the elucidation of how utopia can serve as fruitful social critique: after all, as Moylan notes, 'in the estranged vision of another society lie the seeds for changing the present society',[29] and cognitive estrangement situates SF as a genre 'whose chief interest', according to Freedman, 'is precisely the difference that such difference makes, and […] one whose difference is nonetheless contained within a cognitive continuum with the actual'.[30]

Moreover, Suvin's SF-based framework gives this element of cognitive difference a name: he borrows the term 'novum' from Bloch to describe the precise estranging factor that embodies or has catalysed the shift from our world to the science-fictional world or utopia, stating that 'SF is distinguished by the narrative dominance or hegemony of a fictional "novum" (novelty, innovation) validated by cognitive logic',[31] and that it takes shape as a 'totalizing phenomenon or relationship deviating from the author's and implied reader's norm of reality'.[32] A certain term is key here: as Suvin elucidates, 'its novelty is "totalizing" in the sense that it entails a change of the whole universe of the tale, or at least of crucially important aspects thereof (and that it is therefore a means by which the whole tale can be analytically grasped)';[33] in other words, it is 'hegemonic, that is, so central and significant that it determines the whole narrative logic – or at least the overriding narrative logic – regardless of any impurities that might be present'.[34] Applied to utopia, then, the novum is easily identified as the central element (or set of elements) that make the utopian society different, or that have enabled the precise historical transition that brought about utopia in the first place; in turn, the precision of this connection to our world or the '"zero world' of empirically verifiable properties around the author', as Suvin terms it,[35] is what enables utopia to be fundamentally about *our* world and its shortcomings and potential, rather than about some fantastical or spiritual other-worldly or eschatological imaginings. As Suvin writes,

It should seem clear that there is little point in discussing utopias as a separate entity if their basic humanistic, this-worldly, *historically alternative* aspect is not stressed and adopted as one

[27] Suvin, *Metamorphoses*, p. 19 (italics in original).
[28] Suvin, *Metamorphoses*, p. 22.
[29] Moylan, *Demand the Impossible,* p. 35.
[30] Freedman, 'Science Fiction and Critical Theory' in Rob Latham, ed., *Science Fiction Criticism: An Anthology of Essential Writings*, p. 232.
[31] Suvin, *Metamorphoses*, p. 79.
[32] Suvin, *Metamorphoses*, p. 80.
[33] Suvin, *Metamorphoses*, p. 80.
[34] Suvin, *Metamorphoses*, p. 87.
[35] Suvin clarifies that 'zero' here is to be understood 'in the sense of a central reference point in a coordinate system, or of the control group in an experiment' (Suvin, *Metamorphoses*, p. 23).

of their *differentia genericae* […] Utopia is an Other World immanent in the world of human endeavour, dominion, and hypothetic possibility – and not transcendental in a religious sense. It is a non-existent country on the map of *this* globe, a "this-worldly other world".'[36]

The imagined possibility of genuine transformation of actuality into utopia, then, which Freedman terms 'the practical end of utopian critique and the ultimate object of utopian hope',[37] is fundamentally embodied in the utopian world through the novum-enabled mechanism of cognitive estrangement: 'the mirror', Suvin notes elsewhere, 'is not only a reflecting one, it is also a transforming one, virgin womb and alchemical dynamo: the mirror is a crucible'.[38] Unlike other utopian theorists, Suvin thus harnesses the estranging power of science fiction to demonstrate the potent transformative power of the nova: while Northrop Frye, for instance, speaks of utopia merely as 'essentially the writer's own society with its unconscious ritual habits transposed into their conscious equivalents',[39] Suvin recognises that these 'ritual habits' to be transposed must be those that carry the most weight, those that are most likely to fundamentally alter the fabric of our lived social reality, and that are therefore most worth tracking and exploring in detail – *radically* transposed. Thereby, as Freedman adds, science-fictionality comes into its own: 'the cognitive rationality (at least in literary effect) of science fiction allows utopia to emerge as more fully itself, genuinely critical and transformative'.[40]

Utopia As Thought Experiment:

Having thus accepted for our purposes that the literary utopia functions through a framework of *science-fictional cognitive estrangement*, the next step would be to query what sort of intellectual object the literary utopia constitutes. This is a crucial consideration given the peculiar position it occupies within the intellectual landscape: it is neither a straightforward political blueprint, as we have seen (or ideally should not be), nor is it to be evaluated purely on its literary merits; however, critics and readers have frequently struggled with this generic liminality, often siding with Frye's famous dictum that utopia in literature is 'a relatively minor genre never quite detached from political theory'.[41] Krishan Kumar, for example, agrees with Frye in his influential *Utopia & Anti-Utopia in Modern Times*: though he states that 'utopia is closer to the novel than to any other literary genre; *is* in fact a novel', he also adds that 'very few utopias stand out as great works of literature […] and in many cases utopian authors are perfunctory in the extreme in their selection and use of form. The didactic purpose overwhelms any literary aspiration'.[42] Indeed, some utopian authors have readily conceded to this: Kumar notes that it is 'almost with pride' that Bellamy confesses that in *Looking Backward*, 'barely enough story was left to decently drape the skeleton of the argument and not enough, I fear, in

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[36] Suvin, *Metamorphoses*, p. 56.
[37] Freedman, *Critical Theory and Science Fiction*, p. 69.
[38] Suvin, *Metamorphoses*, p. 17.
[39] Northrop Frye, 'Varieties of Literary Utopias', p. 325.
[40] Freedman, *Critical Theory and Science Fiction*, p. 69.
[41] Frye, p. 338.
[42] Krishan Kumar, *Utopia & Anti-Utopia in Modern Times*, p. 25.

spots, for even that purpose'.'[43] However, others caution us not to disregard the fictional framework of utopia. Gary Saul Morson, for example, suggests that treating it merely as a 'literary mould' to contain political theory is to skew its meaning in problematic ways,[44] while Richard Gerber, whom Morson critiques in the same text, suggests that 'the development towards the novel is part of the logical evolution of the myth-creating utopian imagination, which impatiently proceeds from the general idea to ever greater actualization'.[45] Meanwhile, Chris Ferns reminds us that utopian authors 'Wells, Huxley, and Le Guin have all suggested that utopian fiction would benefit from being *more* novelistic, each attempting (albeit with varying success) to work in that direction'.[46]

How, then, is the literary utopia to be most fittingly and fruitfully understood in terms of its own unique sub-genre, separate both from the political blueprint and the traditional novel form; what designation as an intellectual object would be most appropriate to its function in terms of science-fictional cognitive estrangement? To this, I will suggest that the literary utopia is at its core a type of *thought experiment*: a mechanism for isolating truths about the zero world by using it as a model in which certain specific factors, the nova, are added or altered, thus estranging the entire structure and thereby producing the utopia – a construct which in turn allows us to track the effects of the nova on the overall structure and thereby infer 'data' about the zero world. As James Robert Brown and Yiftach Fehige note in *The Stanford Encyclopedia of Philosophy*, thought experiments play a crucial role in both the natural sciences (see, for example, 'Maxwell's demon, Einstein's elevator or Schrödinger's cat') and philosophy (take 'Searle's Chinese room, Putnam's twin earth, and Jackson's Mary the colour scientist'); moreover, they suggest that the latter discipline, 'even more than the sciences', would in fact be 'severely impoverished' without them: 'philosophy without thought experiments seems almost hopeless', they claim.[47] I would suggest that the idea of fictional utopias forming literary thought experiments, though certainly less rigorous than these carefully designed and pared-down cognitive models in the natural sciences and philosophy, is nonetheless central to our understanding of them as mechanisms of science-fictional cognitive estrangement. As Thomas Kuhn writes, thought experiments function like actual laboratory experiments and observations in two ways: firstly in that they 'can disclose nature's failure to conform to a previously held set of expectations', and secondly in that they 'can suggest particular ways in which both expectation and theory must henceforth be revised'.[48] Likewise, literary utopias challenge the reader to entertain new ideas about what factors might be altered to change *our* world for the better, and to thereafter incorporate some of these ideas into our communal politics and

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[43] Quoted in Kumar, p. 151.
[44] See 'Utopia as a Literary Genre' in Gary Saul Morson, *The Boundaries of Genre: Dostoevsky's 'Diary of a Writer' and the Traditions of Literary Utopia*.
[45] Richard Gerber, *Utopian Fantasy*, quoted in Morson, p. 73.
[46] Ferns, *Narrating Utopia*, p. 11.
[47] James Robert Brown and Yiftach Fehige, 'Thought Experiments' in Edward N. Zalta, ed, *The Stanford Encyclopedia of Philosophy*.
[48] Thomas Kuhn, 'A Function for Thought Experiments' in Kuhn, *The Essential Tension,* pp. 241 and 261.

decision-making. Suvin, too, appears to concur with this thought experiment view of utopia, noting that

> Neither prophecy nor escapism, utopia is, as many critics have remarked, an "as if," an imaginative experiment or a "methodological organ for the New." Literary utopia – and every description of utopia is literary – is a heuristic device for perfectibility, an epistemological and not an ontological entity.[49]

Through the novum or nova, then, this experiment can introduce 'scientific' precision into the heuristic utopian device, 'tak[ing] up and refunction[ing] the ancient *topos* of *mundus inversus*' and thus rendering utopia a 'formal inversion of significant and salient aspects of the author's world which has as its purpose or *telos* the recognition that the author (and reader) truly live in an axiologically inverted world'.[50] In fact, Suvin directly describes cognitive elements or nova in SF as being 'methodically developed against the background of a body of already existing cognitions', thus generating a '"mental experiment" following accepted scientific, that is, cognitive, logic';[51] moreover, he later concludes from this that 'any significant SF text is thus always to be read as an analogy, somewhere between a vague symbol and a precisely aimed parable'.[52] Of course, it seems to follow that the more exactly and rigorously the 'mental experiment' develops the novum, the more the resulting model constitutes a 'precisely aimed parable' rather than a mere symbol.

Other SF scholars find similar value in science-fictional thought experiments, particularly those that form utopias, and likewise describe them as such or as models: John Fekete, for example, writes in a paper on utopian SF that

> The capacity of SF to generate a virtual infinity of parallel models and to do so with a sophisticated self-consciousness about ideological/synecdochic/value parameters – may yet be one of the most crucial human resources and one of the best grounds on which to learn to expand our minds and realities.[53]

Likewise, Fitting interprets recent utopias as offering readers 'the look and feel and shape and experiences of what an alternative might and could actually be, a thought experiment or form of "social dreaming",'[54] while Vieira terms utopia a 'game' that 'implies the celebration of a kind of pact between the utopist and the reader' regarding the reality of utopia.[55] Moreover, Fredric Jameson suggests in *Archaeologies of the Future* that in considering 'Utopian production', we 'begin from the proposition that Utopian space is an imaginary enclave within real social space' that is 'a result of spatial and social differentiation'[56]—an image that lends itself very nicely to the isolation yet connection to reality that such a model would require. Finally, in *Perfection and*

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[49] Suvin, *Metamorphoses*, p. 66. Regarding utopia as 'as if', Suvin refers primarily to Hans Vaihinger, *Die Philosophie des Als Ob* (Leipzig, 1920) or *The Philosophy of 'As If'*, trans. C. K. Ogden (New York, 1924); regarding utopia as a 'methodological organ for the New', Suvin cites Bloch, *Das Prinzip Hoffnung*, I – II, (Frankfurt a. M., 1959).

[50] Suvin, *Metamorphoses*, p. 69.

[51] Suvin, *Metamorphoses,* p. 82.

[52] Suvin, *Metamorphoses,* p. 93.

[53] John Fekete, 'Act and System in Utopian Science Fiction', p. 141.

[54] Fitting, 'The Concept of Utopia in the Work of Fredric Jameson', p. 15.

[55] Vieira, p. 8.

[56] Fredric Jameson, *Archaeologies of the Future*, p. 15. This latter definition, though, would be even more appropriate for the notion of utopia as thought experiment if it did not then go on to describe the utopian 'enclave' as an 'aberrant by-product', 'dependent on the momentary formation of a kind of eddy or self-contained backwater' (Jameson, p. 15), which again robs the utopian model of the purposeful cognition employed by its creator that Suvin suggests.

Progress: Two Modes of Utopian Thought, Elisabeth Hansot employs the term in order to stress
its applicability for utopia as political argument: she writes that

> At its best, political theory is also the proposal in vivid terms of priorities among possible
> forms of social life, and utopias are one form these proposals may take. [...] There comes a
> point at which direct argument is no longer effective [...]. One way to break through the
> impasse is by describing how one's ideals would *actually* work if given free rein; one tries to
> persuade by means of a picture or a concrete description. I have called the utopian attempt
> to employ this mode of political persuasion a thought experiment, but in the forms of
> metaphor, analogy, or fictive reconstructions of the past or present, this type of argument is
> found widely in political writing.[57]

However, once again, the literary utopia is *more* than mere political experimentation on paper.
Gerber and others mentioned previously in this regard make the case for its literary value from
various perspectives, but the central point made above, of course, was that utopia is essentially
a radically transformative subgenre of *science fiction* in Suvin's terms, with the cognitive
estrangement that is a unique feature of this particular genre – and this cognitive estrangement,
in turn, is fundamentally wedded to the *fictionality* of the enterprise; in our case, of the utopian
society described. In fact, it is Frye himself who supports this point in very fitting terms, despite
his previously mentioned dismissal of the literary utopia as a 'a relatively minor genre never
quite detached from political theory':[58] he writes elsewhere in the same essay that 'utopian
thought is imaginative, with its roots in literature, and the literary imagination is less concerned
with achieving ends than with *visualizing possibilities'*.[59] It is the imaginative power of fiction, I
suggest, that allows us not only to engage with the tools of cognitive estrangement that bring
about the science-fictional utopia, but that also allows such a utopia to take the shape of a
thought experiment which we may actively engage with and learn from.

The Isolation of the End-State-Model:

However, it is important to note here, once again, that it is the *connection* between utopia and
zero world that facilitates the radical re-assessment of the present inherent in utopias as
cognitively estranged fictional thought experiments; accordingly, such a connection arguably
also requires some indication within the utopian model itself that its utopian nova are
historically situated, brought about in order to improve society and perhaps even capable of
leading to a better future. And yet, while the notion of utopia as thought experiment itself can
perhaps be traced to Plato's assertion that 'we [are] making a theoretical *model* of a good city',[60]
traditional utopias such as *Republic,* More's *Utopia* and Tommaso Campanella's *The City of the
Sun* (1602) are in fact known for their chronological and historical self-isolation, indicating a
sense of finality and thus almost insolent self-sufficiency that places them outside of time and
human endeavour: as Naomi Jacobs states, aligning herself with Sargent and other critics,

> It is an oversimplification to describe the classical utopias as visions of perfection; but their
> geometric precision, their attempts to contain *all* within a single structure, and their abilities

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[57] Elisabeth Hansot, *Perfection and Progress: Two Modes of Utopian Thought,* pp. 4 – 5.
[58] Frye, p. 338.
[59] Frye, p. 329 (italics mine).
[60] Plato, *Republic*, 472e (italics mine).

> to absorb and convert the outsiders who venture within the charmed circle, resemble to a disturbing degree the mechanized, sanitized efficiency which characterizes our own society's most pervasive images of perfection.[61]

Since perfection is incompatible with further change, these worlds appear to be cemented in an unmoving, disconnected eternal present: indeed, Vieira notes that 'at the onset of literary utopianism, we can but find static, ahistorical utopias', which 'reject their past (faced as anti-utopian), offer a frozen image of the present, and eliminate the idea of a future from their horizon: there is no progress after the ideal society has been established'.[62] She even goes so far as to say that 'that the concept of time, as we know it, has been banished from these utopias'.[63] Vieira then adds that later utopias from the period of the Fin de Siècle, such as Edward Bellamy's *Looking Backward: 2000 – 1887* (1888), William Morris's *News from Nowhere* (1890), and H. G. Wells's *A Modern* Utopia (1905), in fact overcome this sense of ahistorical isolationism in that they are 'also dynamic' given that 'utopia was no longer seen as a rigid, finished model, but as a guiding principle that could even be transcended'.[64] However, Jacobs explicitly disagrees, describing the novels of Bellamy, Morris and Wells as 'so-called "dynamic utopias"' that 'attempted to replace the stasis of classical utopias with a triumphant progress, ever upward, from one stage of human development to the next', and thus lead their inhabitants to reach 'a state of integration and satisfaction resembling that of the Flannery O'Connor character who was "so well-adjusted that she didn't have to think any more".'[65] She attributes this to the fact that they can '"scarcely suspect" or imagine their future accomplishments; nothing more can be projected for them than a larger or purer version of what they already have, a tedious extrapolation from the present successful arrangements'.[66]

The overall effect of both sets of traditional utopian novels, classical and fin-de-siècle, may then not equate to the aforementioned 'static mirroring of the author's environment' that Suvin derides as un-science-fictional, but it does not appear to represent the 'dynamic transformation' of which he speaks, either;[67] such a transformation requires the historical situatedness of experimental cognition, rather than what José Eduardo dos Reis terms the 'eternal present of utopianism'.[68] Moreover, as Erin McKenna points out, such ahistorical, static models, which she terms 'end-state models', can be downright dangerous:

> Visions that seek specific ends, and encourage people to maintain a passive faith that the future will be better, run the risk of unleashing on the world, in an organized and devastating manner, genocide, nuclear destruction, sophisticated genetic engineering, and intentionally directed psychological manipulation.[69]

I will be returning to the particular problematic implications of end-state-models as found in a number of traditional utopias in the first two chapters of my thesis, beginning with the classical

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[61] Naomi Jacobs, 'Beyond Stasis and Symmetry: Lessing, Le Guin, and the Remodeling of Utopia', p. 109.
[62] Vieira, p. 9.
[63] Vieira, p. 9.
[64] Vieira, p. 15.
[65] Jacobs, 'Beyond Stasis and Symmetry', pp. 109-110, quoting Flannery O'Connor, 'Wise Blood' in *Three by Flannery O'Connor* (New York: Signet, 1962), p. 37.
[66] Jacobs, p. 110.
[67] Suvin, *Metamorphoses,* p. 22.
[68] See José Eduardo dos Reis, 'The Eternal Present of Utopianism' in Barbara Goodwin, ed., *The Philosophy of Utopia*.
[69] Erin McKenna, *The Task of Utopia: A Pragmatic and Feminist Perspective*, p. 1.

examples of Plato's *Republic* and More's *Utopia*; I will argue that an understanding of these and other utopias as more or less totalising thought experiments is fundamental to our comprehension of their success or failure as utopian structures and central to their more or less problematic possible implications when treated as real-life political inspiration as outlined by McKenna and others – a factor which in turn has contributed to the recent general unease with the idea of utopia in general.

Of course, the self-containment and merely spatial displacement of the classical utopias to some extent inhibits the sense that these less-than-ideal outcomes would actually come about if their particular views of 'perfection' were realised, which in turn also to a certain extent curtails their cognitive power as fictional thought experiments. As I will also go on to demonstrate in chapter two, the greater danger, so to speak, may in fact stem from the fin-de-siècle utopias by the likes of Bellamy, Morris, and Wells: models that quite earnestly place themselves in our direct future, extrapolating political and social arrangements in an immediate line and thereby creating literary models that beckon to us with their possible realisability. Again, I will examine these worlds in detail as more or less successful science-fictional thought experiments in order to make my case, suggesting that such an analysis is central to any thorough understanding of the ways in which a well-intended utopia may become alienating and even threatening.

Utopia and Time Travel:

For now, I would like to already note on a structural level that the fin-de-siècle utopias' use of some form of *time travel* as a connecting device, able to transport both reader and protagonist to these future worlds, can be seen as a fundamental component of their mechanics as utopian thought experiments, which in turn enables us to better understand their function as such. For one, time travel fiction in itself can be understood as a 'narratological laboratory', as David Wittenberg argues in *Time Travel: The Popular Philosophy of Narrative*, given that

> in a time travel story, even the most elementary experience of plot involves an essentially abnormal metanarrative intervention, since the "classical" mechanisms of temporal discontinuity, dilation, or reordering are now introduced into the plot directly, in the guise of literal devices or mechanisms. They are no longer either tacit or formalistic but rather actual and eventlike—or, in terms of the fiction itself, *real*—a fact that makes time travel fiction already, and inherently, a fiction about the temporality of literary form.[70]

In turn, Wittenberg argues, 'even the naïve reader or audience of a time travel fiction becomes, by default or exigency, a practicing narrative theorist or a practical experimenter in the philosophy of time'.[71] Moreover, even on a more direct level, as Wittenberg notes elsewhere, 'philosophers interested in problems of time, causality, and philosophical realism have very often invoked time travel scenarios as cogent thought experiments'[72] – for example, concerning causality, personal identity, or counterfactuals and possible worlds – though Wittenberg is more

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[70] David Wittenberg, *Time Travel: The Popular Philosophy of Narrative*, p. 5.
[71] Wittenberg, p. 8.
[72] Wittenberg, p. 28.

interested in those of a strictly literary nature. However, in his exploration of different kinds of time travel narratives, Wittenberg himself suggests that the fin-de-siècle utopias tend to fall short as temporal thought experiments of *both* descriptions, as he explains that 'this type of rapidly burgeoning [...] utopian romance following Edward Bellamy's *Looking Backward*' is ultimately no more than a mere vessel for the narrative innovations following time travel in later fiction.[73] Although these texts can be seen to extrapolate 'Darwinist models of social and political development' that are 'directly "evolved" from present-day conditions',[74] which certainly qualifies them as science-fictional thought experiments under our rubric of cognitive estrangement, he ultimately files these stories of '"evolutionary" utopian travel' as mere scaffolding for 'macrologues' – his term for the 'portion of utopian fiction which contains any and all efforts toward framing the requisite travel to a realistic utopian future'.[75] 'It is the macrologue alone', Wittenberg writes, 'that will survive utopian romance's demise and that becomes, eventually, the time travel story'[76] – and in particular the kind of paradox-centred, narratively complex time travel story that he himself appears to be most interested in.

However, I will already posit at this point that it is not the relative lack of narrative-theoretical excitement in these narratives, as opposed to later examples of time travel fiction, that makes them bad examples of the *utopian* genre, or indeed bad thought experiments employing the time travel device to extrapolate nova. Instead, I suggest that it is their almost blind faith in the notion of evolutionary advancement as necessarily leading to a better future, and their subsequent complacency in the translation of the associated nova into totalising, rigorously applied social change, which in turn renders the resulting utopian societies problematic: as I will go on to demonstrate, they become schematic, flawed in various details, and somewhat preachy in tone; this in turn renders them overall simply inadequate science-fictional thought experiments, in that they lack the totalising, hegemonic change that determines the 'overriding narrative logic' of the utopian world in Suvin's terms. [77] Accordingly, this helps to explain both Jacobs' frustration with these 'so-called "dynamic utopias"' that attempt 'to replace the stasis of classical utopias with a triumphant progress, ever upward, from one stage of human development to the next',[78] as well as McKenna's warnings regarding the possible terrible implications of such 'end-state models': by aligning themselves with the supposed determinism of human evolution, these authors not only dispense with the rigour required for testing ideas that might eventually alter our own socio-political decision-making in the zero world, but they also implicitly suggest that perhaps certain unpalatable side-effects to their visions of social improvement, such as loss of certain freedoms, might in fact be excusable in the name of the greater good. Of course, to a certain extent, these authors had no choice but to apply 'evolutionary' ideas to their visions: as Wittenberg points out, 'to ignore Darwinism, for a utopian writer toward the end of the nineteenth century, is to risk creating the impression of

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[73] Wittenberg, p. 30.
[74] Wittenberg, p. 30.
[75] Wittenberg, p. 41.
[76] Wittenberg, p. 41.
[77] Suvin, *Metamorphoses*, p. 87.
[78] Jacobs, p. 37.

obsolescence or ineptitude in one's narration, and therefore to hazard discrediting one's own political theory in advance, a hazard that must have attached to more general anxieties about appearing scientifically naïve'.[79] However, as we shall see, the end result is nevertheless that in many ways, the status quo is maintained, if not intensified, due to extrapolation being insufficiently rigorous, and that the gate is opened for even more damaging social programmes applied in the real world in the name of the improvement of humanity, down to social Darwinism. This is especially the case given the enhancement of the views of an individual or a select few over the experiences of the many – as McKenna admonishes, the seeking of specific ends and blind faith in a better future are inherently dangerous, and I would add that to have them imposed from above is doubly so.

The Partial Utopia:

In my third chapter, I will explore later forms of utopia that do not fall prey to the problem of incomplete extrapolation within their framework as thought experiments; I shall introduce them shortly. However, before they could emerge, the 20th century saw a widespread emergent resistance to the idea of the imposed utopia, particularly following the horrors of both world wars, and this attitude also translated into a general critical wariness regarding any embrace of utopia as a complete construct in general. So as to avoid the disastrous hegemony of concrete utopian constructs such as the Third Reich, many utopian theorists of the 20th century, and even to the present day, chose to think of utopian imaginings less as fully-fledged literary or manifest constructs and more as only ever partial, incomplete, in the process of becoming, or even merely the musings of a somewhat befuddled mind. In reviewing Louis Marin's *Utopiques: Jeux D'Espace,* for example, Jameson notes that

> it is less revealing to consider Utopian discourse as a mode of narrative comparable, say with novel or epic, than it is to grasp it as an object of meditation, analogous to the riddles or *koan* of the various mystical traditions, or the aporias of classical philosophy, whose function is to provoke a thoughtful bewilderment and to jar the mind into some heightened but unconceptualizable consciousness of its own powers, functions, aims, and structural limits.[80]

In doing so, as Angelika Bammer suggests, Jameson is also recalling the concept of 'distraction' that Walter Benjamin developed most notably in his essay 'The Work of Art in the Age of Mechanical Reproduction', which argued that some works of art are received in a 'state of distraction' that Bammer suggests 'opens up suggestive possibilities in relation to utopias'.[81] Most notably, though, it is the aforementioned Ernst Bloch, 'far and away the most important philosopher of utopian interpretation'[82] according to Freedman, who prefers to imagine utopia as fundamentally partial and ungraspable, despite the fact that he is a 'warm' Marxist who takes issue with Karl Marx and Friedrich Engels's 'disparagement of utopias as escapist and

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[79] Wittenberg, p. 39.
[80] Fredric Jameson, 'Of Islands and Trenches: Neutralization and the Production of Utopian Discourse' (a review of Louis Marin's *Utopiques: Jeux D'Espace, Diacritics,* 7:2, 1977), p. 6.
[81] Angelika Bammer, *Partial Visions: Feminism and Utopianism in the 1970s*, p. 17, quoting Walter Benjamin, 'The Work of Art in the Age of Mechanical Reproduction'.
[82] Freedman, *Critical Theory and Science Fiction*, p. 63.

ineffectual', as Alessa Johns points out.[83] As Freedman notes, Bloch, in *The Principle of Hope*, constructs a 'Marxian-Blochian hermeneutic which construes fragmentary prefigurations of an unalienated future in the cultural artifacts of the past and present',[84] yet in a way that is both everpresent and always essentially deferred:

> For Bloch, the central truth of utopia is paradoxical. On the one hand, utopia is never fully present in the here-and-now, and necessarily eludes all attempts to locate it with complete empirical precision. It depends upon what Bloch calls the Novum, that is the *radically* (though not purely) new, which by definition cannot be exhaustively or definitively mapped. Utopia is to be found in the Not-Yet, or the Not-Yet-Being, or in the In-Front-of-Us, or simply the Front, as Bloch variously designates it. Utopia can never be fixed in the perspective of the present, because it exists, to a considerable degree, in the dimension of futurity: not, however, in the future as the latter is imagined by mere chronological forecasting, or in mechanistic and philistine notions of bourgeois "progress," but rather as the future is the object of *hope*, of our deepest and most radical longings.[85]

Although such tactical vagueness is of course rather elegant while avoiding hegemonic determinacy, it certainly does not lend itself to the structural rigour of the science-fictional utopian thought experiment – much like riddles, aporia, and anything received in a state of distraction. In fact, such a broad and indeterminate notion of utopia can shape-shift to fill almost any conception of what one would like utopia to be, while even retaining the 'warm' Marxist hopefulness that Bloch resurrects; as such, it is not remotely precise and cognitively informative in its approach to utopian change, despite Suvin and Bloch's shared use of the term 'novum'. And indeed, Suvin criticises Bloch for this lack of specificity: 'Too wide a sense of utopia, with which Bloch would embrace medical, biological, technical, erotic, and even philosophical wish-dreams, leads to incorporating Don Juan and Faust, the *Theses on Feuerbach* and *The Magic Flute,* into utopia: a somewhat overweening imperialism'.[86] Moylan, moreover, notes that in showing most interest in notions such as the 'latency of being to come', 'dreaming ahead', and the 'figures of hope' that foreshadow human potential, Bloch 'traces the unknown path of the future anticipated or longed for in fables, fairy tales, religion, literary utopias, and in the revolutionary events of history'.[87] Despite the mention of 'literary utopias' in this list, the generic ambience of Bloch's approach seems more along the lines of the fairy tale than the utopia understood as science-fictional cognitive estrangement, particularly as he ultimately locates the utopian Not-yet in that most intimate of spaces associated with dreams, wishes and fairy tales – our own childhood: in the final lines of *The Principle of Hope,* Bloch suggests that 'Once [man] has grasped himself and established what is his, without expropriation and alienation, in real democracy, there arises in the world something which shines into the childhood of all and in which no one has yet been: homeland'.[88] As such, it seems reasonable to suggest that Bloch's Not-yet, if applied to literature at all, might be most at home in a genre in which wishing is central, such as

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[83] Alessa Johns, 'Feminism and Utopianism' in Gregory Claeys, ed., *The Cambridge Companion to Utopian Literature*, p. 193.

[84] Freedman, 'Science Fiction and Critical Theory' in Rob Latham, ed., *Science Fiction Criticism: An Anthology of Essential Writings*, p. 233.

[85] Freedman, p. 64.

[86] Suvin, *Metamorphoses,* pp. 75-76.

[87] Moylan, *Demand the Impossible*, pp. 20-21.

[88] Ernst Bloch, *The Principle of Hope,* Vol. 3, p. 1376.

Cockayne and other atemporal predecessors to the spatiotemporally located utopia, or even in actual myths and fairy tales themselves – the latter of which once began with the German line 'In den alten Zeiten, als das Wünschen noch geholfen hat…', or 'Back in the days when it was still useful to wish for things…'.[89]

Moreover, there is also a sense in which these notions of utopia as riddle, aporia, and constantly deferred wish-fulfilment are in themselves expressions of a certain sense of entitlement, of privilege – of an awareness that one might well wish for better things in rather vague terms, but that one must be wary of totalitarian utopian planning, and that there is in any case no real urgency to this process that would call for such ill-advised blueprint-making. In fact, these approaches almost seem to recall the somewhat hubristic evolutionary utopianism of the fin-de-siècle, which did indeed propose blueprints of a sort, but perhaps in the somewhat complacent assumption that this was the direction in which an enlightened society would head in due time in any case, and that things would certainly remain favourable for the status quo – that is, for those drawing up the plans. In other words, utopian literature had been a kind of plaything for the educated and privileged, and a Blochian approach arguably further facilitated this conception by placing a 'graspable' utopia even more firmly out of the reach of the common people.

The Critical Utopia – a Structural Analysis:

It was around this point in history, then, in the mid-to-late 20th century – or more specifically, during the revolutionary social ferment of the 1960s and '70s – that a new kind of literary utopia did in fact emerge, reclaiming the genre for itself after decades of what Frye termed 'something of a paralysis of utopian thought and imagination'.[90] However, it did so from a radically different perspective: utopian novels such as Joanna Russ's *The Female Man* (1975), Marge Piercy's *Woman on the Edge of Time* (1976), Ursula K. Le Guin's *The Dispossessed* (1974) and Samuel R. Delany's *Triton* (1976) all belong to a group of novels that Moylan famously terms 'critical utopias' in *Demand the Impossible*, in that they are more critical of their zero worlds than their literary predecessors by 'dwell[ing] on the conflict between the originary world and the utopian society opposed to it so the process of social change is more directly articulated'.[91] In particular, they do so by envisaging utopia *for those who need it most* – for example women, people of colour, and the economically disadvantaged – rather than for those who are already in positions of privilege. This led Chris Ferns to term these novels 'not so much dreams of order in a world of disorder as dreams of freedom in a world of oppression',[92] and, in Moylan's terms, allowed them to be 'more recognisable and dynamic alternatives' to the 'systematizing boredom of the traditional utopia' while 'negat[ing] the negation of utopia by the forces of twentieth century

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[89] Translation my own.
[90] Frye, p. 327.
[91] Moylan, p. 10.
[92] Chris Ferns, *Narrating Utopia: Ideology, Gender, Form in Utopian Literature*, p. 15. Ferns in fact includes Morris's *News from Nowhere* in his classification of utopian novels that represent 'dreams of freedom'; I will make my case against this particular inclusion in chapter 2.

history'.[93] These utopias, then, *relied* on the totalising utopian modelling that had grown unfashionable in the first half of the twentieth century, since it was only a rigorous critical depiction of achievable social change that could allow readers to imagine a better world that not only treated historically marginalised groups as fully-fledged members of society, but as deserving of the best life possible – arguably more so than anyone else. Rather than functioning in perfectly imagined spatiotemporal isolation, like the classical utopias, nor in a hubristically determined future, like their fin-de-siècle successors, the critical utopias *required* a closely functioning two-way connection with their zero world in order to make their case for urgently needed social change. In other words, the critical utopias were *ideally poised* to function as rigorous science-fictional utopian thought experiments through carefully employed cognitive estrangement – and I will argue in this thesis that they, in fact, do so, by virtue of their unique and ground-breaking interconnected spatiotemporal models. My reasoning for singling out the structure of utopia itself in these novels (as described shortly) is that their shape arguably functions something like a metaphor in that it gives us a framework for our experience of that particular world and how we relate it to ours – and as George Lakoff and Mark Johnson argue, 'new metaphors have the power to create a new reality'.[94] As such, I suggest, the actual form of utopia is fundamental to its functioning and our perception of it; after all, as Suvin states, 'utopias are verbal artifacts before they are anything else',[95] and furthermore,

> Especially at this time of failing eschatologies, it might even be in the interests of utopia (however widely redefined) if we acted as physiologists asking about a species' *functions and structure* before we went on to behave as moralists prescribing codes of existence to it: perhaps such codes ought to take into account the makeup of the organism?[96]

As it happens, the phrase 'makeup of the organism' will in fact also be highly pertinent to my analysis later on, when I compare these models to living systems, but for now I would like to focus on their structure in the abstract. By this, I mean the makeup of both the overall narrative of the utopian novel, but also the form of utopian society itself; as I will demonstrate in more detail later, the two are both related and inextricably interlinked, and my structural analysis in many ways maps onto both in parallel. Here, it already bears noting that in an analysis of Le Guin's work, Rafail Nudelman and Alan G Myers claim that her unique plot structures are specifically determined by the relationship between the planets on which the plots takes place and the overarching confederation of planets that unites them;[97] citing their approach, Suvin states that 'valid SF' likewise possesses 'spiral structures', 'the plot of which alters the universe of the tale'.[98] Although there is no further explanation of Suvin's use of the term 'spiral', in particular, I would agree that in truly estranging SF, plot and 'universe' have the potential to be more tightly and centrally connected than in other genres, such as the detective tale or the adventure story; these, contrarily, Nudelman and Myers describe as closed and circular or as

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[93] Moylan, p. 10.
[94] George Lakoff and Mark Johnson, 'Metaphors We Live By' in Jodi O'Brien, *The Production of Reality: Essays and Readings on Social Interaction*, p. 111.
[95] Suvin, *Metamorphoses*, p. 53.
[96] Suvin, *Metamorphoses*, p. 53 (italics mine).
[97] Rafail Nudelman and Alan G. Myers, 'An Approach to the Structure of Le Guin's SF', pp. 218 – 219.
[98] Suvin, *Metamorphoses*, p. 96.

open and linear, respectively, with the former for example relying on 'a return of the universe to its equilibrium and order' and the latter leading to the great unknown.[99] Indeed, the classical and fin-de-siècle utopias, less science-fictional in nature, seem to share features with both the detective and adventure story models in this sense: they possess a rigid structure that is both linear, in its direct lines of travel between zero world and utopia, and circular, in that the utopias they describe are fundamentally predicated on 'equilibrium and order'. We shall return to this matter of equilibrium in the traditional utopian society, but first, I would like to delve a little further into the fundamental difference between traditional utopia and critical utopia in terms of basic narrative structure.

In traditional utopias, the visitor to utopia, generally a first-person narrator, travels in a straight line (either spatially or temporally) to the utopian society, where he (it is nearly always a man) is shown around by a guide, who, as Frye points out, is 'as a rule […] completely identified with his society and seldom admits to any discrepancy between the reality and the appearance of what he is describing'.[100] This often leads to what Frye terms a 'pervading smugness of tone' of which 'one gets a little weary' – particularly given that the story overall tends to consist merely in a 'Socratic dialogue' between guide and narrator which permits of nothing more than steady, high-spirited endorsement of the utopian arrangements at hand.[101] The narratives of Russ, Piercy, and Le Guin's critical utopias, on the other hand, incorporate far less complacent depiction of utopia and far more *active contingency,* in that the utopian world described is not the *only* one, in the case of Russ and Piercy, and in fact not straightforwardly utopian at all, in the case of Le Guin. All three novels are set in universes in which utopia is presented far more critically (as per the name) and as historically conditional, intimately dependent on the decisive and well-timed interventions of marginalised individuals to bring them about. Indeed, Russ and Piercy go so far as to literalise this contingency in that their utopian worlds (and dystopian alternatives) are situated along *strands of probability*, that is, parallel worlds that may or not come about depending on the actions of those in the zero world: as the utopian guide Luciente describes it in *Woman*, 'All things interlock. We are only one possible future' (191). In Russ's novel, reality is described as containing 'no clear line or strand of probability' (6),[102] but rather a 'twisted braid, blurring from one to the other without knowing it', and in *Woman*, different possible futures are decided at 'crux times' at which probabilities 'clash' and possibilities 'wink out forever' (191).

The critical utopian narrative, then, far from being a straightforward linear movement as in the classical and fin-de-siècle utopias, is instead made up of (often quite abrupt) visits from zero-world visitor to utopia, and/or from the utopian guide to the zero world, with both protagonist and reader becoming increasingly aware of the socio-historical urgency of the materialisation of utopia both in the fictional universe and, by extension, in ours: it is made

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[99] Nudelman and Myers, p. 218.
[100] Frye, p. 324.
[101] Frye, p. 324.
[102] All quotations from *The Female Man* taken from Joanna Russ, *The Female Man* (London: The Women's Press, 1985).

evident in utopia's direct growth out of urgent resistance to real-life oppression and marginalisation, vividly described and directly counteracted in the utopian realms of probability. As such, these utopias structurally form a cross-temporal utopian *network of agency* in which the protagonist and reader are just as much implicated in the realisation of utopia as the guide and past historical forces are; the utopian thought experiment is thus an *active* one which includes multiple layers of time and probability, and which therefore makes active participants of all those involved in the transmission of its message on either side of the page.

Vieira writes that 'models are frozen images that don't allow for historical change after they have been instituted',[103] and as we have alluded to and will see in more detail in chapters one, two and four, this is very often the case; however, the critical utopias as science-fictional thought experiments are direct counterexamples to this criticism, in that their cross-temporal networks not only allow for change, but actively demand it, as we will explore in chapter three. They enter what Morson terms the historical 'intra-generic dialogue' between literary utopias and their predecessors by not only addressing genuinely pressing matters of social change for the better, but also by employing the reality-shifting capabilities of SF in order to do so; thereby, they create utopian models that are more rigorous in their application of the utopian nova, and thus, I would argue, better science-fictional utopian thought experiments based on cognitive estrangement in Suvin's terms.[104]

Time Travel in the Critical Utopia:

To return to the theme of time travel, which will be more explicitly addressed in this introduction than in later analysis, travel between utopian alternatives – and particularly time travel between various strands of reality, as in Piercy and Russ – plays a significant role in the thought experiments of the critical utopias; in fact, I would suggest that it serves a more pivotal and critical purpose than is customary in time travel fiction in general, the history of which Paul Nahin meticulously documents in his monograph *Time Machines: Time Travel in Physics, Metaphysics, and Science Fiction*. However, like Wittenberg in his narratological approach to the subgenre, Nahin is primarily interested in stories that draw their narrative interest from the paradoxes and other peculiar divergent effects that time travel has on human life; indeed, unlike Wittenberg's, his main fascination lies with the idea of time travel as potentially applicable to real life, and his examination of its role in fiction is accordingly almost exclusively focused on the implementability of the mechanics described. As such, Nahin excludes all narratives that are to his mind not sufficiently interested in the mechanics of time travel or at least 'rationally' grounded, and to his mind, this includes the novels of Piercy, Russ and Le Guin: Piercy is deliberately excluded, and Russ and Le Guin make no appearance even in the index, save for two minor short stories by Le Guin, 'April in Paris' and 'Semley's Necklace'. In fact, in this respect, Wittenberg faults Nahin for exhibiting a 'bias' that 'severely limit[s] the possible domain for the

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[103] Vieira, p. 9.
[104] Morson, *The Boundaries of Genre*, p. 79.

study of time travel fiction' in that he is exclusively interested in the narrative depiction of 'physical time travel *by machines* [that] must have a *rational explanation*',[105] which therefore excludes any time travel story that facilitates time travel through such devices as 'mind travel', dreams, drugs, 'sleeping into the future' and the like;[106] Piercy, for one, is thus immediately excluded from his scope of study, as her novel relies on a mental connection between visitor and utopian guide to facilitate travel between possible worlds.

And yet, both men also share an admiration of the sheer playful appeal of time travel to the imagination, which is paradoxical in that terminology associated with fantasy rather than more 'mechanistically oriented' SF is used to describe it; for instance, Nahin quotes Terri Paul's statement that 'time travel [is] the ultimate fantasy, the scientific addition to the human quest for immortality'.[107] He also relates it to the 'magical autocentric Universe of the child and the primitive',[108] and quotes its characterisation as a release from the 'child-like frustration we sometimes feel at being confined to the present'.[109] This association with fantasy and childhood is somewhat reminiscent of Bloch's vision of utopia 'shin[ing] into the childhood of all', and its atemporal connotation of fairy tales and fantasy literature rather than SF. Indeed, it calls to mind a point at which Peter Ruppert, in *Reader in a Strange Land: The Activity of Reading Literary Utopias,* criticises Suvin for not delineating utopias as both 'criticism of social fact' and 'utopian fantasy', which Ruppert describes as being 'affirmatory, suspend[ing] critical faculties, and inhibit[ing] cognition by blurring the boundaries between fact and fiction'.[110]

Rather than contributing to what I would conversely describe as a blurring of genres, I will suggest here that Ruppert is misguided in his judgement on Suvin, and that Nahin is likewise misguided in his classification of what constitutes 'rational' time travel, and I will reassert once again that it is the *science-fictional* nature of utopia as an instrument of cognitive estrangement, and thereby a rigorous thought experiment, that is best suited to our analysis of the literary utopia and its success or failure. Indeed, it is Nahin himself who also states that 'on a less poetic level, time travel and the stories about it fascinate us because they turn our everyday worldview upside down and inside out. They make us *think*.'[111] This, I suggest, is exactly how the critical utopias employ time travel as an *instrument* of cognitive estrangement. In setting their comparative critical utopian experiment on multiple spatial and temporal levels, all of which are visited and given equal weight in terms of their spatiotemporal reality and impact on the overall narrative, they are not only creating a *larger* model in which to stage the unfolding of their estranged nova, but a more fully developed one: in essence, they are utilising the 'many-worlds' interpretation of quantum mechanics, proposed by Hugh Everett III in 1957 and popularised among physicists in the 1960s,[112] in order to create narrative space as well as a strong sense that our (individual and collective) actions have consequences and can lead to myriad

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[105] Nahin quoted in Wittenberg, *Time Travel,* p. 240 (italics in original).
[106] Wittenberg, p. 240.
[107] Terri Paul, 'The Worm Ouroboros: Time Travel, Imagination, and Entropy', p. 278.
[108] Wachhorst, 'Time Travel Romance on Film', quoted in Nahin, p. 3.
[109] Sorensen, R. A., 'Time Travel, Parahistory and Hume', quoted in Nahin, p. 18.
[110] Ruppert, *Reader in a Strange Land*, pp. 39-40.
[111] Nahin, p. 3 (italics in original).
[112] See Wittenberg, p. 15.

possibilities for the development of our societies. In doing so, they employ alternate paths of possibility as 'worldlines', a term that Wittenberg terms applicable both in physics and narrative theory,[113] thereby participating in 'world-making' on a grand and highly 'scientific' scale. This modelling is thus both hegemonic and validated by 'cognitive logic' as per Suvin's requirements, but also to a certain extent by actual cutting-edge science: the temporal malleability of Einsteinian relativity joins Everett's many-worlds interpretation in the creation of the spatiotemporal framework of utopian possible worlds in these novels. Again, this is particularly applicable to Piercy and Russ, but as we shall see, particular features of temporal relativity and related implications for social development also play a large role beyond a similar 'co-existence' of utopia and dystopia in Le Guin's novel – indeed, they arguably dominate the narrative. Moreover, in all three novels, the thought experiment is rendered especially thorough in that the possible worlds we are presented with do not proliferate without limit – instead, thorough estrangement of the relevant nova is facilitated through a limited focus on two or three temporal possibilities that are explored in a fair amount of detail, which in turn strengthens the hegemonic nature of the 'experiment'.

And yet, despite his criticism of Nahin, Wittenberg also ignores the existence of these novels in his analysis of the narratological role of time travel in literature: he mentions them only in a footnote alongside Wells's *A Modern Utopia* and John Kessel's *Corrupting Dr Nice* as examples of 'utopian/dystopian, parodic or otherwise non-generic […] science fiction' that should not be identified as time travel narratives at all.[114] This is particularly surprising given that he speaks of a second phase (apparently post-utopian) in the history of time travel fiction, influenced by the popularisation of Einsteinian relativity, in which 'time travel stories start to focus intensively on the multiplication or recombination of narrative lines and worlds', thus becoming even more of a 'narratological laboratory'; in fact, he points out that 'noticeably, also, much of the socio-political motivation of earlier time travel fiction is sacrificed to this intensive concentration of form and narrative structure'.[115] In the time-travel-featuring critical utopias that he so pointedly ignores, however, socio-political motivation is arguably not only dropped but *amplified*; indeed, the 'laboratory' or thought experiment itself becomes a socio-political one in addition to being narratological. Moreover, Wittenberg himself notes with regret that 'literary theorists have been relatively indifferent to time travel fiction', a 'dearth of attention [which] may turn out, in future retrospect, to have been somewhat surprising', given that the 'basic question of "fictionality", or of storytelling as "world-making", is at least as old as the theory of narrative itself, if not considerably older', and given that he believes this feature to be particularly enhanced in time travel fiction.[116] And yet, 'world-making' is exactly what these novels do, thus engaging on the level of the syuzhet (plot) as well as the fabula (story) with many of the narrative-theoretical issues, dealt with in contemporary literary narratology, that Wittenberg shows to be literally formalised through narrative time travel: for instance, possible

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[113] Wittenberg, p. 14.
[114] Wittenberg, p. 248, footnote 59.
[115] Wittenberg, p. 31.
[116] Wittenberg, p. 27.

worlds and counterfactuals (as explored by Ruth Ronen and Lubomir Dolezel), worldmaking itself and metafiction (Kendall Walton and Mieke Bal), as well as modality and virtual reality (W. J. T. Mitchell, Garrett Stewart).[117] The straightforward explanation for this oversight on the part of Wittenberg is that he is only concerned with utopias as scaffolding for the 'macrologue' that went on to become the time travel story, as we saw above, and that his true interest lies in 'science fiction writers [who] tend much more often to emphasize, over and against a political or erotic agenda, the mechanisms and significance of time travel itself, as well as its psychological, narratological, and historiographical implications'.[118] However, of course, 'a political or erotic agenda' is not necessarily mutually exclusive with a technical focus on time travel or a rigorous use thereof; also, a network of fleshed-out possible worlds is arguably the perfect vessel for the detailed exploration of such implications, though admittedly of the facilitation of certain worldlines rather than merely of time travel itself.

As such, I would suggest that *both* Wittenberg and Nahin are far too narrowly focused in their inclusion of time travel fiction worth studying: for one, Wittenberg's anti-utopian inclination is not justified given the presence of functionally engaging time travel within the same text, while Nahin's prejudice regarding alternate modes of time travel, particularly of the mental variety, fittingly betrays a lack of open-mindedness regarding the possibilities of future science – who is to say, for example, that time travel via the mind would not at one point be a perfectly rational and scientific form of time travel as transport of consciousness? However, more importantly for my purposes, I would argue that the 'mechanistic', 'rational' rigour that both Wittenberg and Nahin seem to seek in their exclusionary approaches to time travel fiction is more than sufficiently present in the *trans-temporal* causal relationships between possible worlds in these novels – worlds shown to be intimately linked and fully capable of bringing about totalising, hegemonic social change down to the smallest detail, as we shall see later on; indeed, given its basis in principles of relativity and quantum mechanics, this rigour is arguably superior to that of many of the worlds described in more 'classical' examples of time travel fiction. Ultimately, then, it is not the materiality of any 'time machine' itself that provides this 'scientific' rigour, but the totalising nature of the spatiotemporally extended thought experiment itself. Indeed, this usage also appears to be more in line with the scientific 'weightiness' that Suvin himself assigns to his usage of the term 'cognition' in 'cognitive estrangement': in *Metamorphoses,* he notes that one might here 'take "science" in a sense closer to the German *Wissenschaft*, French *science*, or Russian *nauka*, which include not only natural but also all the cultural or historical sciences and even scholarship (cf. *Literaturwissenschaft*, *sciences humaines*)'.[119] Suvin also points out that

> as a matter of fact, that is what science has been taken to stand for in the practice of SF: not only More or Zamyatin, but the writings of Americans such as Asimov, Heinlein, Pohl, Dick,

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[117] See Wittenberg, pp. 27-28.
[118] Wittenberg, p. 26.
[119] Suvin, *Metamorphoses*, p. 26.

etc. would be completely impossible without sociological, psychological, historical, anthropological, and other parallels.[120]

Interestingly, though, even the theorist whom Wittenberg accuses in the aforementioned footnote of incorrectly identifying Russ, Piercy and Le Guin as time travel, William J. Burling, somewhat downplays the role of this device in Le Guin in particular, despite his inclusion of these novels as examples of a 'temporal contrast form' as opposed to the 'temporal dislocation form' that Wittenberg and Nahin favour.[121] He presents Piercy's *Woman* as a paradigm example of the latter, but then goes on to say that

> The scientific details of Connie's "virtual" time-travel are of no significant interest to Piercy (or the reader), being described vaguely by the author as some sort of psychic manipulation of the space-time continuum and offered only for the sake of answering Connie's initial questions (and thus serving narrative, explanatory duty). The point is that Connie frequently "travels" back and forth in her mind, not always at will, and not always under ideal circumstances until the psychic connection is broken [...]. The formal fact of the many repeat visits to the future itself is important, foregrounding by repetition and extension the density, happiness, and freedom of utopian life in 2137 in all of its variety and appeal.[122]

Again, it is true that Piercy, Russ and Le Guin are focused more on the *causal connectivity* that time travel enables rather than on the technical and philosophical implication of time travel itself, but I would like to disagree that it is *merely* the worldline of utopian Mattapoisett in 2137 that is meant to be of significant narrative interest to the reader. Instead, once again, I suggest that Piercy as well as Russ and Le Guin set themselves apart from their utopian predecessors in that they earnestly engage with *multiple* possibilities for social development, including our own zero world; it is the *contingency* of historical development and the role of human agency that is made radically apparent in the cross-temporal presentation of these multiverses, and as such, one could say that these novels with their alternate realities in fact provide the perfect framework for the depiction of world-making that Nahin presents as a particular narratological strength of time travel fiction. Moreover, I will add here (and explore in more detail in chapter three) that it is part of their spatiotemporally unique storyworlds that these multiple possibilities are in fact to be taken as *equally real*, in line with their scientific rigour which includes a particularly far-reaching interpretation of relativity and quantum theory.

Burling takes care to remind us that in *Woman*, Connie is told when faced with a utopian feast, 'Remember, this won't nourish you' (172),[123] which prompts him to characterise the 'temporal contrast form' as informed by a repeated 'gesture of offering' that ultimately lacks substance – a supposed feature of utopia which he in turn associates with the Lacanian sense of lack and pain which we feel in our world and 'that is unrecognised by the collective Symbolic Order':[124]

> The same may be said of readers when confronting the lack revealed by the "gesture of offering" made by Piercy's utopian discourse. We savor the "food," i.e., the pleasure of the

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[120] Suvin, *Metamorphoses,* p. 26.
[121] See William J. Burling, 'Reading Time: The Ideology of Time Travel in Science Fiction'.
[122] Burling, 'Reading Time: The Ideology of Time Travel in Science Fiction', pp. 14 – 15.
[123] All quotations from *Woman on the Edge of Time* taken from Marge Piercy, *Woman on the Edge of Time* (London: Del Rey, 2016).
[124] Burling, p. 15.

fulfilment of the lack that the story provides, but the pleasure is an illusion, and a temporary one at that, *being only symbolic.* It is, after all, "only a story".[125]

Burling thereby seems to be aligning himself with Suvin in 'Locus, Horizon, and Orientation', who states that

in the utopian tradition *the actual place focussed upon is not to be taken literally*, [...] it is less significant than the *orientation* toward a better place somewhere in front of the orienter. In the most significant cases, furthermore, even the place to be reached is not fixed and completed: it moves on. It is thus situated in an imaginary space which is a measure of and measured as *value* (quality) rather than distance (quantity).[126]

This is, of course, once again a Blochian focus on utopia as the unreachable Not-yet; indeed, Suvin goes on to identify it with Bloch's notion of 'a true not-yet-existing, a novum which no human eye hath seen nor ear heard'.[127]

However, firstly, as Suvin himself writes in *Metamorphoses*, models of science-fictional cognitive estrangements *are absolutely* to be taken literally – as models. The action of 'confronting a set normative system [...] with a point of view or look implying a new set of norms',[128] mentioned above, is a thorough, totalising act of critical thought; moreover, the cognitive mechanism of the thought experiment not only underlies some of the most serious philosophy conducted throughout history, but in fact relies on the experimenter and audience's willingness to willingly suspend their disbelief, as it were, and engage with the isolated estranging nova of the experiment *as if* they could in fact be isolated and altered in such a way. It is only in doing so that a utopia, for example, can serve – in Suvin's own terms – as a 'heuristic device for perfectibility, an epistemological and not an ontological entity'.[129] Rather than being a mere 'method camouflaging as a state',[130] as Suvin also writes in 'Locus, Horizon, and Orientation', I will thus add to my methodological framework by suggesting that utopias and other science-fictional thought experiments are best thought of as types of *games* whose rules one must follow if one is to have a satisfactory result, even if it involves a certain suspension of disbelief and temporary commitment to a drastically simplified world-view; indeed, as we also saw above, Vieira characterises utopia as a 'game' that 'implies the celebration of a kind of pact between the utopist and reader' regarding the existence and viability of utopia,[131] while Ruppert notes that Michael Holquist 'has recognized [...] the essential game-like structures of such texts' and that Le Guin calls for the kind of 'productive reader' who might successfully engage with such a structure.[132] Engaging charitably with the utopian game of the thought experiment, I would posit, is surely the *point* of the exercise, if one is to intellectually embrace the developments that the author intends to characterise and thereby arrive at a better understanding of the zero world from which these nova were estranged.

[125] Burling, p. 15.
[126] Suvin, 'Locus, Horizon, and Orientation', p. 77.
[127] Bloch, *Abschied,* p.46, quoted in Suvin, 'Locus, Horizon, and Orientation', p. 77.
[128] Suvin, *Metamorphoses*, p. 18
[129] Suvin, *Metamorphoses*, p. 66.
[130] Suvin, 'Locus, Horizon, and Orientation', p. 74.
[131] Vieira, p. 8.
[132] Michael Holquist and Ursula K. Le Guin quoted in Ruppert, *Reader in a Strange Land*, p. 23.

Secondly, Burling's critical piece of evidence that Piercy's utopian world is not *real* – 'Remember, this won't nourish you' – is actually qualified by other statements in the text that *do* in fact directly testify to the reality of the world, and I will elaborate further on this textual evidence in chapter three; similar arguments can be made for Russ's multiverse, while Le Guin's multiple planetary worlds are undeniably co-existent in the universe of *The Dispossessed.* Moreover, on a quite literal level, one might say that Burling's emphasis on the fundamental insubstantiality and 'lack' of utopia is in fact fundamentally misplaced regarding the spatiotemporally networked utopian worlds of Russ, Piercy, and Le Guin, given that cross-temporal travels rely on Einsteinian relativity, which in turn arguably presupposes the existence of four-dimensional Minkowskian spacetime – or a 'block-universe' in which all times are *equally 'real'*. I will return to this in chapter three, but for now I will quote Einstein's words from a letter to the grieving children of his friend Michele Besso, who had recently died, which gives a strong indication of his endorsement of this world-view: 'And now he has preceded me briefly in bidding farewell to this strange world. This signifies nothing. For us believing physicists, the distinction between past, present, and future is only an illusion, even if a stubborn one.'[133] Indeed, Nahin notes that even without the addition of travel to other possible worlds, 'for the purposes of time travel, it is of course mandatory to accept the reality of past and future';[134] however, this metaphysical approach is particularly suited to the cross-temporal networks of the feminist utopias, given that they form 'spatial and temporal webs'[135] which can be read as particularly apt examples of what physicist Thomas Gold calls the four-dimensional 'world map'.[136]

Literalising Possibilities in the Critical Utopia:

In fact, the 'game' of the science-fictional utopian thought experiment can conceivably be seen as *enhanced* in the critical utopias through the reality of the different temporal strands that make up this world map: of course, the sheer extension of spatiotemporal narrative 'real estate' in the form of multiple worldlines does not in itself make for a more rigorous and totalising thought experiment, but I would argue that the depiction of *other historical possibilities* that these worldlines facilitate (or even parallel worlds in our own worldline, as in *Dispossessed*) are fundamentally enabling of the critical effect that these novels have as instruments of cognitive estrangement based on *social awareness* from a marginalised perspective. The parallel realities act as further platforms on which the totalising force of science fiction estranges hegemonic nova that have very different historical contingencies for their bases, and for example provide radical spaces in which the totalising force of patriarchal ideology has never gained ground, as other nova have taken its place. Multiverses as well as the four-dimensionality of the world map then even further facilitate the radical force of these models, given that they are presented as

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[133] Letter by Albert Einstein from 21 March 1955, quoted in Nahin, p. 74.
[134] Nahin, *Time Machines,* p. 121.
[135] Nahin, p. 122.
[136] Thomas Gold quoted in Nahin, p. 122.

genuine possible realities that are as actual as the possible (zero) world that the reader happens to currently inhabit. It is this earnestly planned and thoroughly crafted totalisation that enables the construction of these multiverses as well-functioning science-fictional thought experiments, and as I shall argue in more detail in chapter three, this totalisation *is* in fact thorough enough that the experiments might be deemed far more successful than those of their utopian predecessors, explored in chapters one and two.

As a result, the multiverses of these novels in a manner of speaking *literalise* the abstract 'possible worlds' that Suvin suggests utopias to possess in lieu of an '*actual place [...] not to be taken literally*' in 'Locus, Horizon, and Orientation': he writes that '*utopias exist as a gamut of Possible Worlds in the imagination of readers, not as a pseudo-object on the page*'.[137] However, once again, I suggest that the enhanced *materiality* of these possible worlds is not in the slightest to the detriment of the utopian project in these literary universes, making them somehow less powerful by 'collapsing' them into fully-fleshed alternatives; instead, it is their tendentious and parallel *existence* that in fact adds to their critical power, with the numbers of possibilities limited in order to facilitate the totalisation required to make these models successful experiments. As such, they are manifestations in themselves of the '"lateral possibilities" of an event or fact' that underlie utopia in the opinion of Raymond Ruyer, quoted by Hansot in *Perfection and Progress* – Ruyer also considers utopias 'mental exercises', and he writes that these are fundamentally predicated on the estrangement of these possibilities:

> It is not by their variety of purpose, nor is it by their imaginativeness that utopias should be defined [...] The essence [or unifying principle] is the use of the utopian method or mode of thought [...] there is a utopian mode of thought, which can be defined as a *mental exercise on lateral possibilities.* The utopian mode of thought belongs by nature to the realm of theory and speculation. But unlike theory, which seeks knowledge of that which is, the utopian mode of thought is an exercise or a playing with the possibilities lateral to reality. In the utopian mode of thought intellect becomes "a power of concrete operation"; it amuses itself in trying out mentally the possibilities which it sees overflowing reality. The utopian mode of thought is related to "understanding"; it depends on an initial understanding of reality, and in its turn it helps towards a better comprehension...[138]

The fleshed-out possible world in the critical utopia, then, can assist in this endeavour by presenting these lateral possibilities as literal strands within the quantum universe; in doing so, it provides an ideal ground for the careful cognitive cultivation of what Bloch considers worth hoping for, yet always remote, when he writes in *Abschied* that 'it is given unto our hands to nurture the possibilities already pending'.[139]

It must be noted as well that these cross-temporal networks as interconnected systems specify active roles for both the time travellers and the reader, the latter being part of the zero world that is specifically included into the overall network as one of the possible worldlines – a worldline from which all relevant nova stem but which for the purposes of the story is just one possibility among several. Ferns writes in reference to post-fin-de-siècle-utopias that 'the overall trend has been towards utopian fictions where the more perfect society, rather than

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[137] Suvin, 'Locus, Horizon, and Orientation', p. 76 (italics in original).
[138] Raymond Ruyer, *L'Utopie et les Utopies*, translated by Elisabeth Hansot and quoted in Hansot, *Perfection and Progress,* p. 19.
[139] Bloch, *Abschied*, quoted in Suvin, 'Locus, Horizon, and Orientation', p. 82.

cutting itself off from the real world, seeks to replace it',[140] and while of course this is also accurate here to a certain extent, I will suggest that for the duration of the storyworld, the critical utopias are not seeking to replace any one reality with another – instead, they seek to highlight the power of consciousness-raising in which all possibilities have weight, and in which the reader ultimately has just as much responsibility in ultimately bringing about utopia as the protagonist does. Of course, the context of the reader does play a role in our interpretation of the message of the text – Suvin speaks of the specific possible world of the reader in 'Locus, Horizon, and Orientation',[141] and naturally the reader's stance will alter dependent on their particular socio-historical situatedness. Nevertheless, with regard to the critical utopias, I basically disagree with the likes of Ruppert, whose main argument in *Reader in a Strange Land* is to say that 'utopias are best understood in a context of the dialectical model of the reader/text relationship', whereby it is 'ultimately the reader who is the site of productive activity, the point at which meaning is produced'.[142] Instead, as I have stated above and will argue later on in more detail, I believe that it is the dynamic and interactive complexity of the critical *utopian network* itself in these novels, which incorporates multiple contingent (utopian and non-utopian) possibilities, and centres human agency (especially from the margins) in actualising the best one, that ultimately produces meaning in both a de-centred and radical localised way, thus asserting through need-based modelling that 'the personal is political' and that we share a communal responsibility for the creation of a better world for all. The reader is not the sole arbiter of meaning, and neither is the author or the author's utopian representative – instead, meaning is created *communally* through the act of possibility-communication in the reading of the text.

As such, these novels articulate a bold new understanding of utopia that frees itself from the privilege-related, somewhat frustrating caution of Marin, Jameson, Suvin, and the like: as Bammer points out, referring to Piercy's *Woman,* 'Piercy challenges the idealism implicit in the eschatological vision of utopianists like Bloch who present the utopian as latent potential. Latency, Piercy reminds us, is not inevitability: "not yet" can mean "soon," but it can also mean "never".'[143] And yet, Bammer herself, in her influential monograph on these critical feminist utopias – *Partial Visions: Feminism and Utopianism in the 1970s* – endorses the same kind of partial, incomplete, or purely process-oriented post-war approach to utopia that I have delineated above, explicitly aligning her approach with the omnipresent yet constantly deferred Blochian Not-Yet, which she characterises in the following way:

> Situated between that which can no longer be and that which can not yet be, this utopian principle of hope is itself part of the reality it anticipates changing, even as it seeks to sublate the very grounds of its own necessity. It is, therefore, *inherently dynamic*, contradictory, and provisional.[144]

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[140] Ferns, p. 2.
[141] See Suvin, 'Locus, Horizon, and Orientation', p. 7.
[142] Ruppert, pp. 5-6.
[143] Bammer, *Partial Visions*, p. 98.
[144] Bammer, p. 52 (italics mine).

It seems, then, that it is the elusive nature of utopian hope in Bloch that attracts Bammer, in that she also associates utopia with movement in the direction of a basically unreachable point: 'My goal is to replace the idea of "a utopia" as something fixed, a form to be fleshed out, with the idea of "the utopian" as an *approach toward*, a movement beyond set limits into the realm of the not-yet-set'.[145] This association appears to be shared by other critics to some extent, as well: Freedman, for instance, writes that 'the dynamic of science fiction can on one level be identified with the hope principle itself',[146] while Vieira suggests that 'contemporary utopianism is in fact dynamic, as it is nourished by the Blochian concept of a surplus of desire'.[147] However, utopian literature up until just before the emergence of the critical utopias can quite clearly be seen to not in fact embody this dynamism: neither the spatiotemporally static classical utopias nor the future-driven fin-de-siècle novels contain an inherent *drive* to keep the system moving and changing, and are thus prone to the stasis we have seen critiqued above and will re-visit in chapters one and two. As Hansot rightly points out, notwithstanding her somewhat misguided focus on utopia as purely political writing, 'despite the authors' efforts to make their societies dynamic, the modern citizen of utopia, living in a world that has solved all its problems, has no purposes or goals beyond his own satisfaction'.[148] This even goes for Wells's *A Modern Utopia,* a novel which Hansot recognises as a 'valiant attempt to demonstrate that a utopia can be dynamic' given Wells's awareness that 'the static quality of the prior utopian tradition was a defect if utopia was ever to be realised',[149] but which nevertheless fails in doing so, as we shall see in more detail later on.

Crucially, though, Hansot's *Perfection and Progress,* in which she makes this point as part of her case that all traditional utopias are essentially static in differing ways, was first published in 1974: the same year as Le Guin's *The Dispossessed*, one year before Russ's *The Female Man,* and two years before Piercy's *Woman on the Edge of Time*. I would therefore like to make the case that these critical utopias are in fact *fundamentally different* to what went before in the history of the literary utopia: I would like to suggest that their multitemporal structures, in addition to serving as rigorous science-fictional thought experiments due to their personal investment in fundamental change, are in fact also *fundamentally dynamic* in a manner that goes beyond Bloch's latent, fantasy-esque Not-Yet and Bammer's unfixed 'approach-toward'. I will explore what it is about their intertemporal networks of estrangement that makes them far better candidates than their predecessors for Suvin's 'dynamic transformation rather than [...] static mirroring of the author's environment',[150] which we find neither in Plato and More nor in what Jacobs disparagingly termed the 'so-called "dynamic utopias"'[151] of Bellamy, Morris and Wells. In doing so, I would like to take the term 'dynamic', as used by Suvin, Vieira, Jacobs and others, *literally,* to demonstrate how these spatiotemporal structures are fundamentally

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[145] Bammer, p. 7 (italics in original).
[146] Freedman, *Critical Theory and Science Fiction*, p. 69.
[147] Vieira, p. 22.
[148] Hansot, *Perfection and Progress*, p. 112.
[149] Hansot*,* p. 6.
[150] Suvin, *Metamorphoses*, p. 22.
[151] Jacobs, 'Beyond Stasis and Symmetry', pp. 109-110, quoting Flannery O'Connor, 'Wise Blood' in *Three by Flannery O'Connor* (New York: Signet, 1962), p. 37.

characterised by change, activity, and progress, rather than mere provisionality and evanescence, in order to become 'more recognisable and dynamic alternatives'[152] (in Moylan's terms) within the history of the genre.

The Critical Utopia As Complex Adaptive System:

My basic claim in this regard is that the structures of these crosstemporal networks, beyond their incorporation of alternate realities within a multiverse (again, in somewhat simplified form in *The Dispossessed*), can in fact be read as examples of *complex adaptive systems* as described by complexity theorists such as Mark C. Taylor, Paul Cilliers and Ilya Prigogine; as I will elucidate further in chapter three, such systems are literally *inherently dynamic,* which means that it is effectively impossible for them to stagnate. Moreover, they function through nonlinear *feedback* relationships between different elements of the system that organically strengthen or weaken certain patterns of connections, and thus determine the functioning of the system as a whole, depending on whether these connections contribute positively to the continued healthy functioning of the system. In fact, just as the inherent dynamic functioning of complex adaptive systems literalises the dynamism that Bammer and others attempt to associate with utopianism as such, the feedback relationships of complexity literalise the feedback that others seek to make present as a fundamental component of their own understanding of utopia. Similarly to Ruppert's quest to centralise the dialectic engagement between reader and utopian author, Suvin writes that 'any utopian novel is in principle an ongoing feedback dialogue with the reader',[153] thus creating 'complex and intimate feedback with the readers';[154] however, rather than thus allowing these novels the 'task of transforming the closing of the "completed" utopia (and utopian novel) into the "dynamics" of his [sic] own mind in his own world',[155] as Suvin quotes Jurij Striedter, the feedback mechanism here functions as directly enabling the *literal* dynamism of the complex network. Indeed, in line with my above observation that in SF, plot and 'universe' have the potential to be more tightly connected than in other genres, this complex feedback-based structure is applicable both within the spatiotemporally extended narrative universes that I have thus far described as so fitting for science-fictional thought experiments, as well as within the structure of the utopian societies themselves – that is, the strands of possibility that are described as utopian within the multi-layered universe.

This, of course, is a major shift following epochs of the classical utopias as static 'charmed circles' (in Jacobs' words) and the fin-de-siècle utopias as privilege-based blueprints, which together represent McKenna's dangerously ahistorical 'end-state-models', and I will make a detailed case for the historical significance of this development later on. At this point, I will merely suggest that my interpretation is very much at odds with the historical critical reception

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[152] Moylan, *Demand the Impossible,* p. 10.
[153] Suvin, 'Locus, Horizon, and Orientation', p. 75.
[154] Suvin, 'Locus, Horizon, and Orientation', p. 78.
[155] Suvin, 'Locus, Horizon, and Orientation', p. 75.

of utopia: Ruppert, for instance, remarks as late as 1986, years after the publication of the three critical utopias in question, that 'if we look for drama, excitement, *complexity,* and conflict, then reading utopias will prove to be a rather disappointing experience'.[156] Likewise, Wittenberg's prejudice that utopian fiction could not possibly contain narratologically valuable instances of time travel further testifies to the fact that even in 2013, utopia was seen as perennially static and incompatible with true dynamism. And yet, complexity and dynamism are precisely what I suggest as constituting the fundamental 'makeup of the [utopian] organism' in these texts, and as thus creating a new utopian reality on Lakoff and Johnson's terms through verbal artifacts as models that shape our imagination.

As I will also explain at greater length in chapter three, the *openness* of complex adaptive systems also plays a crucial role in their role as structural frameworks of these critical utopias: complexity theory arose historically out of the work of scholars like the Austrian biologist Ludwig von Bertalanffy, who showed that an organism is not a static system closed to the outside but 'an open system in a (quasi-) steady state . . . in which material continually enters from, and leaves into, the outside environment',[157] and this notion is still applicable to both organic and inorganic complex adaptive systems in modern complexity theory. Once again, I will go into more detail on the realisation and significance of this openness in chapter three, but I will already put forward that this particular feature of complex systems allows the critical utopias to exhibit a genuine openness to change and development within their basic structure, including with regard to alternate historical possibilities, that goes beyond that of the traditional utopia. In line with Ruppert's reader-based theory, Suvin notes in 'Locus, Horizon, and Orientation' that 'it is the tension between the finite, often closed texts and the multivalent (im)possibilities facing the reader that creates the fictional utopia's basic openness';[158] however, this again strikes me as a somewhat unfounded platitude, much like Bammer's assertion that the Blochian Not-yet is somehow 'inherently dynamic' in its provisionality. Instead, I would suggest once more that the complex networked structure of utopia *itself* performs the relevant function here, in that it allows for a science-fictional model in these novels in which openness is not a superimposed pipe dream but basically guaranteed within the narrative structure.

This also provides further support for my claim that the critical utopia is able to present itself as neither a static blueprint nor as somehow only validly utopian by virtue of being necessarily fragmented, broken, inconclusive, or even contradictory. Ruppert writes that 'if we ignore the contradictory nature of utopian discourse—its conflicting methods, claims, and messages—we are more likely to pursue its inconsistencies and realize its activating impact on readers';[159] however, a utopian system that is already dynamic and open to change due to its fundamental structure does not require either Ruppert's designation of the reader as the sole arbiter of meaning, nor does it require this insistence on somewhat arbitrary imperfection. If

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[156] Ruppert, *Reader in a Strange Land*, p. 24 (italics mine).
[157] Ludwig von Bertalanffy, *General System Theory* (New York: Braziller, 1968), as quoted in Fritjof Capra, *The Web of Life*, p. 48
[158] Suvin, 'Locus, Horizon, and Orientation', p. 78.
[159] Ruppert, p. 51.

the danger of the totalising hegemony of the end-state-utopia is essentially removed through inherent systemic openness, then the production of meaning can assume its rightful place in the proposed utopian construct itself. The utopian model being 'tested' within the science-fictional thought experiment, then, is not necessarily a societal ideal as such, but the dynamic structural model that plays a large role in rendering this utopia worth emulating in the first place.

Indeed, this also addresses Suvin's suggestion in 'Locus, Horizon, and Orientation', utilising the idea of a specified utopian 'Locus' as opposed to a utopian 'Horizon' that is presumably more distant or perhaps unreachable, that a utopia must either be one in which '*Locus coincides with and swallows Horizon*' – which makes for a 'dogmatic, static, closed utopia' such as Campanella's *Civitas Solis* or Cabet's *Voyage en Icarie* – or one in which there is a '*dominance of Horizon over Locus'* or 'Locus does not coincide with but interacts with Horizon', which he says makes for a 'dynamic, open utopia' such as *The Dispossessed* or Platonov's *Chevengur.* Like Ruppert's fabricated fragmentation, this artificial distancing of the utopian 'horizon' from the 'locus' becomes redundant when the utopia is genuinely dynamic and open in the manner I have suggested – in an intrinsically dynamic complex utopian system, the horizon is *always already incorporated* into the utopian locus, in that the possibility for change and adaptation is necessarily part of the complex adaptive structure. In turn, this then allows for a genuine exploration of the utopian system as science-fictional thought experiment, as suggested by Suvin himself in *Metamorphoses* – utopia must no longer be artificially kept at arm's length, but bears detailed and authentic exploration on its own stated terms. In turn, this then also contradicts Suvin's later claim that the 'syntactic closure-cum-value-hierarchy' is 'formally unavoidable' in the utopian text – once more, it is the shape, form and function of the utopian system itself that staves off this closure in the critical utopia, and as we shall see later, the hierarchical set-up of its utopian societies further supports this setup rather than calcifying it.[160]

Open complexity, indeed, is what *makes* these novels critical. Quoting Ruppert's statement that 'even though literary utopias are constructed like closed texts that try to elicit a precise response they also force us to assume a more critical and detached position toward all social propositions, including the ones they offer',[161] Ferns suggests that 'seen in this light, it might be argued that all utopias are in a sense 'critical utopias''.[162] However, as we saw above, Moylan's reasoning for applying this term to Russ, Piercy, Le Guin and Delany's novels was specifically determined by the historically situated 'conflict between the originary world and the utopian society opposed to it' such that the exact social change required to bring the latter about could be more directly articulated. To my mind, reducing this urgency based on the social concerns of this time to a generally applicable utopian 'criticality' is not only overly generalised but historically inaccurate, and once again, it is my suggestion that the complex structure of utopia in these novels provides crucial support for Moylan's specific and vital classification of

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[160] Suvin, 'Locus, Horizon, and Orientation', p. 76.
[161] Ruppert, p. 62.
[162] Ferns, p. 9.

the critical utopia on these terms. Rather than providing yet another vague attempt at safely classifying utopia as something that is essentially ever-provisional, evanescent, or incomplete, my analysis is instead intended to provide a solid, fundamentally structural understanding of the underlying complex systems that allow the critical utopias to constitute totalising utopian thought experiments on science-fictional terms.

Homeostasis and the Chronotope As Structural Model:

Having thus at length given my justification for my structural approach in response to previous rather more ambiguous or intangible proposals for what constitutes a 'successful' utopia, I will add here that I will also, for the sake of completeness and out of interest in the undertaking in its own right, apply a structural model to my analysis of what I deem representative samples of traditional – that is, classical and fin-de-siècle – utopias, in my first two chapters. I will suggest that their static, ahistorical and/or insufficiently totalising linear estrangement as end-state-models can in fact be conversely understood as examples of *homeostatic* systems, based on the work of Walter Cannon on homeostatic systems as well as that of Humberto Maturana and Francisco Varela on *autopoiesis.* Such homeostatic utopian systems, I will argue, are made up of closed feedback relationships which serve the maintenance of the overall functioning of the structure in such exclusive ways as to take precedence over everything else; using this model, I will argue that it is the subsequent coercion over the human elements of the system that thus makes these utopias unsuitable as utopian thought experiments from which we might derive any positive inspiration as to the restructuring of our own zero world. Indeed, I will suggest that they are even insufficient as thought experiments that can somehow be construed to make this paradoxical negative case themselves, in that their science-fictional rigour as thought experiments is insufficiently totalising to provide a workable result in either direction. I will also explain how several of the points for which these utopias have historically been criticised – for example, their treatment of the individual versus the community and their problematic attitudes towards the less privileged – can be straightforwardly understood as symptoms of their functioning as closed homeostatic systems by design, just as their stasis is an unavoidable outcome of this fundamental structure.

Just as the cross-temporal multiverse helps to form the complex system of the critical utopias on the narrative level, I will moreover suggest that the spatiotemporal worldview of the homeostatic traditional utopias forms part of this structural set-up; in chapters one and two, I will go on to demonstrate how the eternal presentism of the classical utopias and the rigid linearity of the fin-de-siècle utopias, presupposing a form of socially Darwinistic determinism, both help to set up and maintain the functional homeostasis of these utopian systems, thus creating the problematic end-state-models that McKenna describes. Indeed, given the centrality of location and movement within space and time to my structural analysis, I will in fact employ Mikhail Bakhtin's concept of the *chronotope* to support my readings of these contrasting generations of utopian models in terms of structures and their inherent dynamism or lack thereof.

Bakhtin writes in 'Forms of Time and of the Chronotope in the Novel: Notes toward a Historical Poetics' that he chooses to 'give the name *chronotope* (literally, "time space") to the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature', in which space-time is employed 'almost as a metaphor (almost, but not entirely)' to determine this 'formally constitutive category of literature'.[163] Indeed, Bakhtin notes that in his use of the term, 'what counts […] is the fact that it expresses the inseparability of space and time (time as a fourth dimension of space)'[164] – this will of course become very relevant when we return to the structure of the critical utopia, but even with regard to less complex fictional universes, it is important to note that Bakhtin also operates under the assumption that all existing dimensions may be key to a structural understanding of different novels and genres. Accordingly, he writes that

> In the literary artistic chronotope, spatial and temporal indicators are fused into one carefully thought-out, concrete whole. Time, as it were, thickens, takes on flesh, becomes artistically visible; likewise, space becomes charged and responsive to the movements of time, plot, and history. This intersection of axes and fusion of indicators characterizes the artistic chronotope.[165]

Bakhtin's central claim regarding the importance of this multi-dimensional fictional framework, then, is that 'the chronotope in literature has an intrinsic *generic* significance', and that 'it can even be said that it is precisely the chronotope that defines genre and generic distinctions',[166] whereby 'a literary work's artistic unity in relationship to an actual reality is defined by its chronotope'.[167] Sue Vice suggests that this happens in the following manner:

> The relations between time and space, and the human figures which populate them, alter according to the text's setting in both literary and wider history. The chronotope operates on three levels: first, as a means by which a text represents history; second, as the relation between images of time and space in the novel, out of which any representation of history must be constructed; and third, as a way of discussing the formal properties of the text itself, its plot, narrator, and relation to other texts.[168]

Bakhtin himself offers multiple examples of chronotopes that he presents as essentially underlying various genres and subgenres of the novel, for instance that of 'the encounter', which he suggests as exemplifying the Greek romance; 'the road', which is employed in the 'adventure of everyday life'; and 'real time', which he associates with the biographical novel.[169] However, his interpretive model is flexible: as Vice notes,

> it is clear that Bakhtin's insistence on a social and political reading of time and space can be extended beyond his own uses of the term. He allows a loophole for possible extensions in his essay, by saying that other work will 'in its further development eventually supplement, and perhaps substantially correct, the characteristics of novelistic chronotopes offered by us here' (FTC 85).[170]

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[163] Mikhail Bakhtin, 'Forms of Time and of the Chronotope in the Novel: Notes toward a Historical Poetics', p. 15.
[164] Bakhtin, , p. 15.
[165] Bakhtin, p. 15.
[166] Bakhtin, p. 15.
[167] Bakhtin, p. 16.
[168] Sue Vice, *Introducing Bakhtin*, p. 201-202.
[169] See Mikhail Bakhtin, *The Dialogic Imagination: Four Essays.*
[170] Vice, *Introducing Bakhtin,* pp. 210-211, quoting Bakhtin, 'Forms of Time and of the Chronotope in the Novel'.

I do not intend to correct Bakhtin's categories, but I do intend to subject them to further development in that I propose another set of chronotopes entirely, in line with the observations I have already made regarding the importance of spatiotemporality in the traditional and critical utopian novels. In doing so, I will not explicitly use Bakhtin's work 'as something which can be built upon using contemporary categories, such as gender', as Vice goes on to suggest, but I will be 'analysing works whose chronotopes are more up-to-date than those of the Greek adventure novel' – though not only these, of course: regarding the traditional utopia, the model I suggest spans all the way back to Plato and More's genre-setting texts.[171]

Regarding the traditional utopia, then, which I take to include the classical and fin-de-siècle varieties, suggestions have been made that these should in fact be fairly easy to categorise chronotopically. Ferns claims that classical utopias, for example, are simply distinguished by a *lack* of time: he writes that 'a characteristic chronotope is evident—one in which the spatial displaces the temporal: descriptions of utopian history may be perfunctory or non-existent, but utopian *geography*, and the problems this poses for the traveller, are given extensive treatment'.[172] There is certainly some truth to this – and yet, it is also worth keeping in mind that even a basically ahistorical view of temporality such as the 'eternal present of utopianism' still presupposes *a perception of time*, even if this perception is presentism and thus ignorant of historical development; it is not a dismissal of time as such. The fin-de-siècle utopia, meanwhile, might well be categorised solely with regard to its utilisation of time travel as a temporally estranging device: as Vice writes,

> Although every text has its own chronotope or set of them, which interact dialogically with other chronotopes within and between texts, some texts are more fruitful to approach in this way than others, for instance those which are set at a particularly fraught historical moment, or which adopt one of the forms where relations between time and space are especially clear, such as the road movie, or tales of time travel.[173]

However, this assumption seems to rely solely on the *mechanical* nature of time travel itself, much along the lines of Nahin and Wittenberg's exclusionary emphases in this regard mentioned above. Although it would be tempting to merely align the chronotope of time travel with 'chronomotion' or 'chronokinesis' itself, if only for alliterative effect (whereby the first is Stanislaw Lem's term and the latter is a word invented by SF writer and editor Anthony Boucher, as mentioned by Nahin),[174] it seems clear that the notion of the chronotope is capable of carrying far more analytic depth and nuance: as Bakhtin notes, 'space and time [are] indispensable forms of any cognition',[175] and 'without such temporal-spatial expression, even abstract thought is impossible. Consequently, every entry into the sphere of meanings is accomplished only through the gates of the chronotope'.[176] To treat all examples of time travel fiction as exhibiting the same chronotope, therefore, seems inadequate and perhaps even biased in the manner of Nahin and Wittenberg; after all, as has already been suggested above, there is a great discrepancy in its

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[171] Vice, p. 210.
[172] Ferns, p. 27.
[173] Vice, p. 202.
[174] Nahin, p. 27.
[175] Bakhtin quoted in Vice, p. 201
[176] Bakhtin quoted in Vice, p. 201

application in the spatiotemporally isolated or straightforwardly linear traditional utopias as opposed to in the complex multiverses of the critical utopias.

Therefore, bearing in mind that of course more specific chronotopic classifications are possible, for instance regarding the division between classical and fin-de-siècle utopia, I will instead highlight my stated division between the traditional and critical models by proposing a chronotope shared by many examples of the former, spanning traditional utopias from Plato up to Wells: I will suggest that based on their homeostatic structure described above, they may be considered as exhibiting a *homeostatic chronotope* in which it is neither the case that time is absent, as suggested by Ferns, nor that chronomotion is all that matters. Instead, I will suggest that these novels take place in artificially isolated spatiotemporal 'bubbles' dominated by either historically circular or excessively linear 'evolutionary time', and in which there is therefore an insufficient *connection* between space and time in that progress is either non-existent or artificially determined, with no provision for organic, continual change and development in either model. As such, I will employ the device of the chronotope to support my case that the success or failure of a literary utopian society and of a literary utopia as science-fictional thought experiment may be determined based on its fundamental structure and the dynamism or lack thereof that this structure exhibits.

In turn, I will suggest that the critical utopia, in line with the inherently dynamic complex model introduced above, may be seen as fundamentally determined by a *complexity chronotope,* exhibiting all the dynamic, feedback-based features mentioned previously that its namesake, the complex adaptive system, manifests. In doing so, I will explicitly oppose Morson's generalising claim, joining Ruppert's dismissal of 'complexity' in association with utopia, that as 'a kind of counter-*Bildungsroman*, utopia usually tells the story of a hero who discovers that the world is *not* as complex as he had thought, and often concludes with the hero's attainment at last of the simple wisdom that there could be a heaven on earth, if only . . .'[177] Instead, as delineated above, I see complexity as forming the very core of what makes these utopias successful: again, not in that the utopias they encounter are *complicated*, but that they form part of a system that is fundamentally inclusive, adaptable, and sustainable in its basic set-up, and thus eminently suitable to its utopian purpose.[178]

Indeed, employing the Bakhtinian chronotope as illustrative of the structural models we are applying to the analysis of utopia – homeostatic or complex – seems in itself particularly well-suited to the utopian subject matter, especially regarding utopia as science-fictional thought experiment, given that the chronotope can it its own right be seen as an adaptable model through which certain worldviews or ideas are expressed: as Vice writes, 'Bakhtin was

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[177] Morson, p. 78.
[178] Of course, one might assume that Morson is referring to traditional utopias which, in their spatiotemporally limited chronotopes as mentioned above, are indeed somewhat unrealistically simplified; however, Morson's *The Boundaries of Genre*, in which he makes the relevant claim, was first published in 1981, and I therefore find myself unable to grant him the excuse I permitted Hansot above in basically denying all literary utopias dynamism. Morson, like Nahin and Wittenberg, appears to ignore the critical utopias for reasons of personal bias, which is both unfortunate and further proof that attempts to re-evaluate the intellectual value of the critical utopia have not been misplaced.

interested in literary texts as testing-ground for his ethical and philosophical concerns',[179] and this, of course, is fundamentally the focus of much utopian analysis, as well. One might of course at this point interject, as Alastair Renfrew does in his introduction to Bakhtin, that any attempt at a 'utopian chronotope' must fail due to the 'terminological contradictions implied by such a name', in that utopia is literally 'no place', as mentioned above – 'chronos' and 'topos' must both be present, Renfrew suggests, for any chronotope to apply. However, firstly, as also mentioned at the very beginning of this introduction, this reading of the term 'utopia' ignores its simultaneous meaning of 'good place' as well as the persisting tension between these two significations. Secondly, once again, 'topos' does not entirely displace 'chronos' even in the classical utopias, despite Ferns' assertion to the contrary, given that presentism is still a view of temporality. And thirdly, as Bakhtin himself notes in his proposal of the chronotope as interpretive tool, it is impossible to dismiss the 'inseparability of space and time',[180] even in fictional constructs that appear to be doing so – one simply cannot exist without the other in our current understanding of the universe, and utopia is therefore also always 'uchronia'.

Though thus not absent in the classical utopia (and clearly present in the time travel of the fin-de-siècle utopia), the fundamental intertwining of space and time is, indeed, particularly evident in the complexity chronotope of the critical utopia, and crucially constitutive of its modus operandi: in incorporating Einsteinian relativity and Minkowskian four-dimensionality in its active multi-dimensional engagement with spacetime, the complexity chronotope directly concretises the inseparability of 'time as a fourth dimension of space' that the Bakhtinian chronotope manifests,[181] as well as the origin of the term 'chronotope' itself as having been 'introduced as part of Einstein's Theory of Relativity'.[182] Moreover, it presents four-dimensional spacetime as a locus of active engagement, thus facilitating the particular characteristic movements that make up chronotopes: as Nahin notes, 'for Newton, space and time are the *background* in which physical processes evolve. For Minkowski, spacetime *is* the world'.[183] Accordingly, the homeostatic and complexity chronotopes exhibit very different patterns and ranges of motion. Though Vice notes Bakhtin's assertion that 'things which are static in space cannot be statically described', as 'narrative forces them into three-dimensionality, on to the road',[184] the four-dimensionality of the critical chronotope of course provides even further space for typical activity on the levels of both fabula and syuzhet.

Moreover, one could also at this point note that these respective chronotopes show similarities to other, existing chronotopes put forward by Bakhtin himself. I will not dwell on this point at length, as homeostasis and complexity provide enough structure for the chronotopes I propose; however, Bakhtin notes that, 'within the limits of a single work and within the total literary output of a single author we may notice a number of different chronotopes and complex interactions among them', whereby 'it is common moreover for one

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[179] Vice, p. 2.
[180] Bakhtin, 'Forms of Time and of the Chronotope in the Novel', p. 15.
[181] Bakhtin, p. 15.
[182] Bakhtin, p. 15.
[183] Nahin, *Time Machines*, p. 105.
[184] Vice, *Introducing Bakhtin*, p. 213.

of these chronotopes to envelop or dominate the others'.[185] Likewise, one might also propose that different chronotopes in themselves may overlap with others to a certain extent, given the blurry lines between the characteristics of different authors and genres. In particular, it would perhaps make sense to say that the homeostatic chronotope, focused largely on the preservation of existing conditions, shares characteristics with the 'castle chronotope', which is focused on the past rather than the future: the castle is 'saturated through and through with a time that is historical in the narrow sense of the word, that is, the time of the historical past', which is kept alive through 'legends and traditions'.[186] Of course, the comparison is imperfect given that the classical and fin-de-siècle utopias present *new* models of societies that they perceive to be necessarily quite different to what has gone before; however, my focus is here on the unchanging nature of the homeostatic traditional utopia *once it has been established,* and on its emphasis on ideally unchanging maintenance. Indeed, these novels could even be said to reflect an idealised past period in which society was similarly unchanging, yet transferred to an idealised future: as Morson writes, 'literary utopias [...] often invoke myths of lost Eden or a past golden age in much the same spirit that *Paradise Lost* cites pagan philosophy and pre-Christian religious narratives—namely, as intimations of a truth now revealed and, in the case of many utopias, soon to be realised'.[187] Likewise, going beyond the 'castle' comparison, one might associate the homeostatic utopia with the 'adventure-time chronotope', which Bakhtin presents as characteristic of the Greek 'novel' or 'romance' and which features adventuring heroes whose actions exist in a temporal near-vacuum: here, Bakhtin writes, time is 'not measured off in the novel and does not add up; it is simply days, nights, hours, moments [...] in this time, nothing changes: the world remains exactly as it was'.[188] This, of course, calls to mind the ahistoricity and utopian presentism of the classical utopia in particular – though crucially, the element of 'adventure' is largely missing there, beyond the protagonist's (usually sidelined or instantaneous) journey to utopia and his subsequent leisurely exploration of the same with a guide – what Wittenberg above terms the 'macrologue'.

The multidimensional complexity chronotope, on the other hand, might be seen as akin to the chronotope of 'parlors and salons', which in the metaphorical sense are places

> where the major spatial and temporal sequences of the novel intersect. [...] this is the place where encounters occur [...] the webs of intrigue are spun, denouements occur and finally— this is where *dialogues* happen, something that acquires extraordinary importance in the novel'.[189]

The analogy here would be with the feedback connections between elements in the complex adaptive system underlying the complexity chronotope: ultimately, these dynamic networks are all about the connections that are formed, about the conversations and exchanges of various sorts that underlie them – and in a four-dimensional interactive network of zero worlds and utopian possibilities, these interactions are of course able to play a more vital role than in a

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[185] Bakhtin, quoted in Renfrew, p. 119.
[186] Bakhtin, p. 18.
[187] Morson, *The Boundaries of Genre,* p. 76.
[188] Bakhtin, 'Forms of Time and of the Chronotope in the Novel', quoted in Renfrew, p. 115.
[189] Bakhtin, p. 19.

realist novel. On a secondary level – or indeed, as perhaps independently supporting the complexity chronotope in the manner suggested by Bakhtin – one might also mention the chronotope of the 'threshold', of 'crisis and break in life' or the 'decision that changes a life', as akin to the 'cruxes' that occur at key points in the generative periods of the critical utopias, thus to a certain extent forming part of the complexity chronotope as well.[190] We shall see later on how these cruxes are both vital to these narratives as well as historically fundamental to the creation of the critical utopia in the first place. However, I will treat this (possibly constituent) chronotope as secondary or separate to the complexity chronotope per se, given that it is historically contingent and not transferrable in the same way as other defining features of the chronotope, as we shall see below. And yet, regarding the applicability of chronotopes in general to the concept of utopia, it is worth keeping the threshold chronotope in mind, both in that thresholds are points between the past and the present at which change may occur, and because the utopian novel itself occupies a liminal generic space, as Morson points out: 'utopia is a threshold genre that is about reality on the threshold. Its paradoxical structure answering to its oxymoronic title, utopia describes the place that is no place in fiction that is not fiction'.[191]

Historical Chronotopes and the Ecofeminist Utopia:

Moreover, regarding historical developments and the crossing of thresholds, this brings me to a final primary reason for my use of the chronotope in this structural analysis of utopia, and particularly of the complex critical utopia. As we have seen, this analytic tool allows for a formalisation of the proposed view of utopias as fundamentally spatiotemporally-engaged models in terms that are particularly devised to apply to the functioning of novels in particular; besides, it matches the importance of spacetime itself in this endeavour, shows particular suitability for utopian models, and provides us with ancillary chronotopes. On top of all this, however, it also supports the view put forward in this thesis of the critical utopias as representing a *fundamentally new way of seeing and engaging with the world* that is different from that of their utopian predecessors in important and promising ways.

In chapter three, I will engage more with the feminist nature of these novels, but at this point, where I am dealing more specifically with the concept of the chronotope per se and its value to my analysis, it is worth reiterating that the critical utopian novels construct utopia *for those who need it most*, particularly those who have been historically marginalised, and already noting that the complexity chronotope allows them to do this in several crucial ways: firstly, the multiplicity of possible worlds in the multiverse literally demonstrates that the future is not fixed and not dependent on the current status quo – that there are always other possible ways of doing things; secondly, the complete interconnectedness of the complex utopian system shows that a functioning society will necessarily have to include everyone, not just the privileged; and thirdly, the reliance of this system on flexible feedback connections is

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[190] Bakhtin, p. 21.
[191] Morson, p. 92.

fundamentally predicated on a fundamental *flatness* of the system, which, as I will further argue in chapter three, entails the necessity of non-hierarchical mechanisms of self-governance in the utopian societies described. As such, the complexity chronotope can be seen as a fundamentally egalitarian framework that, I argue, expresses itself as such most straightforwardly in structural terms grounded in space-time; this, once more, is how I purport to use this structural analysis to provide evidence in support of Moylan's crucial classification of these novels as 'critical' and thus socio-politically engaged in an unprecedented manner within the genre.

Likewise, as Renfrew points out regarding Bakhtin, 'time and space are the coordinates also of *history*' as well as of patterns in literature, and the chronotope can thus be taken as 'more than an attempt to concretize literary time; it is an attempt to conceive of history itself in concrete and material terms'.[192] According to Renfrew, Bakhtin implies that chronotopes

> are such effective ways of analysing the interior of literary texts because those texts emerge from an environment – the sum total of social and ideological forces in play in their time – that is itself profoundly chronotopic. Chronotopes are not therefore only (or even primarily) ways of understanding the literary text; they are also ways of understanding *history* [...]. We might speculate that a certain "form" or understanding of time is characteristic of historical periods. [...] The particular form of time "operative" in or characteristic of any given period will powerfully condition our understanding of the material objects, events, social relations, etc. pertaining to that period.[193]

I do not suggest that the complexity chronotope is characteristic of English-language writing from the 1970s, in any genre – I am sure there are many fascinating and insightful chronotopes to be found and applied to fiction of this period, particularly in modernist and post-modernist modes. However, I *do* suggest that the utopian complexity chronotope *could only have emerged* in this particular historical period or one very much like it; that is, that it bears strong hallmarks of the societal changes occurring at the time, particularly with regard to the emergence of second-wave feminism and various social justice movements that advocated for greater inclusivity and representation regarding *all* members of society in all areas of life. As such, *despite my qualification of the role of cruxes in the complexity chronotope itself,* I will note that this chronotope perhaps gives us a better historical understanding of this 'crux period' of the late 1960s and '70s in which so much seemed possible for the first time. Indeed, this historical period itself resembles complex adaptive systems balanced at the inherently dynamic 'edge of chaos' in which future possibilities proliferate: in Stuart Kauffman's terms, they are 'systems poised in critical states' that 'maximise their opportunities for change, bringing in the powerful concept of the *adjacent possible*'.[194] The critical utopias, then, thrive in these 'critical states', as these periods of flux allow them to emerge after the crux time of radical realignment with a plan for a new beginning on very different terms: an 'adjacent possible' that they have given literary shape to in the form of other possible realities in the multiverse.

In a historical approach to utopian structures as chronotope, however, one must also concede that the radical enthusiasm of the 1960s and '70s was followed by a period in which

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[192] Renfrew, *Mikhail Bakhtin*, p. 122 (italics in original).
[193] Renfrew, p. 123 (italics in original).
[194] Kaufmann, *Investigations,* quoted in Caves et al, 'Time Will Tell: Narrative Expressions of Time in a Complex World' in Richard Walsh and Susan Stepney, eds., *Narrating Complexity*, p. 280.

optimism lessened and social change slowed: social attitudes towards gender roles had largely been successfully changed (though the Equal Rights Amendment had failed to be ratified) and between the end of second-wave feminism and the rise of the third wave in the 1990s, political engagement to a certain extent gave way to infighting, for example in the 'feminist sex wars' over issues such as sex work and pornography. Around this time, the battle lines hardened between feminist separatists and those who believed in social integration, while others turned their attention to ecofeminism, which related the oppression and domination of marginalised groups such as women and people of colour to that of nature. These concerns are accordingly reflected in a few later examples of feminist utopian literature, including Sally Miller Gearhart's *The Wanderground* (1979), Joan Slonczewski's *A Door into Ocean* (1986), Sheri S. Tepper's *The Gate to Women's Country* (1988) and a much earlier example which anticipates many of these issues, Naomi Mitchison's *Memoirs of a Spacewoman* (1962); despite their relative chronological proximity to the critical utopias, these novels go about their utopian project in quite different terms, and the complexity chronotope is here replaced with quite different approaches. In order to further historically situate and qualify the critical utopia, I will therefore provide a brief overview of two of these novels – Mitchison's *Memoirs of a Spacewoman* and Slonczewski's *A Door into Ocean* – in chapter four, engaging with them as supporting evidence regarding the rather delicate balance of the complexity chronotope. For instance, their analysis will demonstrate that the complexity chronotope fundamentally relies on the *open* functioning of the system, which, once again, is facilitated by non-hierarchical feedback relations; in these utopias, new boundaries are instead set in place once more, either knowingly through 'reverse sexism' or inadvertently though exclusionary attitudes to the non-human other. As such, I will argue, these novels once more revert to a form of the homeostasis chronotope, though 'from the other side' of this toppled balance.

This assessment, however, should hopefully serve not as a cause for despair after the relative socio-political achievements of the critical utopian project, but merely as further historical evidence of the singularity of the critical utopia and its unprecedented complexity chronotope – which we may still learn from now despite the subsequent development of the utopian genre in other directions. It also should once again highlight the unique and exceptional suitability of the critical utopia as science-fictional thought experiment, as delineated at length above. While the classical and fin-de-siècle utopias suffer from insufficient rigour in their cognitive estrangement for various reasons to be expanded on in chapter one, and the ecotopias likewise can thus be said to fall short in this respect, the critical utopias remain particularly strong examples of the science-fictional utopian thought experiment, according to my structural analysis: their spatiotemporal modelling is unparalleled in its literal and metaphorical complexity and attendant science-fictional rigour.

Indeed, I will conclude this introduction by making the case that this science-fictional rigour allows the complexity chronotope to play a similarly crucial role regarding utopia as that described by Wittenberg as played by time travel fiction, *excluding* these exact novels, regarding narratology; this closely relates to my aforementioned claim that the four-dimensionality of the

complexity chronotope provides crucial additional *narrative space* on the levels of both fabula and syuzhet.

Revisiting Wittenberg:

Once again, unlike the homeostatic traditional utopias, and particularly unlike those of the Fin de Siècle, the complexity chronotope of the critical utopia allows it to employ time travel as a *critical device* rather than a mere means of temporal distancing, engaging it to link the utopian and dystopian possibilities of alternate strands of the multiverse while utilising the inherent dynamism and feedback mechanisms of complexity in two ways: both to channel cross-temporal movement and to construct utopian systems that are not subject to social stasis, moral corruption and eventual decay. Given this, I will go so far as to say not only that Wittenberg, like Nahin, was committing an unfortunate oversight in excluding the critical utopias from his analysis of narratologically valuable time travel fiction, but that the complexity chronotope of the critical utopias in fact forms a 'narratological laboratory' in a very similar way to that created according to Wittenberg in time travel stories in general, as described above, based on what I believe to be the defining features of the chronotope.

To reiterate, according to Wittenberg, the time travel story involves a direct introduction of the '"classical" mechanisms of temporal discontinuity, dilation, or reordering' into the level of the plot or syuzhet 'in the guise of literal devices or mechanisms',[195] thus rendering readers 'practising narrative theorist[s] or [...] practical experimenter[s] in the philosophy of time'[196] and making 'time travel fiction already, and inherently, a fiction about the temporality of literary form'.[197] Similarly, I would suggest, the complexity chronotope provides 'literal devices or mechanisms' for the literalisation not merely (though arguably also) of the temporality of literary form, but of the spatiotemporal structural characteristics that are so often mentioned independently by scholars of utopia and utopian literature as making up, either separately or in conjunction, a *desirable form of utopia* that does not fall prey to the dangers of static blueprints. These are all features of the critical utopias that go beyond the basic fact that they engage more directly with their own problematic zero worlds and are therefore more *genuinely critical* than traditional utopias in Moylan's terms; instead, these are attributes that *enable* this criticality on a fundamental, quasi-mechanical level by virtue of being intrinsic properties of the complexity chronotope that underlies these novels. I would like to suggest that there are four main characteristics of the complexity chronotope that make up these desirable utopian features; I have mentioned them all above separately at different points as literalising various aspects of utopian thought within the framework of the critical utopias, but I will summarise them again at this point for convenience: they are, firstly, the presentation of utopia

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[195] Wittenberg, p. 5.
[196] Wittenberg, p. 8.
[197] Wittenberg, p. 5.

in the form of lateral possibilities or 'possible worlds'; secondly, openness to change; thirdly, the presence of feedback mechanisms; and fourthly, dynamism.[198]

Regarding lateral possibilities, as we have seen, the alternate worlds of the multiverses in the critical utopias (or parallel worlds of Le Guin) provide a literal manifestation of the 'gamut of Possible Worlds in the imagination of readers' that Suvin in 'Locus, Horizon, and Orientation' deems more vital to utopia than the 'pseudo-object on the page',[199] while also directly embodying Ruyer's utopian 'lateral possibilities'[200] and Frye's emphasis on the utopian literary imagination to 'visualiz[e] possibilities'.[201] On a 'mechanical' level, in Wittenberg's terms, this is facilitated and represented by the many-worlds interpretation of quantum mechanics that arguably underlies this aspect of the complexity chronotope. In turn, these literalised possible worlds give shape to the narrative-theoretical issues of counterfactuals, worldmaking, modality and so forth that Wittenberg already deems formalised through narrative time travel; I would suggest, however, that the complexity chronotope provides even more fleshed-out and literal representations of these narrative configurations, which after all serve the purpose of *actual world-making* in the creation of their respective utopias. On a fundamental level, then, the complexity chronotope is ideally suited for the literalisation of manifold possibilities that Suvin, Ruyer, Frye and others deem a desirable feature of utopia, and I would argue that the same goes for the other three aspects of the complexity chronotope mentioned above, all of which are features of the complexity framework that connects the multiple possibilities of the first aspect.

Openness to change, for one, is a hallmark of complex adaptive systems, as we have seen, as well as a commonly articulated desirable feature for utopian systems given the resistance to its opposite, the 'syntactic closure-cum-value-hierarchy'[202] that Suvin denigrates or the 'timeless and absolute standards'[203] that Morson deems unfortunately inevitable in the ideal society. However, whereas Ruppert and (later) Suvin only allow for this openness within the 'multivalent (im)possibilities facing the reader',[204] I propose to locate it in the text itself, as a basic component of the novels' critical complexity. Again, this includes both the complexity of the utopian societies described, which we will explore in detail in chapter three, as well as, crucially, the complex utopian network on a narrative level that also spans the author's zero world and thereby *includes* the reader, both as observer and as possible agent in the historical facilitation of a future utopia.

Next, as we have already seen above, the nonlinear feedback relationships that characterise complex systems also literalise the ideal reader-utopia relations, or reader-

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[198] Again, I will not include the 'crux' element of the chronotope as one of these features, both because it is more historically specific to the feminist/consciousness-raising background of these novels and thus less transferrable as an ideal utopian structure that one might be inspired by, and because I therefore see it as less fundamental to the complexity chronotope – this is also why I treated the 'threshold' chronotope as a secondary element or separate influence to the complexity chronotope, as opposed to the more intrinsically relevant chronotope of parlors and salons. Moreover, it does not relate to desirable utopian features raised by utopian studies scholars, as far as I am aware.

[199] Suvin, 'Locus, Horizon, and Orientation', p. 76 (italics in original).

[200] Raymond Ruyer, *L'Utopie et les Utopies*, translated by Elisabeth Hansot and quoted in Hansot, *Perfection and Progress*, p. 19.

[201] Frye, p. 329.

[202] Suvin, 'Locus, Horizon, and Orientation', p. 76.

[203] Morson, p. 77.

[204] Suvin, 'Locus, Horizon, and Orientation', p. 78.

generated utopian meaning, put forward by Ruppert and (later) Suvin: whereas both locate the essence of utopia in 'complex and intimate feedback with the readers',[205] which to my mind is simply another way of saying that the utopia itself is too closed and static to be taken at face value (and therefore must gain complexity and nuance through differing reader interpretations), the complexity chronotope of the critical utopia *genuinely* relies on actual feedback mechanisms to facilitate the functioning of the entire utopian system. As described in the following chapters, feedback based on '*actual* performance rather than . . . *expected* performance'[206] is fundamental to the functioning of self-regulating systems, including those of the closed, homeostatic variety. However, open complex systems feature both negative, stabilising feedback of this variety as well as *positive* feedback that amplifies tendencies and produces change, the significance of which will become clear shortly; for now, suffice it to say that it plays a critical role in the sustainability and utopian nature of the system, which in turn forms a vital component of the complexity chronotope in the critical utopia.

Finally, the feature of dynamism, which I believe to be the most important overall characteristic of the complexity chronotope, is perhaps the most commonly posited utopian feature, as we have seen above: it is repeatedly mentioned as being necessarily present in a successful utopia, yet with no agreement as to its precise location: for example, early Suvin suggests that it is cognitive estrangement that performs 'a dynamic transformation [...] of the author's environment',[207] and Striedter joins the later Suvin and Ruppert in locating the 'dynamics' of the 'completed' utopia in the reader – 'his own mind in his own world'.[208] Others suggest that it is precisely the lack or deferral of a specific location that creates utopian dynamism, as we have seen: Bammer and Vieira, for example, both identify it with the ever-elusive Blochian principle of hope, which Vieira deems dynamic by virtue of being 'nourished by the Blochian concept of desire',[209] while Bammer identifies the Not-yet as 'inherently dynamic, contradictory, and provisional';[210] later Suvin more explicitly, of course, proposes that 'Horizon' and 'Locus' must be thoroughly separated for there to be any dynamism present. However, once again, the literalisation of this feature within the complexity chronotope locates it *within the utopian structure itself* rather than in its *absence* or somewhere else entirely, such as in the reader's mind: not only is the inherent dynamism of the complex adaptive system's functioning 'at the edge of chaos' (also known as the 'point of criticality' 'between rigid order and chaos')[211] vital to the system's continued existence, as we shall see in more detail later on, but dynamism is also literally inscribed in the temporal malleability of the worldview based on Einsteinian relativity that enables the critical tool of time travel through the multiverses of these complex utopias.

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[205] Suvin, 'Locus, Horizon, and Orientation', p. 78.
[206] Norbert Wiener, *Cybernetics, or, Control and Communication in the Animal and the Machine*, p. 24.
[207] Suvin, *Metamorphoses*, p. 22.
[208] Suvin, 'Locus, Horizon, and Orientation', p. 75.
[209] Vieira, p. 22.
[210] Bammer, p. 52.
[211] Paul Cilliers, *Complexity and Postmodernism*, p. 97.

These four constituent features of the complexity chronotope, features that also happen to literalise commonly proposed features of successful utopias, all then combine to form a fundamentally interactive and adaptive utopian network which, in its inclusion of the reader via the zero world, arguably allows us to be 'experimenters in the creation of utopia' in a similar manner to that in which Wittenberg suggests time travel fiction renders us all 'practising narrative theorist[s] or [...] practical experimenter[s] in the philosophy of time', thus creating a socio-political laboratory rather than a straightforwardly narratological one, as suggested above – a 'utopian laboratory', one might say.

Moreover, their literalisation of these desirable utopian features within an open, adaptable framework allows for the safe introduction of *substance and materiality* to utopia that would otherwise carry the threat of stasis and even totalitarianism. As we have seen, Burling and later Suvin urge us to not take the utopian 'place' literally but instead engage with it as a 'lack', whereas the four-dimensional reality of Minkowskian spacetime in the multiverse literalises the 'place' without danger of totalising utopian dominance; likewise, it is not necessary for the utopian societies themselves, even if located at a specific point along a possible worldline, to 'replace' the real world in Ferns' terms,[212] since we are dealing with questions of likelihood and realisability rather than total and immediate societal reconfiguration.

In addition, this substantiation applies on an ideological level: in the literalisation of complexity through the utopian complexity chronotope, we now have a *concrete* counterpoint to the fragmentary, contradictory idea of utopia that we distanced ourselves from at the beginning of this introduction: in its four flux-based facets, the complexity chronotope is able to present itself as a *complete mental framework* whose adaptability allows it to retain shape without being destructive in its hegemony, like a dynamic multi-dimensional version of a semipermeable membrane. As such, it provides a utopian structure in which utopia can exist fully as a mental construct without being presented in one of the following ways, which could be taken as compromises or concessions: being located only in the *movement* towards the deferred utopian location itself (Bloch, later Suvin, Bammer's '*approach toward*',[213] and even McKenna's 'process utopia' and Moylan's view of utopia as 'first and foremost a process', both of which will be introduced and qualified later); being necessarily fragmented (Bloch, Bammer's 'always partial'); paradoxically residing in contradiction (Bammer) or being the product of a befuddled mind (see Jameson, Benjamin and Bammer above); and, once again, only existing in the mind of the reader (Ruppert, later Suvin, Striedter).

This re-constitution of utopian completeness on a dynamic basis thus enables a science-fictionality on an even deeper level than described above as a basic and crucial feature of utopia. While fantasy-aligned utopian approaches such as Bloch's 'fantasy-esque' Not-yet and Ruppert's partial designation of literary models as 'utopian fantasy'[214] are arguably the result of an incomplete, fragmentary or displaced utopian construct, the literalisation of the complexity

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[212] Ferns, p. 2.
[213] Bammer, p. 7 (italics in original).
[214] Ruppert, pp. 39-40.

chronotope's four critical features allows for the construction of a *literal model* of utopia as science-fictional thought experiment in two ways. Not only does it flesh out the possible worlds of Suvin, Ruyer and Frye through descriptions of the different worldlines in the multiverse, but it also performs a literal version of the fleshing-out of space-time that Bakhtin describes as constituting the *chronotope* per se: 'spatial and temporal indicators [...] fused into one carefully thought-out, concrete whole' and time 'thicken[ing], tak[ing] on flesh' to become visible in the literary construct.[215] Just as the 'thickening' segments of spacetime in the chronotope are capable of better representing the nature of the literary genre in question, the fleshing-out of utopia across spacetime itself, including in terms of its kinetic functioning, allows the complexity chronotope to render the critical utopia a better *model* of utopia itself, and indeed a better model *for utopian models in themselves* given that it is composed of features that several utopian theorists have seen as essential to the functioning of utopia per se. In other words, it might on some level be seen as representing the shape a *truly functional* utopia might take as a thought experiment, which we determined above to be most indicative of a successful utopian construct.

Conversely, indeed, one might say that the homeostatic utopian chronotope of the traditional utopias fails in that it does *not* showcase these four essential or desirable utopian features. As we will again see in more detail in chapters one and two, these novels, for instance, tend to impose a single ideal social model that is, by virtue of inflexibility, straightforwardly incapable of suiting all its inhabitants, rather than somehow engaging with 'lateral possibilities'; it is closed to change, as McKenna demonstrates to great effect, thus replacing openness with the danger of stasis and totalitarianism; it resists *open-ended* feedback beyond stabilising mechanisms, thus further closing itself off to adaptation and change; and it is overall and for these previous reasons not dynamic, despite the aforementioned attempts of various scholars to locate the necessary dynamism anywhere other than in the utopian constructs themselves. Overall, this means that these models are not sustainable over the long term, unlike their later complex counterparts – a basic conclusion which can, indeed, be said to fundamentally underlie various other criticisms of the traditional utopian model. Moreover, the homeostatic chronotope allows us to single out another central concern with the traditional utopia, as explained further in chapters one and two, which is the fact that it tends to be exclusive in its focus and exclude certain groups of people; by comparing the utopian societies described to homeostatic systems, we are able to point out the parallels that make it possible for these frameworks to function on a limited and exclusionary basis. This, in turn, is what arguably renders them less successful thought experiments than the critical utopias overall in that their nova are not totalising – that is, they do not thoroughly trace the effects of utopian re-organisation through all elements of the utopian community.

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[215] Bakhtin, p. 15.

Learning from Complexity:

Overall, then, the structural analysis of utopia as science-fictional thought experiment allows us to investigate various utopian chronotopes as spatiotemporally situated, and moreover as fundamentally determining the utopias' spatiotemporal set-up in a way that enables our understanding of their success on a fundamental structural level *and allows us to both participate in their creation and learn from it*. It thus allows us to not only engage more deeply and in a more cohesive manner with different historical ideas of what makes utopia successful, but also of what makes it fail, as well as giving us a deeper understanding of the success and failure of our own zero-world social organisation and plans for the future.

Moreover, the comparison of the complexity chronotope with the homeostatic chronotope of the traditional utopia, as well as with the quasi-homeostatic cyclical chronotope of the feminist ecotopia, allows us to understand the former in terms of the genre's history as neither static and dangerous nor unnecessarily divisive and thus also ultimately prone to stasis. Instead, it points the way towards a basic form of utopia and utopianism that is structurally open and adaptive and thus capable of modelling many different forms of social co-existence without ossifying, and this in turn makes it genuinely critical in a totalising manner – cognitive estrangement in a truly critical fashion. In doing so, it points the way towards a form of utopianism that is sustainable and thus alive beyond the utopian present: no mere 'gesture of offering', but something that can actually 'nourish' the reader who forms part of this very network of possibility – a network in which responsibility and agency are very real indeed, and in which the awareness of injustice and the fight for change are accordingly the ethical obligation of all.

Finally, in my conclusion, I will examine briefly what lessons for utopian thought and action an engaged reader might take away from the complexity chronotope of the critical utopias as set apart by their homeostatic neighbours in genre history. Given the overall generic tendency outwith this brief period to draw and re-draw lines of exclusion regarding those less privileged or in some way 'other', I will briefly explore the idea of a non-human utopia as the only logical outcome to repeated human tendencies of exclusion; however, my ultimate focus will instead be on the importance of *open channels of communication* taking the place of a better world as only possible in fragments or constant deferral. These channels, I suggest, form the backbone and lifeblood of complexity, as well as representing the kinds of feedback relations that might be genuinely implementable in our zero world, even in the absence of parallel realities and cross-temporal agency; as such, they could be the first step towards moving away from the idea of a better world as always either a 'good place' or 'no place', the latter of which constant deferral and partiality arguably come down to. Instead, the critical utopias seem to suggest, open, genuine communication and education could form the cornerstone of a sustainable approach towards genuinely creating a better world – not a utopia or even 'pantopia',[216] as such measures

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[216] In scattered usage,'pantopia' seems to indicate a state of constant and overwhelming bliss, though an exact definition appears to be lacking.

would never reach perfection, but something that embodies the radically inclusive spirit of the necessarily imperfect but inherently dynamic, and thus unprecedentedly sustainable, critical utopia, as presented in this thesis.

PART 1: The Homeostatic Chronotope in the Traditional Utopia

In this part of the thesis, I will provide a brief overview of the homeostatic utopian chronotope as characteristic of five examples of traditional utopian literature: *The Republic* by Plato (ca. 370-360 BC), *Utopia* by Thomas More (1516), *Looking Backward: 2000-1887* by Edward Bellamy (1888), *News from Nowhere* by William Morris (1890), and *A Modern Utopia* by H. G. Wells (1905). As mentioned in the introduction, moreover, I will make an analytic distinction between Plato's *Republic* and More's *Utopia* as classical utopias and Bellamy, Morris and Wells's novels as fin-de-siècle utopias; though I suggest that the homeostatic chronotope is applicable to all five examples, it functions within these texts in significantly different ways, as I will go on to demonstrate.

However, the common ground that allows for this chronotope to apply to the traditional utopia across these periods is a sense of ahistorical spatiotemporal isolation, a sense of the 'eternal present of utopianism'[217] that pervades these utopian constructs that McKenna terms 'end-state-models' – even the fin-de-siècle utopias, which isolate and enshrine particular 'enlightened' utopian notions along evolutionary lines and thus create pseudo-progressive spatiotemporal bubbles of their own that some have confused with dynamism. This 'eternal present', then, allows for a *closed* social structure, mirroring the closed nature of homeostatic systems, whose primary purpose is to maintain the status quo of the utopia presented; the aim lies less in stimulating actual change within the zero world, and more in philosophically, semi-seriously, or really quite seriously engaging with certain philosophical or socio-economic ideas for the improvement of the individual human and/or human society in a very precise manner that does not allow for further development. This would, in fact, be quite a suitable premise for a science-fictional utopian thought experiment, but as I go on to show, the problem lies in the fact that the closed nature of the homeostatic chronotope calls for the artificial limitation of natural human movements and developments, which in turn fundamentally damages the utopian project as a whole and results in an incomplete and ultimately necessarily unsuccessful application of the utopian nova.

Besides illustrating this fatal limitation by virtue of its closed structure, moreover, this chronotope draws on systems theory to provide a more nuanced understanding of how the utopian constructs in these texts function while failing to provide sustainability in their modelling: by drawing parallels between these societies and closed homeostatic or autopoietic systems as described by Walter Cannon and Humberto Maturana, the homeostatic chronotope allows for a reading of these models as not merely 'static', as they are frequently described, but in fact as internally (largely) self-regulating while maintaining constant movement. This, in turn, gives the illusion of life and even dynamism while in fact offering no more than isolated, possibly even reactionary bubbles of wish fulfilment that are ultimately incompatible with the continuation of human life, and thus not only less intellectually valuable than they might otherwise have been, but in fact downright dangerous in the manner outlined by McKenna. In

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[217] See José Eduardo dos Reis, 'The Eternal Present of Utopianism' in Barbara Goodwin, ed., *The Philosophy of Utopia*.

this first chapter, I will begin my analysis by establishing the homeostatic chronotope in greater detail in the process of applying it to the classical utopias of Plato's *Republic* and More's *Utopia*, and in the second chapter, I will apply the completed framework to the fin-de-siècle utopias of Bellamy, Morris and Wells, as well.

CH 1: Homeostasis and Autopoiesis in Plato and More's Classical Utopias

Space and Time in Plato's Republic and More's Utopia:

Plato's *Republic* and More's *Utopia* constitute two seminal texts in the history of utopian literature and set the tone for the rest of genre, including later Renaissance utopias such as Johann Valentin Andreae's *Christianopolis* (1619), Tomasso Campanella's *The City of the Sun* (1623), and Francis Bacon's *New Atlantis* (1626), which I will not discuss at length, so our analysis begins here. The *Republic* is the first known recorded utopian proposal, a Socratic dialogue concerning the nature of justice and the relationship between the order and structure of the just city-state and the just man; it culminates in the proposal of the city-state 'Kallipolis', ruled by a philosopher king, which is said to be perfectly just. In its abstract intellectual nature, Kallipolis is without a precise location in time and space – as Hansot writes, 'it exists in a universe of discourse; it is a hypothesis rather than a pretended reality'.[218] More's island of 'Utopia', meanwhile, the central setting for book two of the text that gave the genre its name in 1516, is somewhat more of this world: we are told that the traveller Raphael Hythloday, whom More is introduced to by a friend in Antwerp, joined one of Amerigo Vespucci's voyages of discovery, and upon being separated from his companions spent five years living on the remote island of Utopia somewhere in the Southern Hemisphere. This island, originally a crescent-shaped peninsula, was divided from the mainland by a fifteen-mile wide channel dug by King Utopus when he discovered it. As such, More and the reader are given a rough idea of its spatiotemporal location – certainly more than readers of Plato, though not quite enough to satisfy curiosity. Regarding their relation to time, Plato and More thus also to a certain extent reflect their intellectual environments: as Hansot further points out, 'in Greek thought there is little connection between history and philosophy, between time and eternity: perfection is outside the realm of time', while Christianity, 'heir to Hebrew millennial expectations, did believe in the restoration of the divine kingdom on earth, if not *in* time, then at the *end* of time'.[219] However, she also notes that while this means that More's utopia, like other Renaissance utopias, is thus 'oriented more distinctly toward a future dimension of time than is their Greek counterpart', which parallels 'each individual's concern with salvation', it is also the case that 'it does not, by any means, entail the necessary realization of utopia itself in time'.[220] Since salvation could only occur after the end of life itself – and unlike in Plato's ideal city, virtue 'must remain a continual effort of the will' – the manifestation of a better environment on earth is not

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[218] Hansot, p. 47.
[219] Hansot, p. 48.
[220] Hansot, p. 48.

a particular concern, and More's utopia is thus located in 'sacred, not secular, time'.[221] However, Plato's Kallipolis could be seen as even more temporally estranged than this, given that the forward-looking focus of striving for salvation that still somewhat underlies More's Utopia is here replaced by another model entirely: as Nahin notes, Plato visualised time as 'curving back on itself; that is, as *circular* time', a reflection of 'what Plato could see all about in nature, with the seemingly endless repetition of the seasons [...] Whatever might be observed today would, it seemed obvious, happen again in the future'.[222] Nahin adds that 'this view of time has a powerful, ancient visual symbol, the Worm Ouroborous or World Snake that eats its own tail endlessly'.[223] It was only during the time of More and Andreae that this temporal worldview gave way to a more linear one, as we see in the Renaissance utopias, due to the rise of Christianity and its particular metaphysics: 'in the West it was the Christian theological doctrine of unique historical events that gave rise to linear time in the minds of the common folk', given that major biblical events 'occurred in sequence and each only once', and thus, 'for Christianity, circular time just would not do'.[224]

The end effect for Plato and More's utopias is similar, however – whether linear or cyclical, neither society feels the need to present itself as a realistic, spatiotemporally situated locus in which the passage of time has a significant effect and brings about changes in the lives of its inhabitants. Moreover, their spatiotemporal separation from our own world without any indication as to how to 'arrive' in these utopias – either physically or in terms of application to the complexities of the zero world – provides a further sense of isolation and closure, as we shall see in more detail below: the origins of Utopia's development are murky beyond the initial separation of the land by King Utopus, and appear to be merely a fully decreed and changeless system of governance imposed from on high from that point onwards, while the intricate system of social organisation in the Kallipolis is described dialectically in great detail, but with no indication that a similar organisation would ever be achievable in the zero world. As such, we seem to be dealing with *closed* systems both in terms of relation to their environment and in terms of internal change: neither secular nor circular time-spaces would have room for development, and any possible movement *towards* such a system on the part of the inspired reader is frustrated by the lack of a tangible connection and starting point.

Cannon and the Homeostatic Self-Regulation of Living Organisms:

And yet, these societies are made up of *living* human individuals. This raises a particular question, then: how would one even begin to reconcile a believable depiction of human life with a closed, spatiotemporally isolated system in which there is no need for development and change? Moreover, for that matter, how can a utopian model be convincing or even appealing at any level if it does not provide a believable depiction of human life within its construct? One

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[221] Hansot, pp. 48 – 49.
[222] Nahin, *Time Machines*, pp. 70 – 71.
[223] Nahin , p. 71.
[224] Nahin, p. 71.

possible approach would be to look at other systems in which life is seemingly compatible with stability or apparent stasis, as well as isolation from other systems: the most notable example for this is American physiologist Walter Cannon's attempt to provide a scientific explanation for his French colleague Charles Richet's belief in the fundamental stability of living beings, which I will examine in some detail as it provides the basis for the homeostatic chronotope I propose. In his 1932 book *The Wisdom of the Body*, Cannon quotes Richet on the 'remarkable fact' of biological stability:

> The living being is stable. [...] It must be so in order to not be destroyed, dissolved or disintegrated by the colossal forces, often adverse, which surround it. By an apparent contradiction it maintains its stability only if it is excitable and capable of modifying itself according to external stimuli and adjusting its response to the stimulation. In a sense it is stable because it is modifiable – the slight instability is the necessary condition for the true stability of the organism.[225]

Cannon notes that the key to this stability is *self-regulation*, and that many modern physiologists have referenced 'self-regulatory arrangements' within organisms that allow this stability to occur. He describes some rather horrific-sounding experiments on dogs and cats to make his point: for example, Cannon notes that those animals which have been subjected to 'sympathectomy' or the intact removal of certain nerves or 'thoracic and abdominal sympathetic chains', which results in 'permanent disconnection of [certain] organs from central nervous control via sympathetic channels', thereafter suffer to varying degrees from regulatory difficulties.[226] These include the inability to properly adjust their own internal response to temperature shifts in their environment, insulin hypoglycaemia due to insufficient blood sugar regulation, and the inability to either produce offspring or lactate in order to keep offspring alive.[227] In other words, internal self-regulatory processes have here been severely disrupted by the removal of the pathways (nerves) that would previously have facilitated these processes, much to the detriment of the organic system as a whole. Likewise, Cannon identifies similar self-regulatory processes in the human body: for instance, the 'fluid matrix' wherein various bodily fluids are 'regularly held in remarkable steadiness and which, if altered, are soon restored';[228] temperature regulation, as with the sympathectomised cats and dogs;[229] the supply of oxygen to the tissues; and the regulation of fat and protein by the thyroid gland.[230]

In attempting to describe the stability particular to the organism that ensures such self-regulation, then, Cannon puts forward a new term, which will go on to enter standard scientific vocabulary to this day – *homeostasis* – in order to fill in what he believes to be a gap in the literature:

> The constant conditions which are maintained in the body might be termed *equilibria*. That word, however, has come to have fairly exact meaning as applied to relatively simple physico-chemical states, in closed systems, where known forces are balanced. The coördinated physiological processes which maintain most of the steady states in the organism are so complex and so peculiar to living beings—involving, as they may, the brain

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[225] Charles Richet, *Dictionnaire de Physiologie,* iv, 72, as quoted in Walter Cannon, *The Wisdom of the Body*, p. 21.
[226] Cannon, *The Wisdom of the Body*, p. 268.
[227] See Cannon, *The Wisdom of the Body*, chapter XVII, 'The Role of the Sympathico-Adrenal System in Homeostasis'.
[228] Cannon, p. 289.
[229] See Cannon, p. 295.
[230] See Cannon, p. 292.

and nerves, the heart, lungs, kidneys and spleen, all working coöperatively—that I have suggested a special designation for these states, *homeostasis*. The word does not imply something set and immobile, a stagnation. It means a condition—a condition which may vary, but which is relatively constant.[231]

Cannon also suggests four tentative propositions to describe the general features of homeostasis, which can be roughly summarised as follows: 1) in 'an open system such as our bodies represent', composed of and subjected to 'disturbing conditions', the presence of constancy is 'in itself evidence' that there are processes in place to maintain this constancy;[232] 2) steadiness is maintained through the counteraction of tendency towards change with 'increased effectiveness' of opposing mechanisms;[233] 3) regulating systems determining homeostatic states may comprise several 'coöperating factors' which act simultaneously or successively;[234] 4) when it becomes clear that certain factors influence homeostatic states, they are bound to be evidence of automatic control, as 'homeostasis is not accidental, but is a result of organized self-government'.[235] It must be noted here that Cannon apparently contradicts himself in first speaking of 'closed systems, where known forces are balanced' and then of 'an open system such as our bodies represent', but the latter is merely with regard to external forces that may encroach upon the self-regulating closed system referred to in the former, and it is that system which is of interest to us.

This, then, is Cannon's explanatory proposal regarding the internal stability of living systems, which may help to explain how apparent stasis (with the term 'apparent' being key here) can coexist with human life in the spatiotemporally and developmentally closed systems of Utopia and Kallipolis. However, in order for this analogy to work, such self-regulation would have to occur not only *within* living systems but *between* them in a societal context. And indeed, as Fritjof Capra points out in *The Web of Life: A New Synthesis of Mind and Matter*, self-regulatory processes can be seen to underlie various systems of human social interaction, and particularly those of political and economic self-management within societies – either by design or not: most notably, these include Adam Smith's 'invisible hand', for example, as well as the 'checks and balances' of the US constitution, both of which are 'represented by feedback loops' though 'none of their authors made the fact explicit'.[236]

Indeed, Cannon not only also believes that a human society itself can be self-regulating, but that this is something a society might *evolve* towards; for this, he draws parallels between the evolutionary development of homeostatic mechanisms in animals and his own imperfect society: 'is it not possible that social organisation, like that of the lower animals, is still in a rudimentary state of development?'[237] Indeed, this also suggests that Cannon sees a homeostatic society as more *ideal* or at least more 'civilised' in its functioning, to use Cannon's phrase, and thus perhaps also a reasonable candidate for a *utopian* social structure if based on stability and

[231] Cannon, p. 24.
[232] Cannon, p. 299.
[233] Cannon, p. 299.
[234] Cannon, p. 300.
[235] Cannon, p. 300.
[236] Capra, *The Web of Life*, p. 62.
[237] Cannon, p. 312.

continued internal functioning, as both Utopia and Kallipolis seem to be; this is therefore the idea that we shall be entertaining here.

Cybernetics and Feedback Mechanisms:

A homeostatic structure of this description would accordingly persist through the operation of *feedback loops*, as mentioned by Capra above with regard to self-regulating social systems. These are perhaps best described with reference to the work of a small interdisciplinary group of neuroscientists, engineers, and mathematicians in the mid-20th century who created the field of *cybernetics* in order to examine self-regulation or feedback mechanisms, which they saw as underlying many systems of both organic and inorganic nature. Inspired by Cannon's writings on homeostasis, the work of cyberneticist Norbert Wiener and his collaborators is now seen as fundamental to the study of self-organising systems, particularly in terms of negative feedback:[238] indeed, the name of the field was derived from the Greek word for 'steersman' in order to recognise that 'the steering engines of a ship are indeed one of the earliest and best-developed forms of feedback mechanism'.[239] Although their work was highly interdisciplinary, the underlying concept of feedback employed by the cyberneticists was very straightforward indeed, and can easily be explained with the example of a thermostat used to regulate the heating of a house:

> There is a setting for the desired room temperature; and if the actual temperature of the house is below this, an apparatus is actuated which opens the damper, or increases the flow of fuel oil, and brings the temperature of the house up to the desired level. If, on the other hand, the temperature of the house exceeds the desired level, the dampers are turned off or the flow of fuel oil is slacked or interrupted. In this way the temperature is kept approximately at a steady level.[240]

There are many examples of more complicated feedback systems, as well, such as the 'governors' of steam engines that gave cybernetics its name, but the basic principle remains the same: feedback is the 'control of a machine on the basis of its *actual* performance',[241] in Wiener's words – or, put more broadly by Capra, 'feedback has come to mean the conveying of information about the outcome of any process or activity to its source', though one should add that this flow of information is continually ongoing.[242]

As mentioned, however, there are two types of feedback – negative and self-balancing as well as positive and self-reinforcing – which function quite differently, and the feedback that governs homeostatic systems as described by Walter Cannon – and that would be applicable in any system that is primarily geared towards stability, such as the classical utopias – is firmly of the former variety. The same is true of cybernetics: Wiener specifically points out that cyberneticists were primarily concerned with regulatory, self-regulating and thus homeostatic

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[238] See, for example, John Johnston, 'Distributed Information: Complexity Theory in the Novels of Neal Stephenson and Linda Nagata', p. 225.
[239] Norbert Wiener, *Cybernetics, or, Control and Communication in the Animal and the Machine*, p. 12.
[240] Wiener, pp. 96-7.
[241] Wiener, *The Human Use of Human Beings*, p. 24.
[242] Fritjof Capra, *The Web of Life*, p. 56.

processes, as in Cannon's examples, rather than with self-reinforcing ones. Describing the example of the governor, for example, he asks us to 'notice that the feedback tends to oppose what the system is already doing, and is thus negative'.[243] More specifically, Bruce Clarke explains negative feedback in his description of systems theory as a chain of events which 'measures a process (extracts information about energy) and feeds that measure back into the process so as to damp its amplification past a set-point with a reduction that steers it back to the desired rate'.[244] In fact, Clarke quotes what Margaret Mead termed 'the first great paper on cybernetics',[245] 'Behavior, Purpose, and Teleology', as stating that 'all purposeful behaviour may be considered to require negative feed-back. If a goal is to be attained, some signals from the goal are necessary at some time to direct the behaviour'.[246] And yet, despite this apparent ubiquity, one must keep in mind that systems that display *only* negative feedback are indeed homeostatic in Cannon's sense: fully describable in terms of these self-regulating processes, and thus organizationally *closed* systems, isolated from their environment. Again, this was also the concern of feedback research in cybernetics: as the cyberneticist W. Ross Ashby writes, 'Cybernetics might [...] be defined as the study of systems that are open to energy but closed to information and control – systems that are "information-tight".'[247]

Homeostasis and the Bakhtinian Chronotope:

This brings us back to the spatiotemporally isolated and closed nature of Utopia and Kallipolis. As we have seen, Cannon's model of homeostasis appears to be a fitting structural equivalent for their functioning in that it was initially used to describe the self-regulating mechanics of living systems in ensuring the basic stability of the organism; moreover, the work of the cyberneticists provides us with an interdisciplinary framework of feedback mechanisms that could be used to demonstrate this balanced constancy within a closed, isolated system. In addition, Cannon's suggestion that homeostasis might be seen as a more evolutionarily advanced form of social organisation in human societies aligns nicely with the fact that attempts towards such self-regulation might be identifiable in the earliest literary utopias or ideal societies. Moreover, homeostasis based on feedback mechanisms provides us with a framework for an understanding of these texts that does not merely gloss over the evident lack of development in these novels and their separation from the zero world by describing them as 'static', followed by explanations for their failures as utopian imaginings or as literary artefacts that are not necessarily related to their stasis – for example, that they merely lack literary excitement. Although I have joined other critics in using the term in my introduction to refer to relative lack of dynamism in the traditional utopias, the allegation of 'stasis', I suggest, is in fact an insufficient characterisation of the fundamental workings of these utopias not just in terms of narratives,

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[243] Wiener, p. 97.
[244] Bruce Clarke, 'Systems Theory', p. 216.
[245] Margaret Mead, quoted in Stewart Brand, 'For God's Sake, Margaret: Conversation with Gregory Bateson and Margaret Mead', as cited by Bruce Clarke in 'Systems Theory', p. 216.
[246] Arturo Rosenblueth, Norbert Wiener and Julian Bigelow, 'Behavior, Purpose and Teleology', *Philosophy of Science,* 10 (1943): 18 – 24, p. 19, as quoted by Bruce Clarke in 'Systems Theory', p. 217.
[247] Ross Ashby, *Introduction to Cybernetics*, p. 4, quoted in Capra, *The Web of Life*, p. 65.

but in terms of the fundamental structure of the utopian societies described: stasis, after all, implies a *complete lack of movement*, whereas *homeo*-stasis, as we have seen, still accommodates movement – albeit of a more limited, regulated variety and within a closed framework – which is potentially still compatible with the fact that these societies are made up of living human beings. To quote Cannon's definition again, 'the word does not imply something set and immobile, a stagnation. It means a condition—a condition which may vary, but which is relatively constant'.[248] As such, I will apply homeostasis as part of a *structural model* for Plato and More's utopias, and later for those of the fin-de-siècle, in line with Lakoff and Johnson's belief that metaphors create new realities,[249] as well as with Suvin's call for readers to 'act [...] as physiologists asking about a species' *functions and structure*' in order to better understand the 'makeup of the organism', as quoted in the introduction.[250] What better way to do this, after all, than to draw on the work of *actual* physiologists working on interdisciplinary models explaining the basic functioning of organic (and inorganic) systems?

Moreover, given the generative importance of spatiotemporal separation to the isolated self-regulated functioning of these societies, I suggest that homeostasis is best incorporated into a structural utopian model as part of a Bakhtinian chronotope, introduced previously. As mentioned in the introduction, Vice writes that 'a literary work's artistic unity in relationship to an actual reality is defined by its chronotope',[251] and once again, she suggests that this happens on three levels: as a means of historical representation; as the relation between images of time and space in the novel, which in turn helps shape the historical representation; and as a way of discussing the formal properties of the text.[252] In the case of the stable – not static – isolated and ahistorical utopias of Plato and More, to begin with, the spatial separation of these worlds and their location in either circular, perfect eternity or 'sacred time' can be seen to provide the necessary *boundaries* from the outside world to create an 'information-tight' system – a system which is in turn governed by the homeostatic principle of self-regulation via negative feedback, perhaps just as envisioned by Cannon when he spoke of 'civilised' societies evolving towards homeostasis. As such, this reading combines the representation of space and time in these novels with a fundamental structural analysis that provides us with a specific understanding of how these worlds might be seen to function, and whether they are accordingly successful in their utopian endeavour. Since we are speaking of *ahistorical* societies in the case of the classical utopia, the 'historical representation' that Vice refers to of course takes on a different nature, but the function of the structural, spatiotemporally informed analytic framework remains the same. Finally, the chronotope model is intended as the fundamental structure within the text that, in Bakhtin's words, 'defines genre and generic distinctions', [253] and since the 'perfect' stability of the traditional utopia is central to the utopian genre historically, its presentation in

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[248] Cannon, p. 24

[249] See George Lakoff and Mark Johnson, 'Metaphors We Live By' in Jodi O'Brien, *The Production of Reality: Essays and Readings on Social Interaction*, p. 111.

[250] Suvin, *Metamorphoses*, p. 53 (italics mine).

[251] Bakhtin, p. 16.

[252] See Vice, p. 201-202.

[253] Bakhtin, p. 15.

terms of the Bakhtinian chronotope stands to reason both in terms of content related to its relationship to space and time and in terms of genre-based literary criticism.

Given the above, I therefore suggest that the homeostatic utopian chronotope possesses the following fundamental characteristics: it is organised through *internal regulation*, or *self-regulation* to a certain extent; it maintains such regulation of the system through *negative feedback mechanisms*; and due in part to its isolation and separation in space and time from the zero world, it is a *closed system* which exhibits no fundamental growth or development in terms of its overall structure, nor in the behaviour of its individual components.

Homeostatic Self-Regulation in Plato's Kallipolis:

At first glance, the homeostatic chronotope already exhibits traits that seem to make it a prime candidate for the science-fictional utopian thought experiment: closure and isolation seem ideal prerequisites for utopia as a 'methodological organ for the New',[254] in Suvin's words, in which the model is able to isolate relevant nova as completely as possible for cognitive estrangement within the new utopian system. And indeed, we shall initially approach Plato and More's utopias on these terms. Plato's *Republic,* in particular, is quite literally a thought experiment in that it consists of dialogues in which the Kallipolis is constructed from scratch, with Socrates reasoning from the causes that would bring it into existence (329a-b)[255] – as Hansot observes, 'for Plato, the building of the city *is* the method of examining it'.[256] In attempting to answer the simple question of whether it is always better to be just than unjust, Socrates, rather than examining justice (δικαιοσύνη) as a human virtue, proceeds in a roundabout way by describing Kallipolis as an ideal, and therefore necessarily just, city; in the manner of the most stringent philosophical thought experiments, his aim is to isolate what it is that renders this city just, and then to describe justice as an analogous human virtue. Initially, Socrates identifies the virtues of wisdom (σοφία), courage (ἀνδρεία), and moderation (σωφροσύνη) as existing in this ideal city by associating them with certain classes of citizens: wisdom is seen as particular to the rulers of the city, the 'guardians' (440); courage to the military class or 'auxiliaries', who protect the city; and moderation to all classes, in that it is the self-discipline that holds across categories, including the third class of workers. Justice, finally, is that which remains once the other virtues have been accounted for: it is 'doing one's own work and not meddling with what isn't one's own' (433a). Moreover, justice plays a supporting role for moderation, courage and wisdom, as it is also 'the power that makes it possible for [the other virtues] to grow in the city and that preserves them when they've grown for as long as it remains there itself' (433b).

Analogously, Socrates determines that the human soul is divided up into three sections that correspond to the three classes of the city, since 'we are surely compelled to agree that each of us has within himself the same parts and characteristics as the city' (435 d) – as Robert Gregg

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[254] Suvin, *Metamorphoses*, p. 66.
[255] All quotations from Plato's *Republic* are taken from Plato, *Republic*, trans. G. M. A. Grube (Indianapolis: Hackett, 1992).
[256] Hansot, p. 47.

Bury writes, the individual is assumed to be a 'micropolis' with regard to the state.[257] Wisdom and courage are accordingly found in the 'rational' and 'spirited' parts of the human soul (441e), respectively, with reason being most developed in the guardians and spirit in the auxiliaries, while the third characteristic, appetite, is most developed in the workers.[258] Just as the guardians are tasked with the maintenance of order among the auxiliaries and workers, the corresponding section of reason in the soul is in charge of maintaining order among the other elements of the soul: for example, an individual is wise if reason rules over their soul, and courageous if spirit is the predominant element. Moderation, in turn, occurs when the soul exerts self-discipline over itself by having its reason control the lower elements. Finally, as in the city, the soul is just if each element performs its own function: 'One who is just does not allow any part of himself to do the work of another part or allow the various classes within him to meddle with each other. [...] He regulates well what is really his own and rules himself [...] and harmonizes the three parts of himself like three limiting notes in a musical scale' (443d-e). As a result, justice ultimately appears to be a kind of harmony or internal balance, but it can also be read as a form of overall virtue or morality – as 'not only a virtue; it is something more than a virtue', as Bury remarks, while R. L. Nettleship compares it to a 'sense of duty' and J. Adam suggests that 'Plato's Justice is in reality not so much a specific virtue, as Virtue or Righteousness in general'.[259]

As a thought experiment, then, the Kallipolis is constructed as a model in which different groups of people work together in such a manner that the city becomes so harmonious and balanced that it exhibits the overall virtue of justice, or even virtue itself, and thus represents the ideal city; moreover, this model is achieved through the *harmonious self-regulation* of these human elements, just as the separate elements of the soul would work together in a self-regulatory fashion in the ideal, or just, soul. This self-regulation can thus be seen as a fairly straightforward example of a homeostatic, self-balancing feedback mechanism: each element, while in movement through the city and fulfilling its regular work, interacts with the other elements exactly to the extent that the system remains in balance, much like Cannon's 'coöperating factors' in the organism. For instance, the workers indulge their 'appetite' to the extent that they work hard out of desire to provide well for themselves and the other classes, but the guardians in governing them make sure that their appetite does not grow into such a sense of self-importance that they deign to become guardians themselves. Likewise, the guardians devote themselves to philosophical study and rule on behalf of the city, but their sense of duty compels them to restrict private luxuries to the bare minimum (419e) as an outgrowth of this misplaced 'appetite' would make them less capable as rulers. Lastly, in a similar manner, the auxiliaries are compelled by the rulers to find an outlet for their 'spirit' in defending the city,

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[257] Robert Gregg Bury, 'The Ethics of Plato', p. 275.

[258] As Sean Sayers points out in *Plato's Republic: An Introduction*, the term ψυχή or 'psuche', standardly translated as 'soul', here has 'no particularly religious, spiritual or seven specifically mental connotations': it is simple what animates the matter of any living organism (Sayers, *Plato's Republic: An Introduction*, p. ix-x). Sayers accordingly chooses to use the term 'self' or 'personality' instead, but I will continue to use the word 'soul' as this is the term employed in the translation I am using.

[259] All quotations taken from Robert Gregg Bury, 'The Ethics of Plato', p. 277.

as this same spirit would presumably cause chaos and imbalance if given free rein within the city walls. Thus, possible 'disturbing conditions', in Cannon's terms, are averted, and constancy is maintained, while the resulting equilibrium thereby mirrors the balance of justice of the human soul, described above directly as 'regulation' and 'harmonization'. This feedback, in turn, creates a society that is completely stable and constant, like a self-regulating thermostat, with no obvious end to its regular self-governing motions in sight, which thus gives the impression of immobility: as A. L. Morton writes in *The English Utopia*,

> Plato believed that what was necessary was to devise a city state with a sufficient hinterland and a fixed optimum population, to give it a finished and perfect constitution, regulating the relations of classes, the nature and scope of industry, the type and extent of the education necessary for the various classes, the religion best calculated to serve its social stability. The foundation-stone was justice—which meant the due subordination of classes and the recognition by all of their respective duties and rights. Such a state, he supposed, if it could once be established, might endure unchanged for ever.[260]

If one takes justice as representing the underlying Platonic 'Good' of social organisation, then it is also, according to Plato, the underlying template that drives the homeostatic mechanism of utopian self-organisation in the ideal city.

And indeed, this drive towards a more 'civilized society' in Cannon's terms is further supported here by a moral imperative, which adds to its dimension of utopian idealism as the perfect, thus necessarily separate, Platonic social form: justice is fundamentally associated with happiness, thus forming a common social aim that all should work towards. In fact, the underlying ethical system advocated in the *Republic* to lead to a general attainment of justice, or general virtue, is somewhat unclear: it seems that Plato's ethics can here be classified neither in purely deontological nor in consequentialist terms according to modern ethical theory – deontological approaches present theories of what is right independent of what is good, whereas Plato justifies justice with regard to its consequences; conversely, consequentialist approaches present theories of what is right in terms of what promotes the good, whereas Plato praises justice on its own terms.[261] Instead, Socrates presents justice as both a good for its own sake as well as valuable for its consequences: he states 'I myself put [justice] among the finest goods, as something to be valued by anyone who is going to be blessed with happiness, both because of itself and because of what comes from it' (357d-358a). Justice, then, is strongly associated with happiness – in fact, Plato argues that being just is the same thing as being happy, as Socrates states that 'a just person is happy, and an unjust one wretched' (354a). As such, Eric Brown describes Plato's ethical approach here as *eudaemonist,* 'according to which a person should act for the sake of his or her own success or happiness (*eudaimonia*)', and more precisely as an egoistic kind of consequentialism: one should act so as to bring about states of affairs in which one is happy or successful';[262] on a larger scale, however, one might say that this translates to utilitarianism. Overall, then, as Morson notes, Socrates envisions 'the best state of the commonwealth', in Thomas More's phrase, as one which is organised in order to 'secure the

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[260] A. L. Morton, *The English Utopia*, p. 41.
[261] See Eric Brown, 'Plato's Ethics and Politics in *The Republic*' in *The Stanford Encyclopedia of Philosophy,* 1.1.
[262] Brown, p. 6.

greatest possible happiness for the community as a whole',[263] and this organisation appears to take the shape of self-regulatory feedback mechanisms resulting in 'organized self-government'.[264]

Homeostatic Self-Regulation in More's Utopia:

More's Utopia, meanwhile, is one in which there is not one underlying virtue, but 'the natural virtues [are] allowed to assume their natural forms', as Frye writes;[265] in doing so, however, it is a less clearly delineated thought experiment, since it presents itself as a working, living instantiation of what in the Kallipolis is merely sketched out: Morton points out that

> More was not concerned to repeat what had already been done in the *Republic,* to build logically, step by step, the principles upon which a commonwealth should be based. Instead, he takes the principles for granted and presents us with a living picture of such a Commonwealth already discovered in full working order.[266]

Kumar also notes that 'More saw his own *Utopia* as partly a continuation of the *Republic*, fulfilling Socrates' desire in the *Timaeus* to see the abstract Republic in action actualized';[267] Utopia, he adds later, is 'a society in full operation in which we are invited vicariously to participate'.[268] As such, one might assume that Utopia represents an even more workable, fleshed-out vision of how a self-regulating ideal society might operate, given its supposed increase in animate viability; however, this image is somewhat undermined by the fact that while Plato is clear in his authorial intentions of painting the picture of a perfectly just and thus ideal society, More's stance is less clear-cut: Morson mentions the commonly held view that '*Utopia* was designed by its author to be read in a tradition of deeply ambiguous works, such as Erasmus's *Praise of Folly*', and that 'it was intended to offer only a qualified endorsement to Hythloday's views about "the best state of a commonwealth".'[269] Indeed, Ferns points out that it even 'contains elements suggesting that the whole work is little more than an elaborate scholarly joke', and that this is 'an impression which More's subsequent correspondence reinforces'.[270] However, More's work at the same time represents, as Freedman writes, 'an immensely liberating act' which

> opened up new literary possibilities, which, perhaps, could only first become visible in the bright morning of mercantile capitalism when, for the first time in history, the efforts of human beings were not only leading to the discovery of new worlds but were being seen to restructure social life in fundamental ways.[271]

And it is this restructuring of social life that can indeed be taken seriously in More's work; Morton describes how More grew up in an environment where feudalism was replaced by the

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[263] More and Plato quoted in Morson, p. 76.
[264] Cannon, p. 300.
[265] Frye, p. 324.
[266] Morton, *The English Utopia,* p. 41.
[267] Kumar, *Utopia & Anti-Utopian in Modern Times*, p. 5
[268] Kumar, p. 25.
[269] Morson, p. 75.
[270] Ferns, p. 3.
[271] Freedman 'Science Fiction and Critical Theory', p. 233.

growing merchant class, and in which dynasties like the Tudors gained an absolutist form of power that

> for all its oppressiveness, was not without a genuine popular basis, since it stood for order, for national as opposed to local organisation, and for an internal stability and a secure and considerable market without which the position of the bourgeois could not be consolidated.[272]

It is this new sense of order and stability, then, which More semi-seriously seems to want to replicate in Utopia.

As a humanist, however, More is less interested in discovering the ideal form of virtue as a Platonic ideal, and more in seeing what human reason can produce when left to its own devices. In Book I of *Utopia*, More employs satire to directly attack his present society, and in Book II he uses the voice of Hythloday to provide a positive counterexample to contemporary social organisation. This utopian model, though not constructed around major mutually balancing elements like the social classes of the Kallipolis, is also fundamentally based on self-regulating feedback – that is, regular movement within the system that ultimately serves the purpose of maintaining its functioning: for instance, in the fifty-four cities of Utopia that are all built to the same plan, the citizens change their houses by lot every ten years so as to make sure that no feelings of possessiveness develop, which would be disruptive to the system just like material desire in the guardians of the Kallipolis or misplaced spirit in the guardians. Moreover, the management of the land is highly regulated and optimised, with large families practising agriculture, and every individual citizen is obligated to spend at least two years in the country in order to learn the basics of agriculture and be thus prepared to switch to this work at short notice if the economy requires it; officially, this is done so no-one must 'continue long in that hard and sharp kind of life' (45). Morton suggests that this is More's way of combating 'what Marx rather harshly calls "rural idiocy",' an effect that capitalism has created in widening the gulf between the independent life and distinctive urban culture of towns and the countryside that has become their mere tributary; the result of such location-based regulation in Utopia is therefore of regular movement that enlivens everyday life in both rural and urban areas. In addition, the flow of work in all locations is maintained as a matter of fact, as well, given that More's society is essentially communist – unlike Plato's Kallipolis, where communism only really exists among the guardians. Accordingly, there is no money in Utopia, education is the same for all, and everyone has an equal voice in the election of the governing magistrates – which, in turn, like the guardians in Kallipolis, are primarily in place to make sure that all citizens perform their fair share of work and keep the system moving: 'The chief and almost the only office of the syphogrants is to see and take heed, that no man may sit idle, but that every one applies his own craft with earnest diligence.' (56)

On the domestic level, as well, there are feedback systems in place to ensure that there can be no outgrowth of personal indulgence, feelings of injustice, or pride, that could endanger the even functioning of the overall society, with the latter being particularly shunned: for

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[272] Morton, p. 37.

instance, all citizens dress alike (in leather, plain-coloured linen, or white), they take their household goods from a common repository, and they eat the same foods at communal meals; moreover, no marriage is conducted without complete transparency of what is being entered into, which leads to the bride and groom-to-be examining each other naked before the bond is entered. Accordingly, the Utopians supposedly feel no vanity or need for competition, and thus reject all luxuries and ostentatious displays: like their simple clothing, the Utopians' houses are plainly decorated, while jewels are the playthings of children and gold is used to make chamberpots and chains for bondmen. The overall result is a society that appears to be, as Ferns writes, '*fundamentally* orderly [...] unlike More's world, with its frequent lapses into chaos and anarchy'.[273] And indeed, in its basic set-up, the social system of Utopia seems to be essentially self-regulating due to the lack of disruptive human behaviour: there are no locks on the doors of the Utopians' homes, and there are very few laws to keep the citizens in check, something which is helped by the superior quality of the Utopian educational system and the fact that the most obvious interpretation of a law will always count as the correct one.

Indeed, with its elaborately detailed communist system, one might even say that More's Utopia bears more likeness to Cannon's self-regulating organisms than Plato's Kallipolis, since it is arguably more egalitarian and at least chooses its own leaders, as opposed to the aristocratic rule of Plato's philosopher-kings. Also, external threats to the integrity of the system are dealt with in close alignment to Cannon's model: as Hansot notes, Utopians never initiate military aggression against other countries unless it is to disturb their own peace in punishing a tyrant in a country they are on good terms with, and thus 'with this one exception, war would seem to belong to the category of "accidents," which originate outside Utopia and to which Utopians respond in order to preserve their way of life'.[274] In this way, the Utopians respond to 'disturbing conditions' in Cannon's terms only to the extent that constancy of the closed inner system is preserved. However, as Jack Hexter notes, the citizens of Utopia require more external (though in-system) guidance via laws and rules – despite their relative paucity – than those of Kallipolis, since they are not already suited by their specific nature to inhabit certain roles in society, unlike Plato's guardians, auxiliaries, and workers: 'The sound social, political, and economic regimen under which they live is the cause of the civic virtue of the Utopians, not the other way about; their institutions are not the creations but the creator of their good qualities'.[275] Moreover, these laws and rules might be few, but they are fairly strict even for More's times: indeed, they reflect the fact that More lived in a monastery for four years, and thus 'Carthusian and Benedictine rules underlie much of the highly regulated order of Utopia', as Kumar notes.[276] And yet, much as in Plato's Kallipolis, More did not seem to think this would detract from his utopia's desirability, possibly as he himself was 'strongly drawn to the extreme austerity' of monastery life as well as the organised reign of dynasties such as the Tudors.[277]

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[273] Ferns, pp. 32-33.
[274] Hansot, pp. 70-71.
[275] Jack H. Hexter, *More's Utopia: The Biography of an Idea*, pp. 59-60.
[276] Kumar, *Utopia & Anti-Utopia in Modern Times*, p. 19.
[277] Morton, p. 38.

In fact, in terms of ethics, More's *Utopia* joins Plato's *Republic* in essentially conflating virtue with happiness, though not via the medium of justice or another kind of harmony, and not from a consequentialist perspective, either – instead, this society is founded straightforwardly on hedonic utilitarianism, such that increase of happiness itself is the aim, rather than a balance of elements that leads to happiness. Hythloday reports that 'they discuss virtue and pleasure, but their chief concern is what to think of human happiness, and whether it consists of one thing or more' (59).[278] He also notes that 'on this point, they seem overly inclined to the view of those who think that all or most human happiness consists of pleasure', and that by associating happiness with virtue and defining virtue as 'living according to nature', the Utopians make pleasure-seeking a virtue in itself (59). While their 'first rule of reason is to love and venerate the Divine Majesty' both out of gratitude for one's existence and for one's 'capacity for happiness', the second rule is to 'lead a life as free of anxiety and as full of joy as possible, and to help all one's fellow men toward that end' (59). Moreover, just as John Stuart Mill differentiates in his writings on utilitarianism between higher and lower pleasures – such as playing an instrument versus enjoying alcohol – Utopians do the same: Hythloday states that 'in all their pleasures, the Utopians observe this rule, that the lesser pleasure must not interfere with the greater, and that no pleasure shall carry pain with it as a consequence' (56). Lastly, their utilitarian stance becomes particularly obvious in their attitude towards warfare: in order to further reduce the number of the 'accidents' of warfare that they are involved in, the Utopians offer bribes to enemy troops in exchange for the assassination of the enemy's king, as 'it enables them, by the sacrifice of a few guilty men, to spare the lives of many innocent persons who would have died in battle, some on their side, some on the enemy's' (79). As such, the drive towards a more 'civilized society' in Cannon's terms is thus further supported here by a moral imperative, similar to that of Plato's Republic: if all citizens abide by the rules and minimal laws of Utopia, austere as they may seem at times, the system is promised to essentially regulate itself into a state where individual happiness is maximised through communal cooperation. Indeed, such operation-smoothing measures as tactical warfare and fairly stringent, nigh-monastic rules might well be taken to satisfy Cannon's assertion that 'homeostasis is not accidental, but is a result of organized self-government' even more exactly than the justice-producing feedback relations of Plato's abstract and class-based Kallipolis.[279]

Utopia and Kallipolis as Autopoietic Living Systems:

At this stage, given that Cannon was referring to human bodies in making the above claim, and that the feedback relations we have identified in these societies are largely based on those of organic systems, it is also worth considering whether adherence to Cannon's four propositions for homeostasis in Plato's Kallipolis and More's Utopia has any implications for the successful functioning of the utopian chronotope in these novels with regard to whether these societies are

[278] All quotations from Thomas More's *Utopia* are taken from Thomas More, *Utopia* (New York: Norton Critical Editions, 2011).
[279] Cannon, p. 300.

fundamentally describable as *living systems.* This is an important concern for various reasons, not least because we initially introduced homeostasis as a structural model to reconcile the spatial and temporal isolation of these two societies with the fact that they are meant to contain living human individuals, which presumably are subject to growth and change like everyone else; moreover, as we have seen, More's utopian vision is supposedly a more fleshed-out, 'living' application of what in Plato is mere abstract philosophical speculation. Finally, a structural understanding of both Kallipolis and Utopia as living systems of some description would be an interesting counterpoint to the apparent fundamental lack of dynamism in the traditional utopia – a view that is already somewhat mitigated by an understanding of these systems as *homeo*-static rather than just static.

And indeed, this case is supported by the fact that both Plato and More clearly attempt to present their utopian inhabitants as fundamentally human and driven by human desires and emotions, such as 'appetites' in Plato and pride as well as higher and lower pleasures in More, which in turn dictate the balancing regulatory mechanisms whereby these ardours either serve the system (Plato) or are subdued by it (More). However, the matter is still complicated both by the basic spatiotemporal isolation of the system and by the fact that the value of human life is not entirely clear in a system whose ultimate aim is stability. In societies such as these, which achieve this stability by being basically *utilitarian* in their ethical approach – thus valuing overall happiness more highly than that of individuals – one must wonder whether there *can* be much value to the individual human life, and indeed whether we may extrapolate from this to say that there is much value to the overall system maintaining *itself* as a living organism rather than as a mere mechanism for the mathematical stabilisation of the overall happiness of its individual components. The fact that the Utopians are prepared to sacrifice foreign lives for peace, for example, is not a hopeful sign in this respect, and calls to mind the gruesome dismemberment of animals that Cannon describes as part of his quest to understand their internal self-regulatory processes: they form individual sacrifices made on behalf of the common good, but crucially not by the individuals themselves.

Despite all this, though, we shall briefly entertain the idea of Plato and More's utopias as living systems, given the stabilising regulation of their homeostatic chronotopes; after all, this might give us a better indication of their ultimate value as utopian constructs and also as science-fictional utopian thought experiments. For this purpose, it is interesting to note that while Cannon examined the self-regulatory arrangements of living organisms, and the cyberneticists were interested in feedback 'whether in the machine or in living tissue',[280] Humberto Maturana and Francisco Varela later argued that such self-regulation in fact *constitutes* life, which also raises interesting questions regarding societies as living organisms: they suggested that living beings regulate themselves through a process they term 'autopoiesis' or 'self-making', whereby

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[280] Indeed, the first example of self-regulating systems that Wiener mentions in his chapter on feedback in *Cybernetics,* before that of the governor of the steam engine, is that of two patients suffering from forms of the disorder *ataxia*, or difficulty in commanding one's own musculature following damage to the brain or spinal cord due to disrupted feedback along the nervous system (see Wiener, *Cybernetics,* pp. 95-6).

'*autopoiesis is necessary and sufficient to characterize the organization of living systems*'.[281] Indeed, they claimed that any structural transformation here must 'take place in a manner determined by and subordinated to its defining autopoiesis', as 'in a living system loss of autopoiesis is disintegration as a unity and loss of identity, that is, death'.[282] Maturana and Varela were seeking a designation that would 'by itself convey the central feature of the organization of the living, which is autonomy', and in the term 'autopoiesis', 'praxis' refers to action and 'poiesis' to production;[283] they thereby attempted to replace other possible definitions of life in organisms, such as 'the enumeration of their properties' including reproduction and evolution.[284] Moreover, Maturana and Varela explicitly aligned their concept of autopoiesis with the homeostatic process described by Cannon: since 'an autopoietic machine continuously generates and specifies its own organization', 'a living system is an homeostatic system whose homeostatic organization has its own organization as the variable that it maintains constant through the production and functioning of the *components* that specify it'.[285]

One might say, then, that the internally regulated, homeostatic, *utopian* chronotope likewise forms an 'autopoietic machine' in the constant self-generation which allows it an overall balance in its functioning, including against 'perturbations' such as those which require warfare; the outcome might well therefore be classified as a 'living' system according to Humberto and Maturana's definition of autopoiesis. Indeed, the term 'autopoiesis' is not in itself new to utopianism: in a chapter on Bloch, Peter Thompson for example suggests that Bloch in fact proposes a 'processual move towards an autopoietic utopianism whose only truly concrete characteristic was its Not-Yetness', and does so by 'merging G. W. F. Hegel's and Friedrich Nietzsche's ideas of *Werden* and *Sein* (Becoming and Being)' as a 'partisan of possibility and not of inevitability'.[286] Later, Thompson adds that in Bloch's *The Principle of Hope*, 'the *Heimat* [homeland] to which we wish to return but in which we have never been exists as the end of an autopoietic process rather than at some point already past, and the process is one of collective rather than individual endeavour'.[287] Once again, however, Bloch's vision of the utopian Not-yet does not necessarily align with the rigorous modelling of science-fictional utopian thought experiments, as it is perhaps better associated with the intimate space of dreams, wishes and fairy tales, as argued in the introduction; our application of the term will therefore not be as a similarly vague indicator of supposed dynamism, but on solidly structural grounds, even in the analogical sense – in this case, regarding the viability of self-regulating structures as living

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[281] Humberto Maturana and Francisco Varela, *Autopoiesis and Cognition: The Realization of the Living*, p. 82 (italics in original).

[282] Maturana and Varela, p. 112.

[283] At length, the rather charming etymology is as follows: 'It was in these circumstances that one day, while talking with a friend (José Bulnes) about an essay of his on Don Quixote de la Mancha, in which he analysed Don Quixote's dilemma of whether to follow the path of arms (*praxis*, action) or the path of letters (*poiesis*, creation, production), and his eventual choice of the path of praxis deferring any attempt at *poiesis*, I understood for the first time the power of the word 'poiesis' and invented the word that we needed: *autopoiesis*. This was a word without history, a word that could directly mean what takes place in the dynamics of the autonomy proper to living systems.' (Maturana, Introduction to Maturana and Varela, *Autopoiesis and Cognition*, p. xvii).

[284] Maturana and Varela, p. 83.

[285] Maturana and Varela, p. 48 (italics in original).

[286] Peter Thompson, 'What is Concrete about Ernst Bloch's 'Concrete Utopia'?' in *Utopia: Social Theory and the Future*, p. 34.

[287] Thompson, p. 38.

organisms, as applied to homeostatic utopia. However, whereas we can thereby once more also reject the dynamism that Bammer and Vieira associate with Bloch's ever-elusive principle of hope, as we have previously done in the introduction, the genuine autopoiesis of living systems might yet still provide an *alternative* source of relative dynamism in these models, to support the relatively dynamic nature of the feedback systems that we have already described in these utopias. Moreover, like Cannon's homeostasis, Maturana and Varela's autopoiesis has also been interpreted as applicable to the functioning of human societies: in his preface to Humberto and Maturana's *Autopoiesis: The Organization of the Living,* Stafford Beer writes 'I am quite sure of the answer: yes, human societies *are* biological systems. [...] The social institution has identity in the biological sense; it is not just the random assemblage of interested parties that it is thought to be'.[288] In his independent introduction to the book, Maturana agrees, focusing on the interrelationship between the individual's autopoiesis – and indeed homeostasis – and that of the larger social organism:

> Any biological stabilization of the structures of the interacting organisms that results in the recurrence of their interactions may generate a social system. [...] A society, therefore, operates as a homeostatic system that stabilizes the relations that define it as a social system of a particular kind.[289]

In fact, despite *Utopia*'s aforementioned perception by some critics as a living, fleshed-out version of Plato's utopian sketch, Plato's Kallipolis – as an analogy of the just human soul – could particularly be seen to resemble a living form, in that the city/soul analogy in a sense represents a city/human analogy, whereby self-regulatory justice is the mechanism that allows it to function successfully over time; of course, this functioning is described in moral terms, but the leap could be made given Maturana and Varela's claim regarding homeostatic autopoiesis being both a necessary and sufficient condition for life. However, while the first two characteristics of the homeostatic utopian chronotope given above – internal or self-regulation, through negative feedback mechanisms – quite possibly support this reading, it is the third characteristic – the *closed* and thus fundamentally change-averse nature of the homeostatic system – that seriously undermines this endeavour, both for Plato's Kallipolis and for More's Utopia.

I have previously referred to Utopia and Kallipolis as 'spatiotemporally and developmentally closed systems', thus identifying them with the 'closed systems, where known forces are balanced',[290] in which Cannon locates homeostatic mechanisms, as well as with the organizationally closed, 'information-tight' systems studied by the cyberneticists.[291] Once again, this closure in Plato and More's societies can be related back to their spatiotemporal isolation, linked above to their respective cultural perceptions of time and the changes that human beings might perform in the present if they wish to move closer to perfection or salvation; as we have seen, immediate change in the tangible reality of the zero world takes a backseat in both Greek and Christian ideologies. The effect is that both utopias exist in intellectual and chronotopical

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[288] Stafford Beer, Preface to *Autopoiesis: The Organization of the Living* (originally published separately) in Maturana and Varela, *Autopoiesis and Cognition,* pp. 70-71.
[289] Humberto Maturana, Introduction to *Autopoiesis and Cognition,* p. xxvii.
[290] Cannon, p. 24.
[291] Ross Ashby, *Introduction to Cybernetics*, p. 4, quoted in Capra, *The Web of Life*, p. 65.

separation from the readers' worlds – a fact that is also quite evident in the lack of a clear *transition* to these societies: Utopia was apparently discovered by King Utopus at some point in the past and apparently simply colonised by him, 'which also brought the rude and wild people to that excellent perfection in all good fashions, humanity and gentilness',[292] with no indication as to how this change was performed; and Kallipolis, of course, is an entirely cerebral exercise to begin with and thus starts from first principles with no link to our world. Accordingly, Frances Bartkowski writes that 'the earlier utopias […] most often lack any indication of the process of change necessary to move from there'.[293] This separation, then, arguably ends up reducing both utopias to intellectual exercises performed for the sake of mere intellectual curiosity or even playfulness; utopia becomes a game, not in the aforementioned methodological sense of the utopian game as thought experiment, but in the sense of a diversion that does not serve as an incentive for true social change. However, once more, it is doubtful whether such an abstract model is thus indeed compatible with individual human lives, as questioned above, despite the fact that the *overall* model might well be understood as 'living' in line with Cannon's understanding of self-regulating organisms, and particularly with Maturana and Varela's autopoiesis: a closed system, after all, cannot fundamentally grow and change, and neither can the individual components that make it up, if the overall relations between homeostatic elements are to remain the same.

Indeed, with regard to Plato's Kallipolis, this incompatibility can already be noted in Kumar's claim that 'if Arcadia showed man living within, and according to, nature, the Hellenic ideal city represented human mastery over nature, the triumph of reason and artifice over the amoral and chaotic realm of nature';[294] arguably, if nature itself is subdued in Kallipolis, then there is no room for *human* nature to develop freely, either. Organic change and development, indeed, are simply incompatible with the perfection of the forms that Plato attempts to represent through the internal organisation of perfectly just Kallipolis: as Hansot writes,

> The changelessness of utopian society is part of its transcendence, signalling that the nature of its ideals is different in kind from those of contemporary societies. For Plato the permanent is the real, and the immobility of the ideal society is meant to be in sharp contrast to a world of flux and change.[295]

Subsequently, Hansot notes, 'when change does occur' in Kallipolis, 'it takes the weakest possible form—that of specifying already established principles',[296] thus leaving no room for development in individual human lives. Indeed, this is done in this society by design, she adds: 'while its purpose is to create rightly ordered souls, its effect is to secure the citizens of utopia from any and all avoidable forms of change', reflecting an ahistorical order with 'an end that is unchanging, objectively real, and identical for all men'.[297] This resistance to 'any ideal of improvement',[298] in Neville Richard Murphy's terms, impedes real-world realisability, but it is

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[292] Morton, p. 52.
[293] Frances Bartkowski, *Feminist Utopias*, p. 14.
[294] Kumar, p. 4.
[295] Hansot, p. 28.
[296] Hansot, p. 22.
[297] Hansot, p. 32.
[298] Neville Richard Murphy, *The Interpretation of Plato's Republic* (Oxford: Clarendon Press, 1960), p. 44.

again very much in line with the *Republic*'s homeostatic chronotope as informed by Plato's spatiotemporal worldview: after all, neither perfection nor the circular temporality of the 'Worm Ouroborous' eating its own tail endlessly have much use for the improvement of individuals on any relevant scale. Instead, the 'eternal present of utopianism' takes over, in which individual change is both unnecessary and *irrelevant* due to the myopic constancy of self-maintenance in the homeostatic utopian system.

Regarding the corresponding closure and changelessness of More's Utopia, and beginning again with its setting, we are, for example, never told exactly where the island is to be found, either in space or time – indeed, the coordinates are mentioned, but they are hidden by a cough: 'one of the company, who I suppose had caught cold on shipboard, coughed so loudly that some of Raphael's words escaped me'.[299] Accordingly, as Ferns notes, '[Utopia's] location is the one piece of information conspicuously absent from an account which Hythloday's readers beg him to make as thorough and exhaustive as possible'.[300] Its name itself, however, of course reminds us that we had better not even try to pinpoint it, given that it is really 'no place'; in fact, Louis Marin also observes this 'neutralisation' in other geographical names within Utopia, as Ruppert notes: 'there is a river whose name means "no-water" (Anydrus)' and 'a prince whose name means "no-people" (Ademus)' in addition to the 'no-place' of the island itself.[301] This, along with its spatial separation via King Utopus's channel from the mainland, literally and symbolically 'entrench' Utopia's distancing from the reader's world, and thus the sense of its unperturbed and unperturbable isolation and closure. Bammer writes that 'King Utopus symbolically births his own utopia by cutting off the umbilical cord that had joined it to the mainland',[302] but it is in fact unclear whether the utopia is actually viable for survival as a living system on its own, let alone whether it can sustainably nurture its citizens in their natural capacity for change: like the Kallipolis in Hansot's estimation, Morton designates it a space that is 'unhistorical, allowing no place for growth and development'.[303] Indeed, as Suvin points out, there is *some* qualification to this: 'even in More there is change', he writes, giving the example that 'the Utopians open up to Greek knowledge and Christian religion';[304] however, Johns counters this with the observation that the citizens of utopia must, 'wishing to gain learning, attend talks in their "spare time . . . before daybreak" so as to not waste work hours, and they engage themselves in conversations merely to "amuse themselves" rather than to profit intellectually', for 'brain work is reserved for a hand-selected elite'.[305] Individual development is therefore discouraged by the system itself, and presumably the 'brain work' by the elite is only in place to keep the homeostatic self-regulation ticking over, not for the true intellectual growth of these knowledge workers. Indeed, as Ferns notes, the entire society is set up in such a way

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[299] Ferns, p. 40.
[300] Ferns, p. 39.
[301] Ruppert, p. 84.
[302] Bammer, p. 14.
[303] Morton, p. 52.
[304] Suvin, 'Locus, Horizon, and Orientation', p. 73.
[305] Johns, p. 181.

that encounters with the new or unknown are minimised, thus inhibiting any possible alteration of experience and further new-ness:

> While *Utopia* depicts a world radically different from that of its author, one of its most striking aspects is the extent to which the element of novelty is downplayed. Not only are there few opportunities to do anything wrong, there are scarcely any opportunities to do anything *new*. While travel is permitted within Utopia [though with the restrictions we have noted], there seems little point in it, given that all their cities are "exactly alike" [and] "identical in language, customs, institutions, and laws".[306]

In Hansot's opinion, this comes as no surprise in itself: she draws parallels between More and Plato's perception of how to present perfection, and observes that 'the Utopian society that Hythloday visits is one that does not permit change or development *in its essentials*', since 'permanence and immutability, for More as well as Plato, were essential characteristics of truth. The true nature of pleasure is as little open to debate as the immortality of the soul and belief in a divine providence ruling the world, required by King Utopus of all his citizens.'[307] Again, Hansot adds, this is directly related to the temporal worldview of Renaissance Christianity, in which salvation is only possible at the end of time and is thus not aided by great shifts within earthly society: 'Utopian self-denial significantly resembles Platonic contemplation in that it is an activity that varies neither in its nature nor in its effects. Renunciation of present pleasure does not change anything within Utopia; it serves only to reinforce the extirpation of pride and the hope of reward for good deeds in the afterlife'.[308] Accordingly, she notes that regarding Plato and More, 'change—understood as force for novelty and creativity—was alien to both outlooks; like Plato's craftsman, the Christian artisan only mimics an order he can't create'.[309] More was, in fact, as Ferns notes, 'someone who responded eagerly to new thinking, to new ideas and possibilities', as evidenced even by the mere fact that he constructed a utopian society from scratch that functioned very differently from his own social environment – but on the other hand, Ferns adds, 'it would be wrong to see More, as some critics have done, as therefore progressive'.[310]

All this resistance towards individual development in these utopias, then, as related to their closed homeostatic chronotopes, seems less than ideal in terms of the continued survival of the system as a whole: after all, as we have seen, it is the *feedback relations* between individuals and groups of individuals that give autopoietic life to the homeostatic social system, and if these relations fail because these individuals are no longer capable of fulfilling their specific roles and duties given that no room was left for their growth and development, the overall system could fail. For example, an auxiliary in Kallipolis might discover a love of learning and governance and thus develop a desire to become one of the philosopher-king guardians, or a citizen of Utopia might form an urgent wish to construct elaborate clothing that is not leather, plain-coloured linen, or white, and since there are no mechanisms in place for such individual development to occur, any such frustrations building up on a larger scale and leading to possible

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[306] Ferns, p. 43.
[307] Hansot, p. 69 (italics mine).
[308] Hansot, p. 69.
[309] Hansot, pp. 56-7.
[310] Ferns, p. 34.

rebellion would eventually render the system unworkable, since boredom and frustration might bring about strikes and resistance to the everyday homeostatic routines that are expected of the citizens. As such, individual *lives* in their fullest form are not necessarily compatible here with the life of the system as a whole – and indeed, this is a worry that Maturana and Varela themselves share concerning the organisation of a society as an autopoietic living system, as we shall now see.

The Subordination of the Individual in Plato and More's Utopias and in Cannon:

Firstly, regarding how living and thus autopoietic individuals would even function within an autopoietic society, Maturana and Varela note that autopoiesis in itself *can* take place at different levels of order, which renders an autopoietic society a possibility in the first place: 'an autopoietic system can become a component of another system if some aspect of its path of autopoietic change can participate in the realization of this other system', they write, and consequently, 'the new system becomes in its own right an autopoietic unity of second order'.[311] Following this, they state that 'if human societies are biological systems the dynamics of a human society would be determined through the autopoiesis of its components'.[312] However, in such an integration, the process apparently entails an actual as well as metaphorical creation of hierarchies:

> When this occurs, the component (living) autopoietic systems become *necessarily subordinated*, in the way they realize their autopoiesis, to the maintenance of the autopoiesis of the higher order autopoietic unity which, through their coupling, they define topologically in the physical space.[313]

In a human society functioning as biological system, then, it seems that human members must be subordinated to the self-regulating functioning of the society as a whole, which of course is a highly problematic assertion to make; indeed, Maturana and Varela explicitly acknowledge the 'ethical and political implications' of such a claim and concede that 'whatever we may say biologically will apply in the domain of human interactions directly, either by use or abuse'.[314] In fact, Varela therefore fully refuses to speak of human societies as autopoietic in his book co-authored with Maturana, which is why the above quotes on the matter are taken from Maturana's independent introduction; Maturana, though, likewise does not spend much time on this, noting in fact that the autopoietic subordination of individual to society might have totalitarian tendencies, given that

> The spontaneous course of the historical transformation of a human society as a unity is towards totalitarianism; this is so because the relations that undergo historical stabilization are those that have to do with the stability of the society as a unity in a given medium, and not with the well-being of its component human beings that may operate as observers.[315]

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[311] Maturana and Varela, p. 110.
[312] Maturana and Varela, p. 110.
[313] Maturana and Varela, p. 110.
[314] Maturana and Varela, p. 118.
[315] Maturana, Introduction to *Autopoiesis and Cognition,* p. xxviii.

Moreover, Maturana adds that any processes that mainly intended to maintain social autopoiesis may constitute a life-threatening loss of freedom to this individual:

> A human being that through his interactions with other human beings participates in interactions proper to their social system in a manner that *does not involve his autopoiesis as a constitutive feature of it, is being used by the social system but is not one of its members.* If the human being cannot escape from this situation because his life is at stake, he is under social abuse.[316]

Indeed, one could argue that the homeostatic chronotope of Plato and More's utopias does in fact rely on the subordination of the individual life, such that one might almost speak of 'social abuse' – at any rate, the system appears to maintain itself through a certain amount of coercion, which in turn explains how the suppression of individual change and development on the part of individuals is enacted, and also why this resistance to change does not cause uprisings among the population, as suggested above.

In the Kallipolis, for instance, all citizens should have the capacity to attain happiness in the just city according to its eudaimonic aim as outlined above – despite the fact that only the guardians are autonomous – since, as Brown suggests, everyone should be free of 'regret, frustration, and fear'.[317] Indeed, Jonathan Lear claims that there must be a 'causal-psychological transaction' between the justice, and therefore happiness, of Plato's city and that of its inhabitants, for example through the education the city provides; however, G. R. F. Ferrari points out that neither internalisation nor externalisation can be identified in the city-soul analogy, and that the two therefore cannot be causally related.[318] In fact, it appears that *all* citizens of Kallipolis could not be just and still play their part in composing a just city: as Ferrari notes, the individual is only required to fulfil their specific role, not to be just themselves, and Socrates clearly states that the only goal is to make the 'whole city' 'outstandingly happy' (420 b), not individuals or groups.[319] To the contrary, indeed, it seems in practice that the very tripartite division of the city means that coercion is in fact built into the very fabric of society, as we shall now see in more detail – a fact which prompted Karl Popper to famously accuse the city of being totalitarian, just as Maturana warns.

For one, Socrates explains that the guardians must actually be compelled to rule, since they would otherwise choose a high-minded life of contemplation after receiving their education. In fact, he stresses this fact at eight different occasions in the text, saying, for example, that 'it is our task as founders […] to compel the best natures to reach the study we said' (519c-d), and that 'we mustn't allow them' to then not continue on to life as rulers – for each guardian, 'when his turn comes […] must labor in politics and rule for the city's sake, not as if he were doing something fine, but rather something that has to be done' (540a-b).[320] Indeed, one might see the guardians' compulsion as an internal one, since they might employ their rational character and education to understand the necessity of their employment of rulers; however,

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[316] Maturana, Introduction to *Autopoiesis and Cognition,* p. xxix (italics mine).
[317] Brown, 3.1.
[318] Jonathan Lear, 'Inside and Outside the *Republic*', p. 195, and see G. R. F. Ferrari, *City and Soul in Plato's 'Republic',* p. 45.
[319] See Ferrari, *City and Soul in Plato's 'Republic',* p. 45.
[320] All textual examples of the guardians' compulsion: 473d, 500d, 519e, 520a, 520e, 521b, 539e, 540b.

Ellen Wagner points out that this is insufficient, since Socrates uses very forceful words to describe this compulsion.[321] Moreover, the coercion of the guardians does not end here: they must also commit to a lifestyle of austere simplicity, without possessions or money, and must live together 'like soldiers in a camp' (410) with shared children and partners, whether they like it or not.

In addition, the classes of the auxiliaries and workers are also subject to coercion – *without* the benefit of any kind of internal motivation, which Brown sees as leading to 'some rather unpalatable conclusions about the character of non-philosophers' lives in in the ideal city'.[322] Most significantly, these classes are under the control of the guardians; they can hardly ever change jobs, they can never play an active role in decisions affecting the community, and their children can only change their educational track under very rare, specific circumstances. Moreover, the natural appetites and talents that have placed them into the position they are in are also curtailed by that very position – the honour-loving auxiliaries can never rise to higher positions in which they can gain yet more honour, and the merchants and other workers can never become so successful in business that they are autonomous. As such, Bernard Williams writes that Plato fails in maintaining that the working classes are both 'naturally of powerful and disorderly desires' – and therefore to be 'kept in their place' – as well as being 'good-hearted and loyal fellows' who can 'recognise their natural superiors and, unless stirred up, keep themselves in their place'.[323] Williams therefore believes that the Kallipolis can only be just if the lower classes are subjected to forceful control.

And yet, despite all this, some suggest that Plato did in fact *intend* to place individual happiness at the centre of this utopian endeavour: as Mary Margaret Mackenzie points out,

> Plato is clearly an individualist, even if his political interests sometimes obscure this tendency. Taking it as self-evident that we all pursue happiness he sees himself as justified in doing moral philosophy, and his philosopher-kings as justified in paternalistic activity, provided they maximise the happiness of the individual. In this situation he envisages no separate, independent moral imperative; and he is committed to traditional morality only so far as traditional morality coheres with individual happiness.[324]

However, it is this utilitarian approach in itself that appears to undermine the happiness-generating value of the system of Kallipolis for its inhabitants. Earlier, we questioned whether there can be much value to the individual human life in a purely utilitarian system – and, indeed, whether this also takes away from any overall interpretation of the social system as living – and here, it seems, we have our answer: in a homeostatic utopia whose overall functioning is prioritised above that of its individual components, the good of the individual must indeed be 'necessarily subordinated' to that of the society, just as Maturana and Varela fear. As Sean Sayers points out, Plato, despite Mackenzie's characterisation of him as an 'individualist', is 'prepared even to sacrifice the individual for the sake of the community when there is a fundamental clash of interests between them' – for example, when he advocates that someone who is incurably ill

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[321] See Ellen Wagner, 'Compulsion Again in the "Republic"', pp. 87-88.
[322] Brown, 2.3.
[323] Bernard Williams, 'The Analogy of City and Soul in Plato's *Republic*', p. 52.
[324] Mary Margaret Mackenzie, 'Plato's Moral Theory', p. 90.

and thus 'would be of no profit either to himself or to the city' (407e) should be left to die, while criminals whose 'souls are incurably evil' (410a) should be put to death.[325] Popper, too, notes that there is an interdependence of state and individual in the Kallipolis, but that 'within this relationship of interdependence, the superiority of the state over the individual manifests itself in various ways; for instance, in the fact that the seed of decay and disunion of a perfect state does not spring up in the state itself, but rather in its individuals'.[326] It is with this rationalisation, then, that Plato excuses coercion in the Kallipolis, all in the name of the balance and maintenance – or homeostasis – of communal happiness; and yet, it is unclear how communal happiness can sustain itself if the human elements central to its manifestation are themselves not necessarily made happy by the utopia itself.

In More's Utopia, the homeostatic chronotope can likewise be seen to entail the necessary subordination of individuals to the system: in fact, the very feedback relations that keep the homeostatic system functioning, as in the Kallipolis, are those which also restrict the full functioning of individuals and thus, most likely, their potential for happiness. For example, the fact that everyone wears the same clothing means that self-expression is limited, which in itself has already been mentioned as a plausible cause for discontent, and the enforced practice of house-swapping and regular work in the countryside would also most certainly be at odds with the preferred life-planning of many individuals. Moreover, there is very little privacy at all – in fact, the entire island appears to be a surveillance state, with no secluded spaces in public to retreat to: as Hythloday reports, 'there is no chance to loaf or any pretext for evading work; there are no wine bars or alehouses or brothels, no chances for corruption, no hiding places, no spots for secret meetings' (53). In fact, there is no private sphere to speak of even at home: the doors of houses 'open easily and swing shut automatically, letting anyone enter who wants to—so there is nothing private anywhere', while at communal meals which everyone is expected to attend, the seating plan is arranged in such a way that younger and older people are interspersed in order that

> the dignity of the aged, and the respect due them, may restrain the younger people from improper freedom of words and gestures, since nothing said or done can pass unnoticed by the old, who are present on every side. (42)

Children above the age of five are then forced to either wait on the adults during mealtimes, or, 'if not old and strong enough for that, stand by in absolute silence' while everyone else eats – they 'eat whatever is handed to them by those sitting at the table, and have no other set time for their meals' (52). Moreover, in the regular church services, families are also seated in such a way that the old control the behaviour of the young: the female head of the household sits facing the girls and younger women, and the male head faces the boys and younger men, so that 'in this way they ensure that everyone's behaviour in public is supervised by the same person whose authority and discipline direct him at home' (92).

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[325] Sayers, p. 51.
[326] Karl Popper, *The Open Society and its Enemies,* p. 76.

Matters are made even worse by the fact that this oppressive environment cannot even be escaped for any length of time through leisurely travel: as mentioned above, there are restrictions on movement through Utopia in that citizens must obtain permission from their government to travel anywhere on the island, and even then it is not guaranteed that they will be granted leave: 'Anyone who wants to visit friends in another city, or simply to see the place itself, can easily obtain permission from his syphogrant and tanibor, unless for some special reason he is needed at home' (53). Travellers, then, are only given food once they have completed a morning's or afternoon's stint of work wherever they are, and they must carry a letter from the governor with them at all times that grants them leave to travel and fixes the day of return (53). Anyone who leaves without permission and is caught without this letter is 'treated with contempt, brought back as a runaway, and severely punished' (53). Lastly, the institution of marriage, described above as facilitated by the feedback of potential marriage partners seeing each other naked before the wedding, is also upheld by a great amount of force: 'premarital intercourse, if discovered and proved, brings severe punishment on both man and woman, and the guilty parties are forbidden to marry during their whole lives' (71 – 2). Divorce is accordingly treated as very problematic indeed, and only permitted for 'adultery or for intolerably offensive behaviour'; afterwards, moreover, only the 'aggrieved party' is granted permission by the senate to remarry, while the 'guilty party' is 'considered disreputable and is permanently forbidden to take another mate' (73). Finally, adultery – perhaps unsurprisingly at this point – is punished 'with the strictest form of slavery', and 'a second conviction of adultery is punished by death' (73).

Overall, then, More appears to not actually have any confidence in the citizens of Utopia participating of their own accord in its maintenance, and instead, like Plato, he sets up an artificial system of coercion to facilitate what might after all have been an *organic* process of homeostasis-regulating feedback in the potentially living system of Utopian society. The effect of this, however, is that natural human movements and developments are severely constrained in both societies in a way that arguably damages their utopian project as a whole: not only is the dynamism that could have been possible within these societies as autopoietic living systems curtailed, but the careful design of these spaces as maximally conducive to *communal* happiness, through a utilitarian mechanism, is fundamentally undermined by the subordination of the happiness of the individual. After all, according to Maturana and Varela, the functioning of autopoietic systems must be determined 'through the production and functioning of the *components* that specify it', and if these components are coerced and otherwise reluctant members of this process, then it may not be long before the system is no longer maintainable in its constant form.[327] Indeed, following Maturana's aforementioned caution against the suppression of human components within an autopoietic society, as well as Maturana and Varela's above claim that human societies that are *not* biological systems would require laws to regulate them entirely, one might even say that Utopia and Kallipolis are, after all, *not* definable as living organisms, purely based on the level of artificial regulation that they supposedly

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[327] Maturana and Varela, p. 48 (italics in original).

require to keep their human components in check: once more, 'the dynamics of a human society would be determined through the autopoiesis of its components', and if this autopoiesis is endangered, then so is, eventually, the autopoiesis of the system as a whole.[328]

And yet, it is not immediately apparent why Maturana would be opposed to a society that is properly *determined* through the facilitation of the subsistence and self-regulation of its individual members. It can only be deduced that Maturana (perhaps alongside Varela) realises that the sheer maintenance of life at all costs – or in particular, maintenance of the life of the society at the cost of the life of the individual – cannot be seen as the *epitome* and overall goal of social organisation, even if these interlinking autopoietic networks fundamentally underlie all other human activity. This calls to mind Giorgio Agamben's suggestion that life should be seen as constituted of both the Ancient Greek concepts of *bios* and *zoē,* whereby the former refers to 'the form or manner in which life is lived' and the latter to 'the biological fact of life' – Agamben argues that 'the loss of this distinction obscures the fact that in a political context, the word "life" refers more or less exclusively to the biological dimension or *zoē* and implies no guarantees about the quality of the life lived'.[329] Accordingly, he introduces the concept of 'bare life', a 'conception of life in which the sheer biological fact of life is given priority over the way a life is lived', by which Agamben means its possibilities and potentialities.[330] Likewise, a society that prioritises its own autopoiesis at the expense of that of its individual members could arguably lead to a social system in which individuals are granted no more than 'bare life' in order that the overarching connecting organism may flourish – or not, as we have seen.

Interestingly, Cannon himself does not seem to share Maturana and Varela's concerns regarding the subordination of the individual's autopoiesis to that of a social system; in fact, he merely mentions that a society's 'evolution' towards homeostasis and autopoiesis, his endorsement of which was quoted above, would be a good thing in terms of stabilisation. 'It seems not impossible', Cannon states,

> that the means employed by the more highly evolved animals for preserving uniform and stable their internal economy (i.e., for preserving homeostasis) may present some general principles for the establishment, regulation and control of steady states, that would be suggestive for other kinds of organization—even social and industrial—which suffer from distressing perturbations.[331]

Indeed, Cannon suggests that the basic human needs that Maturana sees as endangered by social autopoiesis are in fact 'largely dependent on social homeostasis'[332] through specialisations within the system; moreover, he speaks of large-scale physical distribution systems via economic and transport networks as self-regulating mechanisms that are both essential to social functioning and necessary for the outfitting and safety of individuals. However, this appears to merely justify the perpetuation of capitalist relations, and makes no allowances for an individual's higher needs as outlined by Maslow; in fact, Cannon ends up claiming that social

[328] Maturana and Varela, p. 118.
[329] 'Bare life' in Ian Buchanan, *A Dictionary of Critical Theory* (Oxford: Oxford University Press, 2010).
[330] 'Bare life'.
[331] Cannon, p. 310.
[332] Cannon, p. 313.

homeostasis constraining an individual's freedom, raised as the spectre of totalitarianism by Maturana and Varela, is in fact a necessary and a good thing: 'The organism suggests [...] that the importance of stability warrants a *specially organized control*, invested by society itself with power to preserve the constancy of the fluid matrix, i.e., the processes of commerce'.[333] Such control, including wage restrictions and the power to limit and in various ways determine the production of goods, is compared by Cannon to the actions of 'lower centres of the brain' which automatically react to certain signals.[334] However, Cannon seems to forget that a social system is in fact *not* fully equivalent to a human body, in which the temporary shutting down of some systems to facilitate others is not a matter of reduced autonomy. Indeed, he seems content to override human autonomy and self-assertion, and thus higher elements in Maslow's hierarchy of needs including social belonging and self-actualisation,[335] in favour of improved societal functioning: this includes the control of immigration to ensure society is 'undisturbed by large increases from either local or foreign sources',[336] control of technological development, and the 'artificial' reduction of human hardship in favour of 'unlimited competition and the relatively free play of selfish interests'.[337] Indeed, referring to people in a dehumanising manner as 'the human elements in production',[338] Cannon clearly cannot envisage a functioning homeostatic society as granting more than 'minimal conditions for healthful life and activity',[339] thus providing ample fuel for any concerns that social homeostasis may promote the harmful subordination of individual autopoiesis.

All this, then, is evident in the homeostatic chronotopes of Plato and More. Indeed, Cannon himself mentions 'dreamers of Utopias' as among those who have previously supposedly attempted to create or encourage stability within their own social organisms, alongside 'sociologists, economists, statesmen, labor leaders and experienced managers of affairs': he notes that 'in all such proposals a much greater control of credit, currency, production, distribution, wages and workmen's welfare is anticipated than has been regarded as expedient or justifiable in the individualistic enterprises of the past' in order to minimise 'sufferings of human creatures because of lack of stability in the social organism'.[340] Plato and More's utopian systems undermine their own autopoiesis through coercion of their living constituents, thus arguably also damaging their viability and credibility as utopias per se, but this very subordination would apparently make them even more ideal examples of social homeostasis in Cannon's own terms: as he writes in his propositions for a definition of homeostasis, 'steadiness is maintained through the counteraction of tendency towards change with increased effectiveness of opposing mechanisms', and here, the opposing mechanisms take the shape of the coercion of individuals in various forms.

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[333] Cannon, p. 318 (italics mine).
[334] Cannon, p. 318.
[335] See Abraham Maslow, *Motivation and Personality*.
[336] Cannon, p. 319.
[337] Cannon, p. 321.
[338] Cannon, p. 322.
[339] Cannon, p. 322.
[340] Cannon, p. 320.

Indeed,, several critics appear to see nothing wrong with this: Károly Pintér, for example, suggests that according to 'social contract' theory, 'Utopian citizens submit to a rigorously disciplined way of life in return for the security of a well-ordered society'.[341] It seems unlikely, however, that citizens would go this far in their quest for a secure life. In fact, it is worth briefly dwelling on this point: a symbolic 'social contract' that we all agree to when forming a society – according to theorists such as Thomas Hobbes, John Locke, Immanuel Kant, Jean-Jacques Rousseau, and more recently John Rawls and David Gauthier – proposes that we take on certain obligations and behavioural restrictions in exchange for welfare guarantees from the state. However, as Fred D'Agostino points out, we are thereby 'determining whether or not a given regime is legitimate and therefore worthy of loyalty',[342] given that, as David Gauthier argues, 'any system of moral constraints must be justified to those to whom it is meant to apply'.[343] 'What theory of morals', he asks, 'can ever serve any useful purpose, unless it can show that all the duties it recommends are truly endorsed in each individual's reason?'[344] This endorsement by the individual, then, is what appears to be missing in Cannon's theory, and to a large extent also in Plato and More's utopias: a nuanced sense of obligation between society and individual is overridden in favour of a stable regulatory system – a system which in turn, however, is endangered by this very lack of 'endorsement', as we have seen.

Privilege and Patriarchal Exclusion in Plato, More and Cannon:

Indeed, there is a further notable way in which Utopia and Kallipolis appear to conform with Cannon's ideal, and this is that he appears to advocate the subordination of specific members of society in particular to the system, even more so than the average individual: this includes, predictably, those in developing countries, women, and people living in poverty. For instance, in relation to an apparent global social development towards greater homeostasis, Cannon speaks admiringly of 'vast areas of the earth's surface, formerly dangerous to man', having been made 'fit for safe and sanitary habitation because of the conquest of malaria, yellow fever, and hookworm disease', yet 'these achievements all involve social organization, social control, *and a lessening of the independence of individual members'.*[345] Presumably, it is the indigenous people's independence that has been 'lessened' here, against their will, while the very notion of these areas having been previously 'dangerous to man' presupposes a Western, colonialist mindset. Moreover, Cannon states that 'the assurance of freedom *to men who are willing to work* would justify a larger control of economic processes, repugnant though they may seem, for it would be a sacrifice of lesser for greater values';[346] again, this sentiment is very exclusive, implying that only men, and indeed only men who are able to contribute to the economy, are deserving of

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[341] Károly Pintér, *The Anatomy of Utopia: Narration, Estrangement and Ambiguity in More, Wells, Huxley and Clarke*, p. 89.
[342] Fred D'Agostino,, *Free Public Reason: Making It Up As We Go Along*.
[343] Fred D'Agostino,, Gerald Gaus and John Thrasher, 'Contemporary Approaches to the Social Contract' in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy*, 1.1.
[344] David Gauthier, *Morals by Agreement*, p. 1.
[345] Cannon, p. 322 (italics mine).
[346] Cannon, p. 323 (italics in original).

welfare. Lastly, Cannon claims that in a truly homeostatic society, 'we as individuals are free from slavery',[347] but again, this raises the question of who is meant by 'we', and suggests that the most economically unfree are expected to prop up the system for the benefit of everyone else. Once more, Cannon decides from a position of privilege which elements might be neglected to keep the system running, yet unlike in a physical organism, this hierarchical judgement has very problematic implications in a human society.

Similarly, Plato and More's societies make top-down decisions as to who is to be excluded in the homeostatic functioning of the system, either generally or in emergencies. In Plato's Kallipolis, this applies to presumably all non-guardians, as they cannot make decisions for themselves, as well as those, mentioned above, who 'would be of no profit' to themselves or the city, such as the incurably ill and criminals (407e, 410a). In More, there is even more blatant discrimination at work, mirroring that of Cannon; most notably, this goes for the role of women in society. Socrates, indeed, argues quite progressively in the *Republic* that since the only operative difference between the sexes is that 'the male begets and the female brings forth', 'we shall conclude that no difference between man and woman has yet been produced that is relevant to our purpose. We shall continue to think it proper for our Guardians and their wives to share in the same pursuits' (152). In doing so, however, the *Republic* stands out against most other traditional examples of the genre, as Morson points out, in that 'all, or almost all, utopias of the past century and a half include passionate criticisms of the status of European women'; 'it is, indeed, remarkable', he continues, 'how conservative utopian writers, willing to abolish private property, prisons, and police, become when they consider family life and the occupations of women outside the home'.[348]

In More's Utopia, accordingly, despite Hythloday's assertion that 'the one and only road to the general welfare lies in the maintenance of equality in all respects' (53), there is a strong patriarchal power imbalance within individual families: 'wives are subject to their husbands, children to their parents, and generally the younger to their elders', and although all adults seem to be allotted the same work units, women alone are expected to prepare and cook food and must move into their husbands' households when they marry (49-51). Moreover, women and children are required to regularly 'beg forgiveness for their offenses' (91) from their husbands or fathers. Both Ferns and Bammer point out, in fact, that this failure to revitalise family structures is noteworthy given that the family plays a crucial role in More's own image of social reform: Bammer, for example, notes that 'his radically utopian and, therefore, subversive move was to shift state authority from feudal to family structures [...] yet he left the relations of power and authority *within* the family more or less unchanged'.[349] Likewise, Ferns suggests that 'it is surely not without significance that there are aspects of the author's own society which he chooses to leave unchanged [...] this is an element which he chooses to reinforce. Utopia is a society in which patriarchy is, one might say, raised to a higher power'.[350]

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[347] Cannon, p. 323.
[348] Morson, p. 80.
[349] Bammer, p. 19.
[350] Ferns, pp. 45 – 6.

While this approach, then, aligns with Cannon's favourably described controls in a homeostatic society, despite Utopia and Kallipolis not ultimately being classifiable as living organisms on Maturana and Varela's terms, it causes further problems for the feedback-based self-regulation of More's utopian system: while individuals are subordinated to overall autopoiesis, women and children are subordinated to the system's *patriarchal* order in an even more oppressive manner than in More's zero world. This, however, once more endangers hedonic utilitarianism and the general increase of happiness in More's utopia. Again, a self-regulating system ought to work 'through the production and functioning of the *components* that specify it', meaning that if the main utopian function here is to generate happiness, then all must 'lead a life as free of anxiety and as full of joy as possible, and to help all one's fellow men toward that end' (59). However, More seems to take the phrase 'fellow men' literally here, keeping women, children, and indeed slaves from the chance of true joy through free participation in the system, which in turn undermines this mechanism by preventing their happiness from 'feeding back' into the system and maintaining its overall eudaimonic functioning.

The Homeostatic Utopian Chronotope as Model and Thought Experiment:

Indeed, the undermining of the homeostatic utopian project in both Plato and More's utopias, both through the subordination and coercion of individuals and through the exclusion of women and others, renders them, in McKenna's terms, 'end-state utopian vision[s]' that 'frustrate [...] the very conditions by which people gain the strength and wisdom to flourish'.[351] Again, those conditions should be those of balanced happiness ensured through smooth self-regulation, but as we have seen, firstly, individuals are coerced within the system to the extent that their potential for flourishing is severely undercut, and secondly, the 'people' in this equation do not include everyone, thus rendering the homeostatic utopian promise of a thoroughly well-balanced and happy society moot in the first place. Accordingly, not only does 'utopia' not apply to every citizen, but much as in Cannon's own homeostatic utopia, the impairment of individuals renders the entire system vulnerable to uprisings and social disintegration.

At this point, then, one might suggest that if both Plato's Kallipolis and More's Utopia are located in their own logical bubbles, far removed from the zero world both spatiotemporally and in terms of potential influence in their own 'eternal present of utopianism', then perhaps it is in fact *irrelevant* that their homeostatic utopian chronotopes appear to be set up for failure and self-sabotage in the longer term in this way. In an eternal present, after all, the lack of potential for change and development on the part of individuals and the social organism overall might simply be of no consequence, while the constricted flourishing of some human elements within the system would presumably not have time to develop to the extent that it is even noticeable.

As such, one might say that the overall justice and concordant eudaimonia of Kallipolis, for one, might be perceived as mutually reinforcing between citizens and city after all, despite

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[351] McKenna, *The Task of Utopia,* p. 25.

the lack of causal-psychological alignment noted above, given Plato's fundamental interest in the happiness of the individual as pointed out by Mackenzie: in an eternal present that is incompatible with true change, occasions where there is a 'clash of interests' between the two, as suggested by Sayers, may simply never arise. However, it seems that the homeostatic and thus eudaimonic balance of the system is in fact highly tendentious even in such a mere snapshot of Kallipolis, given that the coercions embedded in Plato's homeostatic chronotope highlight that he may, in fact, simply have a *misguided* conception of what happiness consists of: as Brown suggests, perhaps 'political self-determination and free expressions are themselves more valuable than Plato recognizes'.[352] Meanwhile, Plato believes that 'in a well-ordered society [...] there is no essential conflict between the individual and the community', as Sayers writes, and he

> does not regard the demands of society and the interests of the individual as necessarily opposed [...] Although the collective interest does take precedence over the individual interest in the event of conflict between them, Plato's essential point is that they need not clash and, in ideal conditions, they will not do so.

However, as Sayers points out, this identification of the individual with the community is 'thoroughly one-sided':

> [Plato] wants the individual to be *totally* identified with the community. He will tolerate the development of individuality only in so far as it accords with the demands of a very authoritarian society. [...] Thus, although he does not deny individuality, he has an extremely limited and restricted conception of it. He sees any autonomy on the part of individuals, any deviation from their social roles, as a diminution of individuality and a threat to social cohesion.[353]

Given Plato's focus on homeostasis between the human elements of the society, then, even under the yoke of coercion in light of the restrictiveness of the given categories of justice, his aim of eudaimonia ultimately appears to fail, given that such a society could only truly function – even in the eternal present – if the good of the individual *did* in fact completely overlap with that of the community, which, as we have seen, is not the case. Individuality and autonomy, after all, appear to play a far more vital role to social cohesion and happiness than Plato supposes, while he ultimately treats his utopian citizens somewhat like Cannon would in his own homeostatic utopia: meeting their basic needs but not their higher ones, and perhaps even reducing their lives to *zoē* rather than *bios* in Agamben's terms.

Finally, as with More's *Utopia*, some scholars, such as Leo Strauss and his followers, argue that Plato did not in fact endorse his own utopian visions in the *Republic* as in any way seriously intended, even as a thoroughly abstract moral fantasy; however, this seems unlikely given several factors. For example, Plato presents several central political theses here that he also endorses in other texts; moreover, there is plenty of textual evidence that Socrates does, in fact, intend for Kallipolis to be theoretically realisable in an ideal moral world rather than being 'impossible' (502c) or 'wishful thinking' (450d). As such, the utopia-undermining problems

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[352] James Robert Brown, 'Thought Experiments' in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy*, 4.4.
[353] Sayers, pp. 53 – 54.

brought about by the homeostatic chronotope in this text are indeed of relevance to the success of the fundamental utopian endeavour of the *Republic.*

More's Utopia, meanwhile, even if partially intended to be perceived as satirical, is of course far less abstract than Kallipolis, such that its homeostatic constriction of the individual *and* increased marginalisation of certain members of society, the latter of which the *Republic* after all does not feature, appear to be even more straightforwardly harmful to its own utopian endeavour, as we have seen. And indeed, as in the *Republic,* the fact that these coercions and exclusions are a fundamental part of the homeostatic chronotope as realised by More indicate that they would be problematic even in an 'eternal' snapshot of this system: regardless of authorial intention, it is very difficult to imagine that the citizens of Utopia could be truly happy in a society that severely limits self-expression, freedom of movement, independence, autonomy, and sexual freedom. In fact, it seems that even disregarding this latter point, More's Utopia is somewhat more oppressive in its enforced homeostatic functioning than Plato's Kallipolis: where Plato arguably *misunderstands* what is conducive towards or prohibitive of an individual's happiness, More explicitly states that the citizens of his utopia *must* be regulated in this way in order to ensure that they participate in the society's restrictive institutions, thus putting Utopia even more under the control Cannon advocates: while Maslow's higher needs on behalf of individuals are apparently *forgotten* by Plato, they are in fact *ignored* by More, in order to keep the system functioning smoothly. As such, Morton suggests, More betrays as 'the least attractive feature of Utopian life' a 'lack of trust in the ordinary activities of common people', which he believes 'reflects More's own lack of confidence in the common man'; this, in turn, 'arises from his own class position and that of the Humanists generally and from the whole relation of class forces at the time'.[354] After all, as Morton notes, More himself was an upper-class man, inhabiting a position of privilege that fundamentally informed his social views: a 'spokesman of the city',[355] as Morton quotes Kautsky,

> More was in a practical respect the representative of their interests, although in his theoretical outlook he was more advanced. Capital has always called for 'order', only occasionally for 'freedom'. Order was its most vital element; More, who had become great in the minds of the London middle class, was therefore a 'man of order' who *disliked nothing more than the independent action of the people*. All for the people but nothing by the people was his watchword.[356]

As such, one might argue that both Plato and More's utopias are deeply informed by the fact that they fundamentally come from a place of *privilege:* the *Republic* stems from a space of intellectual freedom and playfulness in which real-world consequences are simply not applicable, as a consequence of which one might be excused for not thinking them through, and *Utopia* comes from a position of economic power in a changing political and socio-economic landscape in which even a free-ranging experiment in utopian thought, if designed from the perspective of the privileged classes, would apparently entail a level of control that would today count as dystopian.

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[354] Morton, pp. 47-8.
[355] Morton, p. 48.
[356] Kautsky quoted in Morton, p. 48 (italics mine).

Similarly, then, the lack of class movement in the Kallipolis is of no consequence to Socrates, whose interest lies only in intellectually determining the form of the good, not dealing with any fall-out from social miscalculations. Indeed, while Frye makes the case that regarding justice, 'Plato is really arguing from his social model to the individual, not from the individual to society' – thus making it not 'a dream to be realised in practice', but an 'informing power in the mind'[357] – this model is still illustrated through a society in which class differences and coercion reign, thus highlighting the fact that even in intellectual seclusion, the creator felt no need to reinvent these relations.

Likewise, Utopia's oppression of marginalised groups, which characterises its homeostatic functioning over and above the coercion it shares with the Kallipolis, should come as no surprise, given that these groups do not reflect those classes for whom More wanted to entertain the idea of a better life. His Utopia, if taken non-satirically, can be seen as possessing a certain ludic, easy character that can only stem from the privileged viewpoint of one who knows they *require* no better world for themselves, and even in very different systems cannot truly imagine those of their own class and sex much worse off. This is emphasised, for example, by the fact that Hythloday's lack of success in determining the exact location of the island becomes a running joke in the text, as Ferns points out – for example in being hidden by a cough, as mentioned before. Ferns thus notes that 'Utopia can be thought about but it is physically unattainable; the pretence of its existence is sustained by a *knowing complicity* between author and audience; and the secrecy surrounding it is maintained by barrier of an essentially *defensive* humour—the kind designed to forestall awkward questions'.[358] Moreover, the fact that, as Ferns adds, More deliberately wrote *Utopia* in Latin for friends who would understand his 'scholarly humour and enjoy the speculative freedom of its often radical suggestions without mistaking them for a practical programme of action' further contributes to this elitist air of separation from the real world.[359] More had no desire to picture real change; instead, he merely depicted 'the life that More would have liked to be able to live, and one which could reasonably have been expected to tend to produce men like More', as Morton suggests. Such a life, then, happened to include not only the same power relations More was used to, but also, for example, the patriarchy 'raised to a higher power',[360] as Ferns noted. To this, Ferns adds that 'in *Utopia*, as in any portrait of a more perfect society, *it is not merely what changes that is important: equally significant is what remains the same*';[361] More's choices are deliberate. However, More thus not only fails to conceive of a truly different society, stuck instead in his imagined homeostatic present, but in fact turns time *back*, as Ferns suggests: 'the direction of time, in effect, is reversed, as if the hidden intent of the utopian fantasy were to reach back [...] beyond the fall into independent conscious life and start over again—only with the male firmly in control'.[362] In

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[357] Frye, p. 332.
[358] Ferns, p. 40 (italics first mine and then in original).
[359] Ferns, pp. 37-8.
[360] Ferns, p. 45.
[361] Ferns, p. 46
[362] Ferns, p. 47.

doing so, though, More conceives what is ultimately a utopia only for some, and downright dystopian for many.

Indeed, Fern's use of the term 'utopian fantasy' is crucial here, as I would like to suggest more firmly on this evidence basis that Plato and More's utopias ultimately represent not only flawed utopias, but unsuccessful science-fictional utopian thought experiments, as stated in the introduction and briefly entertained above: by undermining the feedback-based functioning of the homeostatic system in both societies through coercion and exclusion within the homeostatic chronotope, Cannon and More's systems in fact are *not* fully self-regulating, given that human elements cannot participate fully in the system. This, in turn, means that the nova in their construction (Plato's tripartite system of justice, More's communist arrangements) are not developed with *totalising* rigour. The result is that the respective models do not deliver reliable, appropriate output to the utopian thought experiment performed, and could thus perhaps be classified as mere fantastical wish fulfilment, after all. Hansot in fact disagrees with such an assessment, reminding us that, for one,

> If the *Republic* is viewed primarily as thought experiment, it cannot be faulted for excluding a variety of other conceivable goods for man and concentrating exclusively on justice and the Good. The exclusion is necessary if Socrates' purpose is to be accomplished: to understand the nature of his ideals more fully by isolating them and treating them as if they were fully realised.[363]

However, as we have seen, these ideals are *not* sufficiently isolated and extrapolated upon if they threaten to be undermined by social coercion, which affects individual happiness and thus overall eudaimonia – Plato's entire experiment rests on the parallel between justice in the city and justice in the individual, and if the former is endangered through incomplete feedback mechanisms due to the coercion of the elements that make them up, then this experiment fails. Likewise, in More's Utopia, the purity of the experiment is already compromised by the fact that it begins not with a stripped-down version of the zero world in which certain interpersonal relations are optimised, but with an even more overtly imbalanced social system which ultimately manifests not only an unnecessarily restrictive and thus unworkable system based on More's monastic ideal, but also one in which those who already benefit from the patriarchy of More's zero world would be even more likely to flourish – at the expense of the less privileged, as Ferns argues.

In both homeostatic utopian chronotopes, then, any basic goodwill that may have in part given rise to these thought experiments is in itself compromised: for example, the likelihood that Plato was possibly trying to find a genuine answer to the question, raised in *The Laws,* of 'What is the best form of organization for a community and how can a person best arrange his life',[364] and also the fact that, as Morton suggests, More possessed an 'understanding of the causes of poverty and [a] real desire to remove them' in Utopia, despite his imaginative shortcomings.[365] Morton identifies the latter in such details as More's focus on communal harvesting in Utopia, at

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[363] Hansot, p. 40.
[364] *Laws* 3, 702b. See Plato, *The Laws,* translated and with introduction by A. E. Taylor (London, 1960), p. 85.
[365] Morton, p. 58.

a time when, in More's world, 'even quite considerable towns had still their common fields'; indeed, Morton takes this as an indication that 'More's communism […] is not merely an imaginative picture of something that might happen in the future, but even more the extension and transformation of something already existing'.[366] However, such utopian estrangement is not in fact rigorously applied on behalf of the whole community, which in turn undermines the resulting utopian model both as a well-constructed mental exercise and as a desirable, sustainable utopian system that might provide inspiration. Again, both Plato and More's utopias thus seem instead to be, first and foremost, intellectual games in which the homeostatic chronotope either maintains or further rigidifies the status quo, despite the potential of these texts for transformative cognitive estrangement as pioneers of their genre.

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[366] Morton, p. 47.

CH 2: Evolution and Homeostatic Coercion in Bellamy, Morris and Wells's Fin-de-Siècle Utopias

I will now go on to explore the homeostatic utopian chronotope as applied to the modern or fin-de-siècle utopia, represented here by the classic utopian texts of Bellamy, Morris, and Wells; as mentioned, the chronotope functions in a significantly different way in these texts, given in particular their location in future time and their emphasis on evolutionary progress, which create a greater sense both of the eventual realisability of utopia and of the possible moral imperative of such a development. I will go on to show, however, that despite these altered parameters, there remains a paradoxical sense of ahistorical spatiotemporal isolation in these utopian worldviews, given that the supposedly fully rational and 'scientific' transformative connection between zero world and utopia – though rigorous in at least one case – does not always serve its purpose in an adequate fashion; moreover, the emphasis on progress and evolutionary or technological development in these worldviews tends to be curtailed at the exact point of the formation of the current socio-political state of being, which pre-empts any further development within utopian society and ironically places utopia even more at the mercy of social stagnation and degradation than the fault-ridden zero world it originated from. It is this forced isolation, then, that facilitates the homeostatic self-regulation of the utopian chronotope in the fin-de-siècle utopia, due to its ultimate operative closure from the outside world both spatially and temporally. This, in turn, also stifles the much-lauded dynamic potential of this generation of utopian literature, thus creating once more a mere illusion of life and dynamism while actually representing no more than the authors' wish fulfilment from a position of detached privilege. Moreover, much as in the classical utopias of Plato and More, this paradoxical separation also renders the fin-de-siècle model both insufficient and flawed as science-fictional utopian thought experiment, the latter due to lack of estranging rigour. On the one hand, the closed nature of the homeostatic feedback system here fundamentally precludes change and development both on a societal and on an individual level – despite a greater focus on linear development in the underlying ideological framework – which eventually endangers the utilitarian project of happiness-maximisation in these societies, much as in Plato and More. In addition, the categorical enforcement of these feedback systems even precludes the functioning of these systems as fully *self*-regulatory in an isolated state, while further jeopardising the overall eudaimonic aim. Lastly, the exclusion of certain 'human elements', particularly women, from full participation in the utopian project again further undermines the success of the utopian system even in its closed state, while also representing a failure of the totalising application of the respective utopian nova.

The Evolution of Utopia:

Around the end of the 19th century, there was a surge in the publication of utopian literature, partly due to the fact that 'the notion of progress—of history as a process of continuous advance, with change as the norm, rather than the exception—had become commonplace' by this point, as Ferns notes, bringing with it 'the increasingly widespread belief in the feasibility of creating,

if not an ideal, at any rate a better society'.[367] Bellamy's *Looking Backward,* Morris's *News from Nowhere* and Wells's *A Modern Utopia* all arose within and contributed to this optimistic worldview, which set itself apart most notably from its classical predecessors such as Plato's *Republic* and More's *Utopia* by locating utopia not elsewhere in space, but elsewhere in time: as David Leopold phrases it, utopian journeys shifted 'from a geographical to a chronological location, *terra incognita* to *tempora incognita'*,[368] while Frank Manuel has suggested that 'utopia' be in this period referred to as 'euchronia', as 'good place' becomes 'good time'.[369]

There are various factors that play into this development, but to begin with, as Wittenberg notes, this relocation of utopia is closely tied to the fact that Charles Darwin's *Origin of Species* was published in 1859, and *The Descent of Man* in 1871, both of which popularised the theory of biological evolution based on natural selection. This meant that, according to Michael Ruse, 'people became evolutionists at a remarkable speed':[370] 'like "relativity" or "uncertainty" in the mid-twentieth century', Wittenberg writes, '"evolution", for the late nineteenth, is an elemental component of the semantics of social and cultural description, a virtually obligatory rubric even for thinkers who explicitly oppose it as a theory'.[371] Accordingly, the linear notion of incremental development for the better was pre-eminent in cultural consciousness, and utopian literature proved the ideal vessel for the exploration of evolutionary fantasies, thus necessitating the location of a more highly 'evolved' utopian society in the future rather than elsewhere in space: 'evolution', Wittenberg adds, 'as a default scaffold for theories of historical change, provides a vocabulary for explaining the social and technological advances or regressions that protagonists typically witness in the future societies they visit, and that authors often depict as the direct result of "natural selection".'[372]

For instance, when Julian West awakens in utopian future Boston of the year 2000 after an artificially extended sleep in *Looking Backward*, the 'labor question' that worried him in Boston of 1887 appears to have been entirely resolved through social progress that is 'constrained by the same inexorable mechanisms presumed to govern change within all nature':[373] Dr Leete, whose house West finds himself him, informs him that

> No such thing as the labor question is known nowadays [...] It may be said to have solved itself. The solution came as the result of a process of industrial evolution which could not have terminated otherwise. All that society had to do was to recognize and coöperate with that evolution, when its tendency had become unmistakable. (29)[374]

In Dr Leete's utopian Boston, the result of this linear development has been the gradual formation of an 'industrial army', containing nearly all citizens, which allows employment, production and consumption to be streamlined, with income distributed independently of employment by the state. West learns that this is a matter of great national pride: in a sermon

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[367] Ferns, p. 68.
[368] David Leopold, Introduction to *News from Nowhere*, p. xxvi.
[369] Frank Manuel, 'Toward a Psychological History of Utopias', *Utopias and Utopian Thought,* pp. 79-80.
[370] Wittenberg, p. 35.
[371] Wittenberg, p. 36.
[372] Wittenberg, p. 36.
[373] Wittenberg, p. 36.
[374] All quotations from *Looking Backward* are taken from Edward Bellamy, *Looking Backward: 2000 – 1888* (New York: Oxford University Press, 2009).

delivered to thousands of households on the occasion of his arrival, it is declared that the development of the industrial army 'may be regarded as a species of second birth of the race', upon which 'humanity has entered on a new phase of spiritual development, an evolution of higher faculties, the very existence of which in human nature our ancestors scarcely suspected' (170). As Wittenberg notes, 'such a rhetoric of inexorable tendency and influence is entirely common within the social theorizing of Bellamy-era utopian fiction'[375]; however, Bellamy's hugely influential novel doubtless led the way, given that it sold more than half a million copies in the United States by the time of Bellamy's death in 1898 and became the 'best-selling novel in nineteenth century America after *Uncle Tom's Cabin*'.[376] Indeed, this vision proved so popular that, as Kumar notes, '*Looking Backward* is probably unique in that, as a single book, it launched a national political movement', inspiring the creation of 165 'Nationalist Clubs' across the United States by 1891.[377]

However, not everyone perceived such strict economic organisation as the pinnacle of human development – *News from Nowhere* was written by Morris as a direct response to Bellamy's novel, reflecting what Matthew Beaumont calls Morris's 'unqualified hostility' towards Bellamy's utopian proposal: 'I wouldn't care to live in such a cockney paradise as [Bellamy] imagines', Morris declared in a contemporary letter, with Beaumont clarifying that 'Morris often used the word 'cockney' idiosyncratically to denote the vulgar and materialistic'.[378] Morris suggested that Bellamy had misunderstood the end goal of socialist action, and that work must not be treated as a necessary evil, but as something to be made easier, and in fact embraced: in the likewise seemingly 'evolved' society that Morris describes in *News from Nowhere*, set in a near-future version of London and surroundings, work has become a pleasure, and indeed the desire to work has become the single mobilising factor in the communist, leaderless gift economy of Nowhere.[379] In conversation with William Guest, the visitor to utopia, Guest's utopian guide, Dick, laughs at the idea of this not being the case: 'Fancy people not liking to work!—it's too ridiculous' (35).[380] Indeed, in line with evolutionary rhetoric, the urge to shirk work is referred to in Nowhere as 'a disease called Idleness' which people used to be 'hereditarily afflicted' with in the early days of utopia; however, now this disease is 'either extinct, or exists in such a mild form that a short course of aperient medicine carries it off' (34). The hereditary improvement of society has apparently shaped the citizens of Nowhere into such eager workers that their main concern is that they should *run out* of jobs to do ('there is a kind of fear growing up amongst us that we shall one day be short of work', 79) – a claim that is made somewhat more believable by their assertion that all work is now either genuinely enjoyable, in that it centres around loving craftsmanship, or it is guided by obvious necessity, such as agricultural tasks; if it is both unnecessary and not enjoyable, it is usually simply not done.

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[375] Wittenberg, p. 37.
[376] Kumar, p. 133.
[377] See Matthew Beaumont, Introduction to Edward Bellamy, *Looking Backward,* p. x and Kumar, p. 136.
[378] David Leopold, Introduction to William Morris, *News from Nowhere*, p. xii.
[379] For ease of reference, I will refer to Morris's utopian society as 'Nowhere', based on the title *News from Nowhere,* although it is not explicitly referred to as such – in fact, there are no countries in the text, and thus no named nations.
[380] All quotations from Morris's *News from Nowhere* are taken from William Morris, *News from Nowhere* (Oxford: Oxford World's Classics, 2009).

Finally, in *A Modern Utopia,* Wells presents a utopian society in which all countries have joined together into a borderless 'World State', again using language that clearly frames the process along the lines of biological evolutionary development: the reader is informed that

> change of function is one of the ruling facts of life; the sac that was in our remotest ancestors a swimming bladder is now a lung; and the State which was once, perhaps, no more than the jealous and tyrannous will of the strongest male in the herd, becomes the instrument of justice and equality (141).[381]

In this utopia, however, the apparent evolution of the state itself into a border-less world economy has not brought about either socialist full employment, as in Bellamy, or fully voluntary labour, as in Morris: instead, world peace is ensured through the segregation of citizens into castes (described in more detail below), while governing decisions are made by a self-selecting class of 'voluntary nobility' called the 'samurai'. These modern-day guardians, explicitly modelled on those of Plato's *Republic,* in themselves appear to be the pinnacle of human development in their calm, impartial demeanour and total self-control, as well as their privileged awareness of the social processes that have led to their guardianship and which they now help to shape. Indeed, the one samurai that the reader encounters in person gives an indication that these guardians are aware not merely of the quasi-evolutionary process that has enabled them to hold their current position, but of the parallel and alternate forces that likewise govern the further development of life on earth – for example, the concordant and seemingly paradoxical universal trend towards entropy.[382] In speaking of his annual trip to the wilderness that forms part of the strict 'Rule' or set of ascetic principles he must follow to keep his position, the samurai muses, recalling the 'bloody' sea and 'eternal sunset' at the end of time in Wells's *The Time Machine* from a few years before,[383]

> When I go among snows and desolations [...] I think very much of the Night of this World – the time when our sun will be red and dull, and air and water will lie frozen together in a common snowfield where now the forests of the tropics are streaming . . . I think very much of that, and whether it is indeed God's purpose that our kind should end. (205)

The samurai admits that he does not think the latter to be the case, but that the exercise affirms his sense of himself as representative of the human race – yet another indication of the samurai's apparent superiority as the *current* pinnacle of evolution, whatever may come next: '"One becomes a personification up there," he said. "One becomes the ambassador of mankind to the outer world"' (205). Indeed, Well's utopia itself was intended to present the height of reason, as the narrator tells us frequently, which is in kind with the samurai's apparent superiority.

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[381] All quotations from Wells's *A Modern Utopia* are taken from H. G. Wells, *A Modern Utopia* (London: Penguin Books, 2005).

[382] Current research indicates that evolution and entropy are not in fact contradictory forces, despite the apparent incompatibility of the former theory, which states that organisms become more ordered over time, with the latter, which states that systems become more disordered. As Alexander Schreiber and Steven Gimble note, this apparent contradiction hinges firstly on a 'misunderstanding of the second law of thermodynamics and notion of entropy', secondly on errors concerning 'the scope of the application of the second law of thermodynamics', and thirdly on 'failing to understand the way in which the mechanisms underlying genetics are perfectly in line with physical law' (Alexander Schreiber and Steven Gimble, 'Evolution and the Second Law of Thermodynamics: Effectively Communicating to Non-technicians', pp. 99 – 100).

[383] H. G. Wells, *The Time Machine,* p. 60.

As such, once again, these utopias seem to envisage themselves as representing some kind of ultimate end point of linear human development, each in their own way; in doing so, they move away even further than the Renaissance utopias from the cyclical ancient worldview of the Worm Ouroborous eating its own tail endlessly: Darwinian evolution has at this point taken on the mantle, previously carried by Christianity and also Judaism (as noted by Kumar), of breaking 'the cyclical conception of history common to the Graeco-Roman world'.[384] However, it has not done so alone, but alongside the linear technological progress of the industrial revolution – a progress which, as Suvin notes, also helped to facilitate an accordant relocation within the genre of SF from the spatial to the temporal: he writes that 'the shift of SF from space into future time is not simply due to an exhaustion of white spots on the *mappa mundi',* but also in part to 'the strong tendency toward temporal extrapolation inherent in life based on a capitalist economy, with its salaries, profits, and progressive ideals always expected in a future clock-time':[385]

> Thus space was a fully plausible locus for SF only before the capitalist way of life, from very early tales about the happy or unhappy valley or island […] to More and Swift. An Earthly Paradise or Cockayne tale, a humanist dialogue and satire, all happen in a literary or imaginative space not subject to positivist plausibility. But a triumphant bourgeoisie introduces an epoch-making epistemological break into human imagination, by which linear or clock-time becomes the space of human development because it is the space of capitalist industrial production.[386]

Stimulated by the progress-based worldview associated with both evolution and capitalist production, the new utopian focus was thus firmly guided by the inherent potential of future-oriented development within a given system, such that, as Hansot writes,

> the differences between classical and modern utopias may well be expressed by saying that in modern utopias, transcendence becomes temporal. Modern utopias find their meaning by portraying a future state in which the inadequacies of present social arrangements are overcome.[387]

It is in this new time-bound yearning for transcendence, she suggests, that the shift from the spatial to the temporal utopia takes place, whereby 'its location in the future emphasizes that what is important is, not to judge, but to change'.[388] Accordingly, Wittenberg notes, it is not only the case that 'utopias very likely can no longer be "spatial" at all', but that they must be both set in the future and directly linked to the zero world, particularly if they are to be interpreted along evolutionary lines: 'any creditable utopian (or dystopian) society informed by Darwinist sociopolitics must extrapolate its conjectured *polis* from actual present social conditions, since that *polis* will necessarily have evolved precisely from them'.[389] Following both the principles of evolution and the positivism of industrial development, then, 'scientifically realistic utopian

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[384] Kumar, p. 14.
[385] Suvin, *Metamorphoses*, p. 89.
[386] Suvin, *Metamorphoses*, p. 90.
[387] Hansot, p. 95.
[388] Hansot, p. 96.
[389] Wittenberg, p. 40.

romance, consistent with the paradigm of evolution and its continuity with physics and mechanics, is set in *our* future', Wittenberg writes.[390]

Accordingly, despite the evolutionarily mandated temporal jump forward, the utopian societies of Bellamy, Morris and Wells are all more exactly located in both space and time than their classical predecessors by Plato and More, thus giving the reader a stronger sense that their own zero worlds might be capable of undergoing similar utopian developments. Utopia in *Looking Backward*, for instance, is already identified in the extended title as being situated in the year 2000, and the location is immediately identified as Boston. Morris's Nowhere has a slightly more vague temporal location, but could perhaps be calculated fairly exactly given the extensive information provided on the historical incidents leading to its establishment; also, it is set in a precisely described future version of London as well as along the river Thames, past Oxford. Lastly, Wells's Utopia, though also precisely located, is somewhat idiosyncratically placed: it is set on a planet 'out beyond Sirius, far in the deeps of space, beyond the flight of a cannonball flying for a billion years, beyond the range of unaided vision' (15).[391] And yet, this world is also both spatially and temporally almost identical with our own, except that it is utopian – in fact, all inhabitants of our earth have recognisable doubles on this utopia, doubles whose lives are only different to the extent that their society is erected along utopian principles whereas ours is not: 'every man, woman and child alive has a Utopian parallel' (23). Indeed, one might therefore say that this utopia does not in fact exist in the future at all, despite its evolutionary basis and Wittenberg's decree, given that it is technically contemporaneous with our world, existing in parallel up until the point of the protagonists' visit:

> From now onward, of course, the fates of these two planets will diverge, men will die here whom wisdom will save there, and perhaps conversely here we shall save men; children will be born to them and not to us, to us and not to them; and for the first and last occasion the populations of our planets are abreast. (23)

However, since there is no clear cut-off point at which utopian development previously diverged from ours, and Wells's depiction of the planets' parallel ontogeny is epistemologically dubious at best – an assessment that Ferns shares, as described below – it makes no difference to our analysis that this world is not technically in the future. In any case, the effect in all three novels is that utopia might well be within reach for us, in the present day, in the present place; indeed, Wells's narrator, the 'owner of the voice', is clearly modelled after Wells himself, while according to Leopold, moreover, *News from Nowhere* is structured spatially around sites of particular autobiographical importance to the author's own life: specifically, the whole of London, with whom he had a 'complex and ambiguous relationship', and the connection of Morris's own London home, Kelmscott House, 'along the river that he knew well, to the Oxfordshire retreat which he loved so deeply (Kelmscott Manor)'.[392]

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[390] Wittenberg, p. 40.
[391] Wells situates *A Modern Utopia* in direct dialogue with his utopian literary predecessors, with many direct references to previous works, including the fact that he names his utopian society simply 'Utopia', after More's island.
[392] Leopold, Introduction to *News from Nowhere*, p. xxvi.

As such, these texts make utopia real and tangible, thus echoing the writings of other utopian socialists such as Henri de Saint-Simon, Charles Fourier, and Robert Owen, who all devised plans for the socialist reconstruction of society that could genuinely be put into practice in the future (and in some cases were), and that arguably also *ought* to be: Vieira notes that 'they all believed [...] that those who, like themselves, were able to conceive strategies in order to change society were morally obliged to do so'.[393] Consequently, this moral imperative became attached to utopian thought in general: if society *could* indeed change and be changed, as evolution and industrial development indicated, then did members of society also have an ethical obligation to instigate such a development or influence it into one direction or another? Indeed, Hansot suggests that 'these men [Saint-Simon, Fourier, and Auguste Comte, a positivist philosopher inspired by Saint-Simon] were reformers whose critique of contemporary society was inseparable from an explanation of historical change intended to show that utopia would *inevitably* come into being';[394] here, again, we see the force of projected evolutionary development, but in conjunction with a determinism which could possibly conversely be seen to *absolve* of moral responsibility. However, as Vieira notes, this combination of determinism and agency makes sense in light of the fact that Marxism was a driving force of utopian thought at the end of the 19th century, which 'saw the fulfilment of utopia as part of historical development', but was also predicated on the belief that 'the birth of the new man would only take place after the economic situation of society had changed', as 'it was then urgent for man to take action, and to hasten the transformation'.[395] Moreover, scientific advancement and technological innovation put the manifestation of utopia, whether imminently or after a social economic shift, into the grasp of mankind: as Kumar writes, 'what science contributed to utopia was the sense that utopia was ultimately, in the foreseeable future, realizable'[396] – a considerable cognitive leap from More's final dejected observation that utopia was something 'I may rather wish than hope for' (150). Overall, then, Hansot suggests, 'the basic assumption used to distinguish modern from classical utopian thought is man's recognition of his ability to initiate social change and use it for ends of his own devising'.[397]

As such, this realisable, future-set utopia that had supposedly evolved from our own world would have to show a clear *transition* from zero world to utopia, unlike the classical utopias of Plato and More, so that the reader could track these changes in a realistic fashion: as Hansot notes, their future location implies that 'the ideal state acquires a history'.[398] Accordingly, there is indeed at least a nominal, 'scientifically' explained connection to the author's world in all three texts, both regarding the protagonist's presence in utopia and the development of utopia itself. When West wakes up in utopian Boston, for instance, it is after having been in a state of artificially induced coma-like sleep that accidentally went on for hundreds of years after his house burnt down, leaving only his sealed underground sleeping

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[393] Vieira, 'The Concept of Utopia' in *The Cambridge Companion to Utopian Literature*, p. 12.
[394] Hansot, p. 108 (italics mine).
[395] Vieira, pp. 14 – 15.
[396] Kumar, p. 30.
[397] Hansot, p. 9.
[398] Hansot, p. 97.

chamber – a fact we are informed in 'quasi-scientific terms designed to play down its miraculous qualities', as Wittenberg notes: 'a "mesmerizing *process*," "the *subject* of animal magnetism," "a *state* of suspended animation".'[399] Moreover, after West is awakened by Dr Leete in the year 2000 and informed of the 'industrial evolution' that solved the 'labor question', he is told that this change did not in fact come about with 'great bloodshed and terrible convulsions', as West had supposed, but that 'there was absolutely no violence', as 'the change had been long foreseen' (33). Dr Leete then goes on to describe the gradual consolidation of all industries under national control over the years, and how this eventually led to the creation of the industrial army.

Likewise, Morris goes to some lengths to describe how utopian Nowhere came about – in fact, he devotes an entire chapter to the matter, entitled 'How the Change Came'. Here, an old historian named Richard Hammond describes to Guest in great detail how this transformation *did* indeed require 'great bloodshed and terrible convulsions' to come into existence in its formative period, including a massacre on Trafalgar Square which left 'between one and two thousand' (100) dead – as Hammond tells Guest, using the same phrase as Dr Leete in *Looking Backward,* 'the world was being brought to its second birth; how could that take place without a tragedy?' (113). In a lengthy section that could only be of real interest to politically-minded persons such as himself, Morris then goes on to detail, via Hammond, how the massacre was followed by communist rebels' gradual increase in political influence, as well as by further 'convulsions' such as a general strike and a civil war that lasted two years, before the communist artisanship-based utopia of Nowhere could come about – the beautiful garden utopia in which all work is pleasure. As Leopold notes, this extensive and detailed account 'draws on both [Morris's] understanding of past events (such as the Paris Commune), and his own political experiences (of 'Bloody Sunday' and the strike wave of 1888-9, for example)'[400] – as such, the connection between zero world and utopia is further strengthened here, as there is at least a historical precedent for the transitional period of revolutionary action. Regarding the journey of protagonist to utopia, however, Morris is a little more vague and old-fashioned, allowing William Guest to simply wake up one day in utopian Hammersmith with no indication as to how the temporal shift occurred; and then, just as fantastically – though announced by premonition (his own and that of his friend Ellen) – Guest simply disappears from utopia once more at the end of the text.

This is no more fantastical than Wells's description of his protagonist's arrival in utopia, though: the 'owner of the voice', who introduces himself before the main text, simply finds himself on the utopian planet one day while hiking in Switzerland with his companion, the botanist; moreover, at the conclusion of their utopian adventures, utopia simply vanishes, and the two explorers find themselves back where they started. In fact, Wells makes no pretence that his utopia is not merely imagined: 'Utopia is a thing of the imagination that becomes more fragile with every added circumstance, that, like a soap-bubble, [...] is most brilliantly and variously coloured at the very instant of its dissolution' (234). In terms of the transition of the

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[399] Wittenberg, p. 34 (italics in original).
[400] Leopold, Introduction to *News from Nowhere*, p. xxvii.

author's world to utopia, Wells does appear to at least imply a scientific connection through the above description of the state evolving to become an 'instrument of justice and equality', but beyond that, he seemingly prefers to invest his utopian rationalisations in descriptions of the improved society itself, in contrast to what Suvin calls Bellamy and Morris's 'effective' use of the 'anticipation device'.[401]

Where Wells does present a 'realistic' contrast between our world and utopia, however, is in his aforementioned use of doubles, which manifest the differences between life on earth and in Utopia on the bodies and lives of individuals, including the owner of the voice. Indeed, the owner of the voice becomes almost obsessed with the idea of finding his own utopian counterpart, to the point where this quest becomes more important to him than his exploration of any other aspect of Utopian society: 'That I have come to utopia is the lesser thing now; the greater is that I have come to meet myself.' (155-6) When the owner of the voice does eventually meet his double, he learns many things from him about Utopian society, but intriguingly, the reader is not permitted to eavesdrop on their comparison of personal details and life experiences: the owner of the voice merely observes that 'No, the conversation would contribute nothing to a modern Utopia. And so I leave it out' (168). As such, we are given a direct idea of comparative utopianism through the existence of parallel selves, but by being deprived of the personal comparison of the owner of the voice with his own Utopian double, we are perhaps being urged to focus again, instead, on the universality of the utopian parallel, and to thus turn our attention back to larger matters of social restructuring rather than getting lost in petty personal detail – a particular peeve of the owner of the voice, who sees no room for such detail and sentiment in his supposedly supremely rational utopia. In any case, though, the existence of doubles allows for speculation on the part of the reader as to what one's own double might look like, and how social circumstances might affect personal development – all of which ties in with the fin-de-siècle utopia's focus on realisable personal improvement, either in the short term regarding the individual or along larger-scale evolutionary lines: unlike in the classical utopias, there is again a direct sense that current individual members of our own zero world might themselves become better through living in an improved social environment.

Indeed, the idea of 'doubles' is also present in a less literal fashion in both Bellamy and Morris's utopias: in *Looking Backward*, there is a family connection in that West ends up becoming engaged to Dr Leete's daughter, Edith, who turns out to be the great-granddaughter of his fiancée in 1887 Boston who shared the same name; moreover, Ferns suggests that Dr Pillsbury, the 'doctor by courtesy only' (14) who puts West into his 113-year sleep, 'finds a utopian equivalent in Dr Leete'.[402] In *News from Nowhere*, the genealogical link is less explicit, but there is an indication that Hammond might be Guest's (great-)grandson in the future: Hammond mentions a 'great-grandfather in Bloomsbury' (18), and when he first sees Hammond, Guest observes that 'his face, dried-apple-like as it was seemed strangely familiar to me; as if I had seen it before—in a looking-glass it might be' (46). The effect of these personal

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[401] Suvin, *Metamorphoses,* p. 93.
[402] Ferns, p. 85

mirrorings in all three novels is, I would suggest, not merely to strengthen the air of utopian realisability as delineated above, but also to shift the utopian focus a little more from the utopian society to the utopian *individual,* which was also a feature of fin-de-siècle socialist utopianism: as Hansot points out, both Saint-Simon and Comte placed 'greater emphasis on the value of individual personality':

> They adopted a psychology, derived from Bichat, which stressed the ineradicable differences between men; and by this new emphasis on the value of the unique individual, they transformed earlier utopian forms of egalitarianism (condemned for having ignored individuality and prevented the growth of the unique) into equality of self-realization.[403]

This seems like a positive step forward from the classical utopias of Plato and More, in which, as we have seen, individual development is subordinated to the homeostasis and autopoiesis of the community, despite the fact that individual happiness is crucial to overall eudaimonia; indeed, Hansot suggests that 'with increased attention being paid to personality, nineteenth-century utopias no longer assume that the happiness of the individual and that of the race are identical'.[404]

Overall, therefore, the fin-de siècle utopias of Bellamy, Morris and Wells appear to both embody and in themselves stimulate the sense of change and progress that was in the air at the time, presenting utopias that could well be within reach of the average person, or at least something that society could eventually evolve towards; moreover, there is scope for a world in which the individual is no longer subordinated, but perhaps stands to benefit from the social and technological benefits of utopia in such a way as to lead a fulfilled life as a full member of the utopian community. Indeed, as alluded to before, several critics have associated this sense of utopian realisability and possible moral obligation towards utopia in the fin-de-siècle with *dynamism*, in contrast with the stasis of the classical utopia: Vieira, for example, writes that

> By projecting the ideal society in the future, the utopian discourse enunciated a logic of causalities that presupposed that certain actions (namely those of a political nature) might afford the changes that were necessary in order to make the imagined society come true. In this way, utopias became dynamic, and promoted the idea that man had a role to fulfil.[405]

However, I suggest that this apparent dynamism brought about by the supposed realisability of the fin-de-siècle utopia – as implied through evolutionary language and supported by descriptions of the transition to utopia and the suggestion of personal utopian parallels – is in fact merely an indication, once more, of balancing homeostatic regulation within a closed system, akin to those of Plato and More, whose apparent focus on progress and development is in fact given no further avenue within the completed utopia. Moreover, as I will show, such a system is neither sustainable in itself, as it is once again facilitated through coercion rather than true self-regulation, nor is it universally inclusive: two factors which once again additionally impede the ability of these utopias to function as rigorous science-fictional utopian thought experiments.

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[403] Hansot, pp. 108-9.
[404] Hansot, p. 109.
[405] Vieira, p. 10.

Homeostasis in Bellamy, Morris and Wells:

To begin with, the apparent realisability of the utopias of Bellamy and Wells – though not that of Morris – is impeded by the fact that their historical transitions to utopia, described above, are in fact far less rigorous and convincing than one might expect from 'rational' and – at least in the case of Bellamy – quite seriously proposed utopian visions. In *Looking Backward,* for example, the 'industrial evolution' apparently did feature a 'stormy epoch of transition' (167), but no explanatory specifics are given; in any case, moreover, this period appears to have been very brief, given that the citizens of utopian Boston proclaim that they 'cannot fail to be astounded at the suddenness with which a transition so profound beyond all previous experience of the race must have been effected' (164). As a result, these 'profound' changes appear to not be particularly wide-ranging, and in fact largely related to the (albeit significant) economic re-organisation of the nation, despite the temporal gap of more than a century: as Julian West remarks in a footnote, '…except for the topic of our conversations, there was in my surroundings next to nothing to suggest what had befallen me. Within a block of my home in the old Boston I could have found social circles vastly more foreign to me.' (26) In fact, Morris's decision to write his own utopia in response to Bellamy's 'cockney paradise' was in part due to his disapproval of the ease with which utopia comes about in *Looking Backward*; he attributes the lack of obvious historical change in Bellamy's utopia to the fact that Bellamy's temperament is 'unhistoric and unartistic', thus making him the type of socialist who is 'perfectly satisfied with modern civilisation, if only the injustice, misery, and waste of class society could be got rid of; which half change seems possible to him'.[406] Accordingly, Morris writes, 'it follows naturally from the author's satisfaction with the best part of modern life that he conceives of the change to Socialism as taking place without any breakdown of that life, or indeed disturbance of it'.[407]

Wells's utopia – despite its connection to our world through the parallel nature of identities and natural surroundings – suffers from a similar lack of transitional rigour, though in a somewhat different way: as mentioned above, the world state of Utopia is never presented as more than a fancy of the author's imagination, yet even so, the author or owner of the voice could arguably have dreamed up a more historically and technically detailed depiction of the development of utopia from the zero world, in line with the 'scientific' reasoning that supposedly underpins the rest of his mental construction of utopia. Instead, there is no sound explanation for this social transformation at all, despite the narrator's observation at some point that 'Utopia too must have a history' (81), which then turns out to only relate to the fact that the two explorers are finding it easier to navigate the utopian terrain due to its geographical similarity with our world. Indeed, Ferns calls it a particularly 'striking parallel between Wells's utopias and their Renaissance predecessors' that 'there is almost no discussion of *how* the utopian society was created—an omission perhaps understandable in the Renaissance, but considerably less so in an era where there had been so many examples of radical social and political

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[406] Morris, 'Looking Backward', *Commonweal,* pp. 194-195.
[407] Morris, 'Looking Backward', p.194-195.

change'.[408] Ferns also suggests that the assertion that all individuals in our world have Utopian doubles is in fact problematic in this respect, as mentioned above: he states that this notion is 'subsequently modified to the point of outright contradiction by the narrator's admission that such a utopia could only have emerged from a wholly different utopian history', such as one in which 'Jesus Christ had been born into a liberal and progressive Roman Empire that spread from the Arctic Ocean to the Bight of Benin' (260).[409] Indeed, Ferns claims, for utopia to exist in Wells's proposal, 'it must *already* have existed', due to this historical confusion – and he concludes that 'even while Wells attempts to imagine a society capable of change, he severs its link with the world which utopia proposes to alter for the better—his own'.[410] Moreover, Ferns notes that Wells's presentation of his Utopia as a mere 'act of the imagination' (93), presumably meant to protect him from criticism by those who find flaws in his social proposals within the text, also finds expression in the fact that he attempts to refer to utopia mostly (or at least initially) in the subjunctive or future tense, using phrases like 'let us suppose' or 'in utopia we should';[411] I would suggest that the effect, however, is that of further distancing of the utopia from the reader, as its developments are not presented as historically tied but as merely hypothetical and fanciful, dreamed-up rather than resulting from actual change in the zero world.

As a result, Bellamy and Wells's utopias, both such advocates of progress and evolved social relations, ultimately find themselves disconnected from the zero worlds whose arrangements they purport to be directly improving upon, which in turn somewhat undermines the supposed realisability of their utopian proposals, whether explicitly intended for realisation or not. As such, moreover, I would suggest that both utopian models are in fact more spatiotemporally isolated from the zero world than their authors perhaps intend them to be, since even the closest spatial connection (such as the continued presence of Boston) and exact temporal location (such as the year 2000 or Wells's present moment) mean very little if the transitional path towards the reformed societies they feature is unclear. In fact, I maintain that this disconnectedness applies both to the past – in the case of at least Bellamy and Wells – due to inadequately described utopian transition, as well as to the future, in the case of all three novels; this is due to the fact that true change and development are in fact made impossible in these societies on a *structural* level, given that their internal regulation functions within closed systems, as I will go on to show in detail.

In fact, I also propose that the spatiotemporal isolation of all three utopias to various degrees conversely helps to *facilitate* the self-contained functioning of these utopias as self-organising homeostatic systems; my belief is that it is this, in turn, that gives the illusion of the dynamism that ought to be associated with realisability, as Vieira suggests, or at least with continued progress and development. Instead, I suggest, the apparently dynamic movement that the reader perceives within the utopian system merely represents the feedback relationships of the homeostatic utopian chronotope, as in Plato and More, enabling the bounded self-regulatory

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[408] Ferns, p. 98.
[409] Ferns, p. 98.
[410] Ferns, p. 98.
[411] See Ferns, p. 88.

construct to merely maintain itself in its own terms, rather than allowing for genuine change and transformation. Indeed, I would put forward that the utopias of Bellamy, Wells and even Morris, despite their emergence within an intellectual environment of change and individual development – including the inherent linearity of evolutionary thought – join Plato and More in featuring all the main characteristics of the bounded, ultimately quasi-cyclical, homeostatic utopian chronotope: internal self-regulation (at least attempted), a reliance on negative rather than positive feedback in their overall functioning, and closure to their external environments.

Regarding these first two characteristics in conjunction – internal self-regulation through negative feedback – Bellamy's 'industrial army' provides a particularly fitting case study. In this streamlined system of employment and production, individual workers are matched with trades according to individual suitability and preference, yet the difficulty of particular forms of labour is constantly adjusted in response to volunteer numbers in order to maintain a proportionate relationship between the desirability of certain jobs and their availability: 'it is the business of the administration to seek constantly to equalize the attractions of the trades' (40), while hours are adjusted for arduousness. As such, it is expected that with the help of the administrators, the job-allocation system will basically regulate and balance itself, and there will be no cause for claims of unjust treatment. Indeed, job satisfaction can be the only regulatable factor in this scheme, given that there are no wages, nor indeed any other intermediate regulatory elements between worker and labour that could be controlled or serve to mediate disputes: there are no politicians and almost no laws, and indeed 'nothing to make laws about', as Dr Leete informs West (123). In this matter, as in many others, it appears to be as with the prospect of inheritance, explained by Dr Leete: 'the matter *arranges itself* very simply' (69, italics mine).

The same internal feedback-based regulation also applies on a material level in Bellamy's utopia, with 'pneumatic transmitters' connecting sample stores with warehouses (63), so that shopping is perfectly streamlined and the acquisition of goods nigh-instantaneous; moreover, even the immaterial good of music travels via pneumatic tubes to individual households, where something which resembles a telephone more than a radio connects 'music rooms' with live musicians on request at any time of day or night. Machines in fact play a central role in Dr Leete's Boston, with even the housework being automated and mostly done by 'labour-saving inventions' on request (70); in this way, Kumar suggests, Bellamy responded to the belief of his time that 'the only relevant social theory was that capable of addressing the system of a fully industrialized society'.[412] In fact, one might say that Bellamy's 'industrial army' has itself become a *machine* for the product and consumption of products, whereby its human workers are merely the feedback-giving cogs in the system that must be managed and directed based on their input and outputs, just like all other mechanical elements; indeed, Morris claims that Bellamy's use of the word 'monopoly' in his social organisation 'shows unconsciously that he has his mind fixed firmly on the mere *machinery* of life'.[413] Such a machine, of course, would be

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[412] Kumar, p. 138.
[413] Morris, 'Looking Backward', pp. 194-195.

of the homeostatic variety, as we have seen, balanced through self-regulation. In fact, the 'governor', which formed the key example in the cyberneticists' explanation of negative feedback relations in homeostatic systems – and indeed gave the field of research its name – is directly referenced in *Looking Backward* with regard to the feedback-based adjustment of production: 'over-production in special lines, which was the great hobgoblin of your day, is impossible now, for by the connection between distribution and production supply is geared to demand like an engine to the governor which regulates its speed' (140).[414] The overall effect of such homeostatic regulation in Bellamy's utopian society, then, is that of balanced equilibrium – indeed, Beaumont describes Bellamy's utopian system as in a 'perfect state of social equilibrium'.[415] As such, then, it is an arrangement focused once again on *maintenance* of the status quo rather than its alteration, as Hansot also points out – an arrangement that is self-regulatory almost in its entirety, she suggests, except for the presence of criminals, who are treated in hospitals as exhibiting atavism:

> Change as novelty or as a reaction to change initiated from outside the utopian environment is not provided for in Bellamy's ideal society. The type of change that remains possible to utopia is change in its weakest form—the elaboration and consolidation of the status quo. [...] In their activities the utopians appear to be busy maintaining the status quo; when atavism has been eliminated, the status quo will, presumably, maintain itself.[416]

In the end, as Ferns notes, it is therefore 'security, above all', that 'remains the fundamental object of Bellamy's utopian desire' – security in the form of maintenance and stability, one might say – for which, in return, all may have an easy life:[417] 'no man any more has any care for the morrow, either for himself or his children, for the nation guarantees the nurture, education, and comfortable maintenance of every citizen from the cradle to the grave' (52).

In *News from Nowhere,* one may likewise make the case that the status quo is upheld through homeostatic feedback relations; here, however, in the absence of any form of hierarchical government and monetary economy, it is the apparently universal desire to work and share the results of one's labour that keeps the system moving and in balance. Goods and services, for example, are distributed as a matter of course as part of a gift economy, separate from both a market economy and actual gift-giving (as well as, for that matter, a barter economy); this becomes clear when Guest unsuccessfully attempts to pay Dick for ferrying him on the river, and Dick laughs 'as if the idea of being paid for his work was a very funny joke'. (9) Moreover, in further evidence of self-regulating arrangements based on the desire to work, people come together to work in organically formed groupings, such as in 'banded-workshops' (39) which have replaced factories, while schooling is largely self-led: 'the little ones get together, and rub their speech into one another' (26), Guest is told, and Dick says 'I can assure you our children learn, whether they go through a "system of teaching" or not' (25). The same principles of interest-led self-regulation, then, apply to Nowhere's version of government: self-

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[414] Regarding the connection between the name 'cybernetics' and the governor, see, for example, Norbert Wiener, *Cybernetics, or, Control and Communication in the Animal and the Machine*, p. 12.
[415] Beaumont, Introduction to *Looking Backward*, p. xx.
[416] Hansot, p. 130.
[417] Ferns, p. 80.

governance based on individual feedback is the rule of the day, via participatory democracy practised in 'Mote-houses' (76). This stands in stark and presumably very much intended contrast to Wells's samurai government and Plato's guardians, which together inspired it – an arrangement that is in fact alluded to in Hammond's dismissal of the alternative possibility that the citizens of Nowhere should 'choose out, or breed, a class of superior persons capable of judging on all matters without consulting the neighbours; that, in short, we should get for ourselves what used to be called an aristocracy of intellect' (77). Instead, Hammond explains, 'the whole people is our parliament', run by majority assent, which Hammond describes as a perfectly pared-down arrangement based on common sense: 'it is true that a man no more needs an elaborate system of government, with its army, navy, and police, to force him to give way to the will of the majority of his *equals,* than he wants a similar machinery to make him understand that his head and a stone wall cannot occupy the same space at the same moment' (65, italics in original). Here, too, feedback rules the operations of the system, since the 'Motes' function by consensus decision-making, as Hammond explains to Guest: changes are proposed and then 'meantime arguments *pro* and *con* are flying about' (76) until an agreement can be reached; if not it is 'again put off for further discussion' (76).

In the end, no argument is ever forced through against the will of the majority, as Hammond points out, and indeed no force is used in general, as there is no criminal justice system: though it is accepted that 'hot blood will err sometimes' (70), it is also agreed that 'we who live amongst our friends need neither fear nor punish' (71). In general, the belief underlying the functioning of Nowhere is that the system will ultimately sort itself out, much as in Bellamy's Boston; however, whereas Bellamy's feedback system relies on total state control, such hierarchical regulation is almost entirely absent in Nowhere, as excessive interference in the process of self-management is seen here as neither necessary nor wise. And yet, both societies ultimately aim for the same end result: stable, balanced maintenance of the status quo, with Hammond declaring that 'daily work' is the foundation of happiness, and that happiness is desirable because it brings about 'peace and stability' (80).

In *A Modern Utopia,* this stabilisation takes on a somewhat different shape: unlike Bellamy's regimented version of feedback-based socialism – which Bellamy called 'public capitalism'[418] – and Morris's voluntarily regulated gift economy, Wells's Utopia functions as a fairly standard market economy; however, a strong sense of homeostatic organisation is in evidence in this utopian system as well, in that Wells explicitly attempts to balance individual freedoms against one another in order to create a perfectly 'rational' society in which people easily go about their daily movements and dealings.

And yet, to begin with, there is certainly also an element of self-regulation in Wells's economic system – more along the lines of Adam Smith's 'invisible hand', but with a little more planning to ensure equilibrium: it is described as a 'wisely balanced economic system' (90). To this end, there is also ongoing feedback-based regulation by the state in this economy, similar to the adjustment of working hours in Morris's Nowhere, in that work times are likewise calibrated

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[418] Beaumont, Introduction to *Looking Backward*, p. xvii.

and the workers themselves are in addition physically moved around the globe to balance out shortages and overflows of labour:

> All over the world the labour exchanges will be reporting the fluctuating pressure of economic demand and transferring workers from this region of excess to that of scarcity; and whenever the excess is universal, the World State [...] will either reduce the working day and so absorb the excess, or set on foot some permanent special works of its own, paying the minimum wage and allowing them to progress just as slowly or just as rapidly as the ebb and flow of labour dictated. (106)

In private life, there is an analogous focus on the rapid meeting of demands in a streamlined, automated fashion, largely on the basis of technology, as in Bellamy's Boston: the narrator describes, for instance, a 'thermometer beside six switches on the wall' (74) that caters for every human need in his hotel room, and he also notes that the room is designed in such a way that very little housework is left to be done, and what remains is assigned to an 'automated sweeper' (75).

However, perhaps the most notable area of self-regulation in Wells's Utopia, and that which he appears to be most keen to advertise, is that of borderless free movement of people across the globe: just as the narrator describes the Utopian state becoming an 'instrument of justice and equality' (141) as a high point of human evolution, he appears to see a freely traversable world state as the only possible socio-geographical outcome of such a development, again in direct opposition to the respective arrangements of his literary predecessors: 'No less than a planet will serve the purpose of a modern Utopia' (15), he claims, and later adds

> I submit to the modern-minded man it can be no sort of Utopia worth desiring that does not give the utmost freedom of going to and fro [...] so we may expect no unclimbable walls and fences, nor the discovery of any laws we may transgress in coming down these mountain places. (31)

As a result, the narrator suggests, 'the whole Utopian world will be open and accessible and as safe for the wayfarer as France and England is today' (36); moreover, since 'the Utopian will travel in many ways', 'a thin spider's web of inconspicuous special routes will cover the land of the world' (37). Accordingly, the narrator envisages a regular exchange of people all over the globe, a gently flowing system guided both by the desire for leisure and presumably by mandated work assignments, which results in 'a migratory population' – 'an endless coming and going', with 'people as fluid and tidal as the sea' (112).

And yet, this migratory system is not quite as free-flowing and organically self-regulating as these mellifluous phrases make it out to be: after all, it is Wells's stated aim in *A Modern Utopia* not to allow humankind to *fully* moderate itself in gentle interchange, but to intelligently design and implement a system in which freedoms, including the freedom of movement in particular, are as perfectly balanced against other human desires as possible, thus maximising overall life satisfaction. For instance, the narrator proposes 'detailed regulations, very probably varying locally with local conditions', which govern exact space usage in order to both ensure relatively free movement while also guaranteeing privacy to a reasonable extent: one suggestion is that 'privacy beyond the house might be made a privilege to be paid for in proportion to the area occupied', while 'a maximum fraction of private enclosure for each urban

and suburban square mile could be fixed'; likewise, a garden might be 'closed only for a day or a couple days a week, and at other times open to the well-behaved public' (35). 'Who', the narrator asks, 'in a really civilised country, would grudge that measure of invasion?' (35) After all, he argues, 'so a reasonable compromise between the vital and conflicting claims of the freedom of movement and the freedom of seclusion might be attained…' (35). Throughout the rest of the text, as well, the narrator keeps coming back to this question of 'balancing' rights, for example after a discussion on marriage laws in Utopia (examined in more detail below), upon which he muses on 'the mystery of balancing justice against the good of the future, amidst these violent and elusive passions. Where falls the balance of freedoms here?' (48). Likewise, in a section on property rights in Utopia, the narrator ponders the fact that 'very speedily, under terrestrial conditions, the property of a man may reach such proportions that his freedom oppresses the freedom of others' (66-7); he declares that 'here, again, is a quantitative question, an adjustment of conflicting freedoms, a quantitative question that too many people insist on making a qualitative one' (67). The property laws of Utopia, then, epitomise how the narrator proposes to handle this question of balance, in that they are supposedly set out in such a precise way as to attain to 'the same object that pervades the whole Utopian organization, namely, a universal maximum of individual freedom' (67): in this instance, for example, 'legitimate property' may be kept by the Utopian, as long as it in some way an 'extension and expression of his personality' (67), but unspent sums will be re-assigned by the state.

Overall, though such a delicate matter as this balance of freedoms does, according to the narrator, require intervention by the state – and at times fairly significant intervention – it is allegedly for the higher good of a (somewhat vaguely defined) more significant overarching personal freedom: in a discussion on marriage and child-bearing, for instance, the narrator proclaims, somewhat ironically, that 'all former Utopias have, by modern standards, erred on the side of over-regulation in these matters', and that 'here, just as in relation to property and enterprise, the law will regulate only in order to secure the utmost freedom and initiative' (128). In this way, the reader is informed, 'the *maintenance* of public order and decency' (48, italics mine) is ensured; once again, the overall aim appears to be the ongoing stabilisation of the status quo. In fact, once again, the narrator describes the Utopian 'balance of freedoms' as ideally poised to recalibrate equilibrium in the face of external disruptions to the system, in the same way that Cannon describes the homeostatic self-regulation of biological systems as counter-balancing 'alarming disturbances in the organism':[419]

> We are to shape our state in a world of uncertain seasons, sudden catastrophes, antagonistic diseases, and inimical beasts and vermin […] to face it in no ascetic spirit, but in the mood of Western peoples, whose purpose is to survive and overcome. (12 – 13)

Despite this focus on stabilisation, however, the narrator suggests that the overall effect of this regular homeostatic re-calibration will be a sense of flow, dynamism and even forward

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[419] Cannon, p. 289.

motion, which is again described in highly evocative terms to characterise commercial relations in Utopia, in particular:

> The energy developed and the employment afforded by the State will descend like water that the sun has sucked out of the sea to pour upon a mountain range. [...] Between the clouds and the sea it will run, as a river system runs, down through a great region of individual enterprise and interplay, whose freedom it will sustain. (66)

This process, seemingly facilitated by the greater stability and security enabled by state regulations, in turn enables the personal freedom that allows for greater individual development, as the narrator adds: 'The State is to be progressive, it is no longer to be static [...]. The factor that leads the World State on from one phase to the next is the interplay of individualities'. (64) It is in this 'interplay of individualities' in his utopia, apparently facilitated by the 'balance of freedoms', that Wells then appears to ground his famous assertion that 'the Modern Utopia must not be static but kinetic, must shape not as a permanent stage but as a hopeful stage leading to a long ascent of stages' (11).

However, it is unclear how exactly, even given the greater relative freedom enabled through safety and stability, a society that is fundamentally geared towards the maintenance of the status quo would have the necessary flexibility and future-oriented latitude to allow for true progress. Moreover, it is not immediately obvious how open to progress, innovation and the interplay of individualities a society can be that is so precisely focused on evaluating individual personal freedoms and privileges and meting them out against one another – deciding exactly, for instance, on what days a citizen might have the use of their own private gardens and on what days they must be made open to use by the public. Also, such 'quantitative questions' are, of course, not decided democratically by any stretch of the imagination, but by the 'voluntary noblemen', the samurai, mentioned above, which further calls into question the potential of such a system for truly independent individual progress and development – or even the dynamic free flow of interpersonal economic relations described so picturesquely above – without hindrance through the samurai's incontestable decrees. In fact, this instinct appears to prove correct in that the narrator elsewhere attempts to justify the undemocratic appointment of the samurai by informing the reader that 'I have come to perceive more and more clearly that the large intricacy of Utopian organization demands a more powerful and efficient method of control than electoral methods can give' (174); control and coercion, then, are evidently vital components to this homeostatic system, a system which the narrator attempts so ardently to identify instead with the natural, free play of human innovation and individuality, as 'balance' is actively maintained by the state not only between human freedoms, but between individuals themselves.

Indeed, I suggest that as in Plato and More, the apparent self-regulation of Bellamy and Morris's homeostatic utopias is in fact more fundamentally reliant on control and coercion than is immediately apparent (particularly in the latter) – and certainly more than the reader is led to believe given the explicit emphasis on streamlined, flow-like and/or organic efficiency in all three novels, in which 'matters arrange themselves' in independence from any reliance on laws, politics, currencies and other 'artificial' governing constraints. External coercion, after all, does not seem a fitting ingredient in a society that supposedly represents the pinnacle of human

evolution, and whose theoretical realisability is suggested in numerous ways. In making this suggestion, I also propose that such coercion further supports my reading of these utopian systems as homeostatic, given that, as in Plato and More, it fundamentally inhibits any tendencies towards genuine change and development in these societies that might have provided an openness in a future direction, an openness that is missing in their aforementioned lack of a believable connection to their apparent past – our world. Lastly, I argue that this forced homeostasis, brought about by artificial control, further essentially invalidates Vieira's argument for the dynamism of these utopias on the basis of future-oriented realisability, given that a coercive society is not only difficult to implement, but also not necessarily desirable – as well as certainly not a future-oriented ideal state based on faith in individual human development, predicated, in Vieira's words, on 'the idea that man had a role to fulfil'.[420]

Eugenic Coercion in Bellamy, Morris and Wells:

To begin with, what at first sight appears to be a logical aspect of utopia is that in all three societies, human individuals are described as both physically and behaviourally superior to those of the zero world. In terms of appearance and vigour, for example, men and women of Bellamy's Boston are described as beautiful and in 'magnificent health' (14); the inhabitants of Morris's Nowhere are said by Guest to be 'strong and handsome, both men and women' (139), and the women 'so kind and happy-looking in expression of face, so shapely and well-knit of body, and thoroughly healthy-looking and strong' (13); and in Wells's world state, the Utopians are depicted as 'natural beauties' possessing 'beautiful bodies, and a universally gracious carriage', which are taken by the narrator to be 'only the outward and visible signs of an inward and spiritual grace' (118).

Likewise, this 'grace' seems to extend towards these individuals being remarkably easy to *manage* within their respective homeostatic utopian systems, and even in the transition towards these systems. In Dr Leete's history of utopian Boston, for instance, there is no indication of there having been any resistance on the part of citizens to the 'industrial evolution': Dr Leete claims that there having been no violence is due to the fact that 'the change had been long foreseen', and that 'public opinion had become fully ripe for it, and the whole mass of the people behind it' (33). In Bellamy's finished utopia, moreover, the utopian citizens seemingly require little more than 'special incentives in the form of prizes, and advantages to be gained' as 'requisite to call out the best endeavours of the average man in any direction' (56), with the 'red ribbon' forming the highest incentive – the 'highest of all honors in the nation', 'awarded by vote of the people to the great authors, artists, engineers, physicians, and inventors of the generation' (96). In the absence of possible wealth accumulation, these incentives appear to be sufficient to keep all citizens functioning within the homeostatic feedback system as it requires them to. However, there seems to have been some marked change in human nature to enable this accommodating behaviour: the utopians of Boston in the year 2000, West discovers, are

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[420] Vieira, p. 10.

exclusively motivated by the esteem of their peers as 'the coarser motives, which no longer move us', as Dr Leete explains, 'have been replaced by higher motives wholly unknown to the mere wage earners of your age [...] service of the nation, patriotism, passion for humanity' (57), while other 'coarser' human habits also appear to have been eradicated and replaced by more 'noble' ones. Lying has become a great moral taboo, for example, as 'falsehood is [...] so despised among us that few offenders would lie to save themselves' (120), while conversely everyone now cares for the finer things in life such as music (65); indeed, Dr Leete explicitly says that the formation of the industrial army was enabled by 'the increased intelligence of the masses which made the difference' (164). By way of a parable in which a rose is able to bloom to its full potential only once its environment has been changed, Dr Leete claims that utopia has brought out 'what unperverted human nature really was like', and that it has become evident that 'human nature in its essential qualities is good, not bad' (168). Moreover, such 'unperverted' human nature is apparently ideally suited to life in this new patriotism-driven superstructure geared towards consumption: the only real character information that the reader is given regarding any utopian citizen is Edith Leete's description as an 'indefatigable shopper' (58), and Beaumont suggests that 'although the rationalisation of labour embodied in the idea of an "industrial army" is the governing principle of the utopian future portrayed in *Looking Backward*, the citizens of twenty-first-century Boston are by vocation consumers rather than producers'.[421]

In Morris's text, the transition to utopia itself is less smooth, as we have seen, but once utopian Nowhere has been established, nearly all utopian citizens – perhaps with the exception of Ellen's disgruntled grandfather – appear remarkably willing to devote their lives to work despite there being no monetary incentive to do so, and also to largely adapt their labour to communal necessity, for example when coming together to harvest hay. As in *Looking Backward,* their motivation to work, and in particular to produce aesthetically pleasing products, seems to have arisen entirely out of their purest good nature: 'the art or work-pleasure [...] sprung up almost spontaneously, it seems, from a kind of instinct amongst people' (115). Moreover, the movements of apparently voluntarily human feedback that take the place of certain economic or legal arrangements in Nowhere are seemingly performed without question, out of sheer good nature, as evidenced by the fact that it is taken for granted that a certain individual will give up his house to another person whose friends believe that he would benefit from the move: 'Is the house in question empty?', Guest asks, and is told 'No [...] but the man who lives there will go out of it, of course, when he hears that we want it' (145).

Wells, indeed, appears to be the only one among the three fin-de-siècle authors whose utopian citizens are treated as not all possessing an ideal human nature, as evident in the class system discussed in greater detail below, as well as in the narrator's assertion that the individual is not 'necessarily good' (114); also, as seen above, we have no real indication as to how well or badly people enabled or responded to the shift towards Wells's Utopia, given the lack of an explicitly described transition. However, the reader is told that individual perfection is not in fact the aim of this utopia, and that the conceit of utopian doubles to all humans is in part

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[421] Beaumont, Introduction to *Looking Backward*, p. xvi.

intended to illustrate the imperfect humanity of the former: 'the alternative is a Utopia of dolls in the likeness of angels—imaginary laws to fit incredible people, an unattractive undertaking' (23). And yet, there is a certain lack of consistency in the depiction of the Utopians as individuals of average human quality – as mentioned, they are also described as particularly beautiful, strong, and graceful, and the reader is moreover informed of a marked improvement in their behaviour and mental capacities: 'Utopian manners will not only be tolerant, but almost universally tolerable. Endless things will be understood perfectly and universally […]; baseness of bearing, grossness of manner, will be the distinctive mark of no section of the community whatever'. (34) We are not given many illustrations of the specific shape this cultivation takes on Utopia, but the citizens' moral refinement might be seen in their disdain for slaughterhouses, the abstention from alcohol that even non-samurai largely follow, and the fact that they generally seem 'people a little heedless of small pleasures' (159). This conclusion, along with the fact that the citizens of Nowhere are mostly driven by the desire to practice artisanship, and that Bellamy's Bostonians are easily honour-driven as well as natural consumers, further hints at some general alteration to human nature along the path to utopia in all three worlds – an alteration that renders these individuals apparently ideally suited to the specific homeostatic system they eventually inhabit, able to perform the required feedback operations described above with no apparent distress, and indeed sometimes with great enthusiasm.

In fact, this change in the nature of the individual utopian is largely presented in all three novels, whether explicitly or implicitly, as the natural outcome of the evolutionary process that brought about utopia itself, and it is explicitly stated as such a result in *Looking Backward*, in the words of Dr Leete:

> Perhaps more important than any of the causes I mentioned then as tending to race purification has been the effect of untrammelled sexual selection upon the quality of two or three successive generations. I believe that when you have made a fuller study of our people you will find in them not only a physical, but a mental and moral improvement. (157)

And yet, as Patrick Parrinder argues at length in *Utopian Literature and Science: From the Scientific Revolution to 'Brave New World' and Beyond,* the reality appears to be rather more akin to the state-imposed and thus deeply coercive practice of *eugenics*, rather than gradual evolutionary development: he writes that

> Since designers of utopias from Plato onwards have tended to insist on controls over the choice of a sexual partner and the production of offspring, it can be said that any utopia from before the age of plastic surgery that emphasizes the physical beauty of its inhabitants must be referring to the effects of a deliberate or inadvertent eugenic policy. This applies to supposedly libertarian utopias quite as much as to those of authors committed to some degree of state-imposed eugenics.[422]

Indeed, as Gregory Claeys writes, 'eugenics might well be described as the "Darwinian *utopia*",'[423] and Parrinder accordingly suggests that it is part, along with eudaimonics and euthanasia (the striving for a happy death, or at least the absence of pain and suffering), of a

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[422] Patrick Parrinder, *Utopian Literature and Science: From the Scientific Revolution to 'Brave New World' and Beyond*, p. 68.
[423] Gregory Claeys, 'The Origins of Dystopia' in *The Cambridge Companion to Utopian Literature,* p. 34.

triumvirate of goals that he sees as necessarily present in any utopian society, while also being 'open to a more sinister interpretation than utopians customarily give them'.[424] Debra Benita Shaw in fact points out that Darwin himself 'vascillated between a fascistic disclaiming of the value of social support for the weaker members of a society and an exhortation that all members of a society should feel compassion and sympathy towards "the unfit".'[425] However, it was Francis Galton, the inventor of the term 'negative eugenics' in 1883, who fully focused on the *elimination* of these individuals for the benefit of all: he believed that the 'worst elements of the poorer classes, those presumed to have subnormal mentalities, would have to be physically prevented from passing on their infirmities', and that this should be accompanied by a 'co-operative effort to raise all members of a society to the level of "the fit".'[426] Indeed, Galton himself was keenly interested in the expression of his eugenic ideas in terms of utopia: not only did he, as Parrinder notes, speculate that future political action might raise 'the present miserably low standard of the human race' to one in which 'the Utopias in the dreamland of philanthropists may become practical possibilities', but he also 'indulged in many' utopias himself, and even produced an unpublished fictional utopia of his own, *Kantsaywhere*, 'of which only a fragment survives', and which is so controversial in its depiction of eugenics that Parrinder suggests the best thing about it may be its title.[427]

Regarding somewhat less radical examples of utopian literature, Parrinder notes that such eugenic tendencies are also already evident in Plato's *Republic*, where Socrates compares the breeding of humans to that of animals in Book IV:

> We must, if we are to be consistent, and if we're to have a real pedigree herd, mate the best of our men with the best of our women as often as possible, and the inferior men with the inferior men as seldom as possible, and bring up only the offspring of the best.[428]

By contrast, Parrinder describes the 'eugenic provisions' of More's *Utopia* as 'comparatively liberal': while the choice of a mate is in fact compared to that of a horse, the extent of eugenic practice then merely appears to lie in potential brides and grooms seeing each other naked before their wedding; indeed, as mentioned above, I would suggest that this exercise is more of an indication of the basic negative feedback relations underlying the social relations of 'fundamentally orderly' Utopia rather than a coercive measure.[429] Key here appears to be the distinction between comparatively freely performed sexual selection and state-imposed eugenics as a form of control, the latter of which is, as Parrinder notes, sometimes a matter of secrecy – as in the case of Kallipolis, where the human 'pedigree herd' is by no means self-selecting: 'Official secrecy is maintained by the institution of hymeneal festivals at which marriage partners are chosen by drawing lots. The public are led to believe that this state lottery is completely random, but of course it is not'.[430]

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[424] Parrinder, p. 67.
[425] Debra Benita Shaw, *Women, Science, and Fiction*, p. 14.
[426] Quoted in Shaw, p. 14.
[427] See Parrinder, also Galton as quoted in Parrinder, p. 68.
[428] Quoted in Parrinder, p. 60.
[429] Ferns, p. 32.
[430] Parrinder, p. 70.

In *Looking Backward*, then, Dr Leete boasts to West that

> for the first time in human history the principle of sexual selection, with its tendency to preserve and transmit the better types of the race, and let the inferior types drop out, has unhindered operation. [...] Every generation is sifted through a little finer mesh than the last. (156-7)

Parrinder sees in this an endorsement of something akin to the 'libertarian eugenics' proposed in the late nineteenth century by Grant Allen, who argued that 'positive eugenic results would flow from free unions'.[431] Beyond the free flow of courtship, however, Dr Leete and other 'administrators' have perhaps done more than immediately apparent to ensure these results – a suspicion also raised by the fact that the retired physician has such a central role in the narrative, as Parrinder notes. The fact that Dr Leete allows West to marry his daughter despite his 'inferior' genes could thus only be attributed to the assumption that West is already such a magnificent example of his own kind that this poses no difficulties.

In *News from Nowhere*, the eugenic rhetoric is less obvious, beyond such matters as the 'disease called Idleness' (34) having been bred out. However, Parrinder suggests that 'social eugenics has also played its part'[432] here in that Hammond tells West that

> a child born from the natural and healthy love between a man and a woman, even if that be transient, is likely to turn out better in all ways, and especially in bodily beauty, than the birth of the respectable commercial marriage bed, or of the dull despair of the drudge of the system. They say, Pleasure begets pleasure. (34)

Moreover, a more interventionist brand of eugenics is hinted at in Hammond's statement that 'how to take the sting out of heredity [...] has for long been one of the most constant cares of the thoughtful men among us' (53). As such, a much darker coercive mechanism seems to be at play here than one would expect from such an apparently organically self-regulated society as Nowhere; indeed, in this case, the visitor has no chance in the first place to muddy the gene pool – he is clearly not meant to be part of this society beyond the end of the narrative: 'Ellen's last mournful look seemed to say "No, it will not do; you cannot be of us; you belong so entirely to the unhappiness of the past that our happiness even would weary you".' (181).

Finally, in *A Modern Utopia*, the segregation of society into 'four main classes of mind': 'the Poietic, the Kinetic, the Dull, and the Base' (179), beyond the separation between ordinary citizen and samurai, is noteworthy: only the creative and educated Poietic and Kinetic are in effect permitted to have children, due to stringent marriage laws, including the stipulation that contracting parties are 'free from specific transmissible taints' and 'sufficiently intelligent and energetic to have acquired a minimum education' (131). Indeed, it is also explicitly noted that the Dull and Base 'gravitate towards and below the minimum wage that qualifies for marriage' (181), while the samurai women are in fact required to have children, which also means that 'it is from samurai mothers [...] that a very large proportion of the future population of Utopia will be derived' (199). Moreover, in a chilling off-handed remark, the narrator later adds that if there were such a thing as an 'all-round inferior race' (224), 'there is only one sane and logical thing

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[431] Parrinder, p. 73.
[432] Parrinder, p. 79.

to do [...] and that is to exterminate it' (224); clearly, the Utopians are in no way above eugenics, and indeed profoundly racist in addition. In fact, this points towards a society that has moved far beyond 'libertarian eugenics' and into a rigidly state-controlled programme of 'social Darwinism' that will presumably have the end goal of entirely eradicating the existence of both the Dull and Base classes, and perhaps even eventually being made up entirely of samurai. Moreover, unlike in Bellamy and Morris's texts, any genetic incorporation of the narrator seems entirely out of the question here, given that, as Francis Wheen notes, he betokens a 'recognisable self-portrait of the author, a short, tubby balding man whose speaking voice is an "unattractive tenor",' and thus does not exactly represent a 'modern Übermensch' – the implication, Wheen says, is that 'we should keep this figure in mind when reading his paeans to the tall, fit, hearty supermen of Utopia, and realize that his dreamy paradise isn't necessarily the ideal habitat for the person who imagined it'.[433] As such, a firm line is drawn between utopia and its present-day visitors, the narrator and the botanist, who after all are merely traversing the 'soap-bubble' of the narrator's imagination, which bursts at the end – arguably an even more immaterial and evanescent vessel for utopia than Morris's dream state. Wells's eugenic proposals may be the harshest among these three utopias, but at least Wells cannot be accused of vanity on the part of his stand-in: indeed, the narrator does not even have time to identify a suitable mate before the bubble bursts.

Parrinder ends by suggesting that 'we may question whether eugenic considerations can ever be absent from visions of utopian societies that speak to us of beauty as well as happiness, of the satisfactions of the eye as well as the satisfactions of the mind'.[434] However, once more, there is a an operative difference between the freely performed feedback relations of sexual selection and state-imposed control regarding reproduction, the latter of which now seems to be the case in all three of these fin-de-siècle utopias: in Wells's case, I would argue, it lies between the mere *observation* of such processes and their outright *enforcement* by the state, the more-or-less classified practice of which appears to be present in all three utopias to varying degrees. While observation of this kind is compatible with self-regulation, though notions of 'libertarian eugenics' may raise eyebrows among those generally opposed to eugenics, enforcement is a matter of feedback-hindering coercion, leading to rigidification and endangering a system's sustainability.

Moreover, the apparent eugenic practices in these novels are not a matter of *elevating* all members of a society to make it run more smoothly, as suggested for example in Ferns' claim that *Looking Backward* is a 'middle-class fantasy of a classless society' in which the lower classes are 'absorbed';[435] instead, the focus seems to be on the *elimination* of the individuals and character traits most at odds with the system's requirements. Wells's narrator, when asked what Utopia will do with 'its congenital invalids, its idiots and mad-men' (95), for example, answers that 'these people will have to be in the descendent phase, the species must be engaged in

[433] Francis Wheen, 'Introduction' in *A Modern Utopia*, p. xxii.
[434] Parrinder, p. 81.
[435] Ferns, p. 83.

eliminating them', while 'the better sort of people, so far as they can be distinguished, must have the fullest freedom' (96). As such, then, rather than serving the 'evolution' of the entire utopian social system, which might for example be achieved through better education and other utopian facilities, development towards perfection is reserved here for the individuals deemed most deserving – be they consumer, artisan, or 'poietic' creator, respectively. This, however, further undermines the functioning of the homeostatic utopian systems as a whole in all three novels, and is further indicative of external rather than self-regulation, since elements of the system are simply removed rather than being allowed to regulate themselves via feedback relations. Moreover, it hinders the self-regulation of personal development and sexual selection in these societies while further isolating these novels from a close connection with our own world, reserving utopia in the full sense for a lucky few: as such, these texts represent a modelling of utopia that is neither totalising in its depiction of the estranged nova, nor indeed fully utopian in the sense of the construction of a community 'where sociopolitical institutions, norms, and individual relationships are organized according to a more perfect principle than in the author's community',[436] in Suvin's terms.

In addition, despite the eugenic approaches detailed, there are further coercive measures in evidence in all three societies, described below, in order to align individuals even more closely with the functioning of their respective feedback systems. This is problematic in two major ways: firstly, it further subverts the supposition that these societies are founded on evolutionary progress and linear development, given that even in their apparently advanced state, they cannot rely on the evolved nature of their citizens to not warrant further control; secondly, since these measures are largely intended to paradoxically *stifle* development on the part of the individual citizen, as in Plato and More, they undermine the entire idea of continued dynamic progress towards utopian perfection that supposedly underlies their fin-de-siècle raison d'être, given that such measures close utopia off to the *future* as well as the past.

Social Coercion in Bellamy, Morris and Wells:

Following his claim that eugenics, eudaimonics and euthanasia are the triumvirate of goals that must be present in any utopia, Parrinder adds that utopian science based on these three principles is 'necessarily at variance with traditional ethical beliefs and ingrained values in our own world'.[437] In doing so, Parrinder essentially claims that utopian eudaimonia can only be ensured through amoral coercive practices – and perhaps it is true that in a utopia characterised by the homeostatic utopian chronotope, such measures are indeed required for the continued functioning of the system. However, such mechanisms must likewise ultimately *cancel out* the eudaimonia that Parrinder includes in his utopian triumvirate, given that as in Plato and More, it is not apparent how a society could be fully conducive to the production of the greatest happiness for the greatest number while simultaneously, and in order to do so, fundamentally

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[436] Suvin, *Metamorphoses,* p. 63.
[437] Parrinder, p. 6.

inhibiting the happiness of the individual citizens that make up this group. Indeed, according to Parrinder, Galton apparently put forward eugenics as the 'ultimate form of evolutionary utilitarianism'[438] – such an assertion, however, merely considers one side of the 'hedonic calculus' required, I would argue:[439] the 'greatest number' cannot in fact be made happy if large numbers of the individuals constituting this number are simply eradicated from society in the process.

Nevertheless, *Looking Backward, News from Nowhere* and *A Modern Utopia* all display just such fundamentally coercive state practices that can thus be said to ultimately undermine their eudaimonic aspirations, much as in Plato and More – practices that arguably include their covert eugenic regulations, as detailed above, but also go far beyond these in attempting to mould the citizens of utopia to the particular homeostatic systems that contain them, thus also, once more, arguably indicating the failure of their eugenic endeavours. These coercive practices, moreover, seem largely designed to curtail the development of individuals, as in Plato and More, thus serving to frustrate any dynamism that might exist in these systems in the form of openness to change. Again, this fact stands in opposition to various explicit indications to the contrary, including in particular the presentation of feedback relations in Morris's Nowhere as unforced and communally consensus-based, as well as the narrator's declaration in Wells's utopia that 'the State is for individuals, the law is for freedoms, the world is for experiment, experience and change: these are the fundamental beliefs upon which a modern Utopia must go' (66). Countering this statement, I would argue that individuals here once again, as in Plato and More, become merely an 'autopoietic unity of second order',[440] as Maturana and Varela warn of self-regulating autopoietic systems, and thus '*necessarily subordinated*'[441] to the higher social order.

In Bellamy's Boston, for example, the industrial army is characterised by 'control and discipline' which is, 'of course, required to be central and uniform' (122); in fact, its military-inspired regimentation seems no less strict and war-like than that of its martial namesake, according to Dr Leete, as he compares it to 'a disciplined army under one general—such a fighting machine, for example, as the German army in the time of Von Moltke' (143). In their first three years in the workforce, for instance, 'new recruits' are 'assignable to any work at the discretion of their supervisors' (41) and it is in this period that they particularly experience 'stringent discipline' which 'none are exempt from' (42): these individuals are part of an 'unclassified grade of common laborers' which serves as 'a sort of school, and a very strict one, in which the young men are taught the habits of obedience, subordination, and devotion to duty' (72). Moreover, once a career path is chosen, the state makes it very difficult for young workers to change their minds: 'frequent and merely capricious changes of occupation are not encouraged or even permitted' (42), while the enrolment in university studies is no longer allowed past the age of thirty, given that members of the industrial army are made to retire at

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[438] Parrinder, p. 71.
[439] A.k.a. 'felicific calculus', an algorithm formulated by utilitarian philosopher Jeremy Bentham to calculate the degree or amount of happiness a certain action is likely to bring about. See, for example, Jeremy Bentham, *An Introduction to the Principles of Morals and Legislation*.
[440] Maturana and Varela, p. 110.
[441] Maturana and Varela, p. 110.

the age of forty-five and there would thus 'remain too brief a period before the age of discharge in which to serve the nation in their professions' (43). In fact, Hansot suggests that 'the basis of education' in Bellamy's utopia is 'economic, requiring as it does the maintenance of the pupil without economic return during the educational period';[442] as such, it does not appear to primarily serve the development of specific faculties within each individual, but merely their subordination into the existing socioeconomic system.

Likewise, there is little scope for the development of individual potential in a way that does not fit the streamlined path dictated by the system: amateurism, for example, is systematically discouraged, in that artists are either professional or basically non-existent (as Edith Leete says, 'the rest of us hold our peace for the main part', 65), while books are only printed so long as they sell well enough. Universal early retirement, indeed, is designated as a period where utopians might 'fully devote [them]selves to the higher exercise of [their] faculties, the intellectual and spiritual enjoyments and pursuits which alone mean life' (115), and it is the age at which they finally 'become enfranchised from discipline and control' (116); however, it is unclear how they might remain fully intellectually and creatively engaged in this period without the frameworks required for publishing, teaching and public engagement, for example. One way in which they *may* stay engaged is through voting, as retirees alone have suffrage, but this conversely also means that the ordinary working person in the industrial army is voiceless and disenfranchised. Accordingly, in such statements as Dr Leete's assertion, regarding the allocation of money, that 'we prefer to expend it upon public works and pleasures in which all share' (143), the *we* in question in fact refers to a very small, privileged subset of the population.

Nevertheless, nigh-universal participation in the industrial army is not only expected but harshly enforced: as Dr Leete explains,

> As for actual neglect of work, positively bad work, or other overt remissness [...], the discipline of the industrial army is far too strict to allow anything whatever of the sort. A man able to do duty, and persistently refusing, is sentenced to solitary imprisonment on bread and water till he consents. (74-5)

Perhaps even more striking and dystopian-sounding than this punishment, however, is the sheer hopelessness of any attempt to escape the system, perhaps due to one's frustration with strict working conditions or the lack of political representation: as Dr Leete explains, compulsory participation in the system is so fundamental to the working of the industrial army that there is both metaphorically and literally no way for a deserter to survive outside of it:

> To speak of service being compulsory would be a weak way to state its absolute inevitableness. Our entire social order is so wholly based upon and deduced from it that if it were conceivable that a man could escape it, he would be left with no possible way to provide for his existence. He would have excluded himself from the world, cut himself off from his kind, in a word, committed suicide. (37)

Such draconian measures might in fact be more palatable to the reader if we were given some indication from utopian citizens themselves that they deem them fair in exchange for universal employment and safety. However, West in fact has almost no interaction with any utopians

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[442] Hansot, p. 119.

beyond his host, Dr Leete and his family, and this tiny subsection of the population is not exactly representative: we hear very little from Mrs Leete; Dr Leete is retired; and Edith must be of working age and thus enlisted in the women's industrial army, but instead spends all her time playing utopian tour guide for West. Moreover, impersonal experiences such as pneumatic music and sermons replace several possible chances West might have had to meet people, while even his shopping excursion with Edith is so impersonalised that the extent of Edith's interaction with the clerk is the recording of her order. In fact, the only other utopian West encounters is the young man who waits on the family when they go out to eat, but no conversation is initiated; moreover, the dinner takes place in a shared dining house in which families maintain separate dining rooms, which effectively renders this space, as Dr Leete notes, 'a part of our house, slightly detached from the rest' (90). The overall effect of this on the reader, then, is alienation and suspicion regarding the actual satisfaction of the other, unseen, human elements in this vast economic machine – forced to cooperate in its homeostatic feedback operations on threat of solitary imprisonment or even death, yet officially in enjoyment of a process perfectly calibrated to ensure 'the science of wealth and happiness' (167).

In Morris's Nowhere, Guest does meet a wide range of utopians and is able to personally ascertain their satisfaction; however, he is also told things that throw some doubt on it, and on the apparent organic self-regulation of the system. On the surface, once again, there seems no sign of force whatsoever: these 'happy and lovely folk, who had cast away riches and attained to wealth' (172) are, for example, apparently free of 'family tyranny', as Hammond says, since in Nowhere 'families are held together by no bond of coercion, legal or social, but by mutual liking and affection, and everyone is free to come or go as he or she pleases' (70). Such coercion-free flow of feedback, moreover, was apparently also present in the process of revolution and re-organisation that brought about utopia, which Hammond claims happened 'by the absence of artificial coercion, and the freedom for every man to do what he can do best' (80); the implication here is that the principles upon which utopian feedback occurs are so self-evident that they organically determine human behaviour when given free rein, much like the blooming rose bush analogy in *Looking Backward*. However, despite all this and the fact that there are neither institutionalised government and legal systems nor apparently a 'code of public opinion which takes the place of such courts' (50-1), it paradoxically appears to be the case that it is *precisely* in public opinion that social pressure is applied in Nowhere, after all – not in such an obvious manner as the control and discipline exerted within Bellamy's industrial army, but in an insidious fashion that nevertheless has clear wide-spread effects. For instance, certain kinds of work are expected to be undertaken at certain times and those who do not conform are called out, like the people referred to as the 'Obstinate Refusers' (149), while manual labour seems to be valued at the expense of intellectual work which is 'not much sought for' (27). Indeed, reading is uncommon as the utopians 'don't encourage early bookishness', and in fact only consider practical pursuits 'genuinely amusing work' (27). Moreover, knowledge-based invention and creativity also seem to be discouraged, despite the obvious link of creativity with craftsmanship: when Guest points out old river-locks still in operation, he is told 'this is not an age of inventions'

(146). In turn, this sense of static complacency extends to a lack of critical engagement with one's own history and society: Hammond is one of the only people interested in Nowhere's past and the changes that led to utopia, but suggests that this is not surprising as 'it is mostly in periods of turmoil and strife and confusion that people care much about history; and you know [...] we are not like that now' (26). Charitably interpreted, this could be taken as an indication of a system so successful that it need not concern itself with change, but when Hammond speaks of the 'new spirit of the time' as 'delight in the life of the world' (113), he also gives this observation a darker tone, mentioning that 'all other moods save this had been exhausted: the unceasing criticism, the boundless curiosity in the ways and thoughts of man [...] was gone past recovery' (113). Moreover, Ellen, whom Guest later meets, points out the danger in this, given the risk of historical mistakes being repeated:

> I think sometimes people are too careless of the history of the past [...] Who knows? happy as we are, times may alter; [...] and many things may seem too wonderful for us to resist [...] if we do not know that they are but phases of what has been before; and withal ruinous, deceitful, and sordid. (167)

In the place of historically informed intellectual curiosity and flexibility, it seems, the society of Nowhere is characterised by a similar presentism to that found in the ahistorical classical utopias of Plato and More – an 'eternal present of utopianism', once again, in which only the current moment matters, to the extent that interest, innovation and critical engagement beyond it are neither common nor valued, allowing only for reactivity to one's immediate spatiotemporal environment. Indeed, Dick's partner Clara becomes contemplative in hearing Hammond's talk of the past and says it 'makes us feel as if we were longing for something we cannot have', to which Hammond – a respected elder who fully believes in Nowhere's underlying principles – smiles 'kindly' and replies, 'Well, my child, if that be so, *go and live in the present*, and you will soon shake it off' (117, italics mine). Ellen, however, would not be put off as lightly: she has felt this sense of unease in being confronted with her society's intellectual myopia long before Guest even arrives in Nowhere, and plans to teach her children historical awareness outside of reactivity to the present moment and 'mere moods' (167). And yet, Ellen is nearly alone in this desire; the general 'spirit of the age' that in fact pervades Nowhere, as enforced by habit and popular opinion, is that of deeply uncritical enjoyment of the present. Indeed, 'Nowhere' could also signify not only 'utopia' as 'no place', but also the combination of the terms 'now' and 'here': it is a place focused entirely on the 'here and now', both in a sense of complete aesthetic mindfulness and in the sense of resistance to change.[443] This attitude, then, appears to impede the intellectual development of its inhabitants, retaining them in a perpetual childlike state without true personal growth – a state which may, indeed, have been intended by Nowhere's implied eugenic programme. Hammond in fact proudly endorses this state of affairs:

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[443] Further investigation reveals that others have likewise read this dual meaning into the term 'Nowhere'. Owen Holland, for example, suggests in *William Morris's Utopianism: Propaganda, Politics and Prefiguration* that Morris may have, 'when *Nowhere* was still gestating in his mind', encountered R. Heber Newton's 'explicit invocation of this double meaning' in an article on 'Communism' in *To-day,* where he writes that unlike the revelation of the 'City of God coming down from heaven' in Plato's *Republic, Nowhere* is 'yet on earth in outward form, but in spirit so long seen and striven for that a rearrangement of the old elements may make it *Now-here*' (p. 40).

when he says 'let us rejoice that we have got back our childhood again. I drink to the days that are!', Guest interjects 'second childhood' in a hastily regretted act of 'double rudeness'; however, Hammond replies, 'Yes, why not? And for my part, I hope it may last long; and that the world's next period of wise and unhappy manhood, if that should happen, will speedily lead us to a third childhood: if indeed this age be not our third' (88).

This attitude, then, has the effect of enhanced spatiotemporal isolation of Morris's utopia, this time in both directions: while his text is the only one among our three fin-de-siècle utopias to showcase a strong connection with the zero world through in-depth description of the transitional period that led to it, it then effectively severs this connection after all by embedding a disregard for both past and future in Nowhere's utopian zeitgeist. And again, this severance is seemingly maintained through a 'code of public opinion' as well as possible selective breeding for relevant character traits: namely, regarding the past, an indifference to history, and regarding the future, an 'exhaustion' of interest in creation, innovation and invention – in fact, an exhaustion of interest in most modes of thought and practice that might bring about growth, change and development in either individual utopians or the social structure of Nowhere as a whole. Contentment, and perhaps genetic tinkering, have bred placidity and thus a closure to any future-oriented awareness, as Hammond notes uncritically: 'we are too happy, both individually and collectively, to trouble ourselves about what is to come hereafter' (88). However, once again, this indicates that the apparently achieved 'evolution' of this particular utopia is in fact only that of one particular type of person – in this case, the uncritical, highly creative and beauty-loving artisan – rather than of society as a whole. Moreover, it demonstrates that any evolutionary tendency has abruptly stagnated, whether intentionally or not, at the point of utopia's completion: like the cyclically homeostatic worldview underpinning Plato's utopia, Nowhere's isolated reality is not only effectively static beyond its maintaining feedback relations, but likewise becomes homeostatically cyclical, folding back on itself over and over again in a presumably doomed attempt to escape the unstoppable rush of modernity, which might endanger its highly specific socio-aesthetic ideal. Crucially, though, it can be argued that rather than thus representing a glimpse of a beautiful, harmless dream or fantasy, Nowhere in fact exemplifies a utopian model that is both troubling and potentially dangerous if taken as inspiration for social restructuring in the real world at any level, as Ellen's concerns allude to. In Nowhere, the individual is once again autopoietically subordinated to the functioning of the utopian whole – the only real difference to the utopia's predecessors is that in this case, the utopian whole is geared towards a particular conception of the eudaimonic good focused around a specific variety of beauty and craftsmanship, as well as towards the joy to be derived from the associated process of creation. Indeed, Hansot points out, 'despite Morris's perception of the weakness of Bellamy's utopia, *News from Nowhere* also offers but one ideal (pleasurable work in natural surroundings) which is both social and pervasive in nature'.[444] Moreover, this ideal is so rigid in its apparently harmless specifications, only sustainable through the coercion of public opinion and possibly eugenic practices, that its

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[444] Hansot, p. 122.

seemingly organic homeostatic self-regulation is not only undermined, but threatening to collapse entirely once aberrant or questioning individuals like Ellen and Clara no longer obediently silence their 'strange discontented whims' (118) for change and historical engagement.

Finally, Wells's Utopia possibly exhibits the most explicitly coercive practices among all three fin-de-siècle utopias. The segregation of society into the Poietic, Kinetic, Dull and Base classes as well as the endeavour to eliminate the latter two classes through coercive practices of state control, particularly in the form of marriage laws as mentioned above, is evidence enough for this assessment. Indeed, to go against marriage laws means that a utopian citizen is 'under a debt to the State of a peculiarly urgent sort', one to be enforced with restraint and paid with one's liberty on re-offence (127). Moreover, state control in Utopia and its 'haunting insistence upon sacrifice and discipline' (159) extend far beyond direct eugenic practices, while still remaining focused on the oppression of the lower classes: in fact, the entire system seems designed around this, as for example the Dull are liable to be 'set aside [...] as unteachable' (188) in school, while the Base, the 'idiots and lunatics' or 'perverse and incompetent persons', are 'secluded' in a 'kind of social surgery' of some description (99). Likewise, criminal individuals 'pass out of the free life of our ordered world' (99) as soon as they offend: not killed, but banished to prison islands, where they are oddly given 'as full a liberty as they can have' (101). These islands, in fact, thus form a kind of liminal space of alterity, in that they are the only places of freedom in a world characterised by stringent discipline – their main shortcoming, seemingly, is merely that they are places of exile from utopia. Outside of these islands, indeed, the people confined to them would likely lead far more difficult lives: the lower class, after all, are largely excluded from participation in the utopian 'free flow' of transport, travel, and commercial relations, given both their expense and the movement-regulating taxation, alongside other state controls, that determine housing, work, and entertainment. Indeed, 'privacy, locomotion, and almost all the freedoms of life' are only available to those who 'possess the money to pay for it' (103), since 'to be moneyless will be clear evidence of unworthiness' (104). Meanwhile, as with regard to eugenics, the Utopian standard of life relies on *exclusion* rather than bringing everyone to the same level: for example, houses not up to standard are pulled down, while beggars are immediately apprehended and removed (though also given aid). Moreover, such interventions are facilitated by a veritable panopticon of surveillance via personal numbers, thumb-prints and identity files that the narrator terms 'organised clairvoyance' (114). Indeed, even the samurai are under the same control – in addition to that of their ascetic 'Rule', which restricts how they spend their time, what they eat and drink, and even their relationships, in that they 'must sleep alone at least four nights in five' (198-9). However, it is in fact the samurai themselves, in their guardian-like role of government, who enact the most stringent control within Utopian society as a whole, and thus maintain its hierarchical oppression of the lower classes: what began as a 'private aggressive cult' (187) now 'take[s] a hand in the universal control' (187) while being 'planned to exclude the Dull' and 'be unattractive to the Base' (187). Ultimately, as a result,

'practically all political power vests in the samurai', as they form nearly all professionals and public officials as well as being the 'only voters' (207).

As such, the world state's homeostatic 'balance of freedoms', seemingly the ultimate achievement of Utopia in its calibrated stability between free movement and state control, is fundamentally eroded and subverted by this undemocratic state coercion. Again, the narrator's justification for this is that 'Utopian organization demands a more powerful and efficient method of control than electoral methods can give' (174); however, this is somewhat qualified in a thoughtful postscript, in which the narrator suggests that this arrangement is perhaps problematically presented, and then blames individual human unpredictability as difficult to reign into a rational and mapped-out utopia: 'in that incongruity between the whole and the individual inheres the incompatibility I could not resolve, and which, therefore, I have had to present in this conflicting form' (247). And yet, given that eudaimonia of the greatest number of individuals is therefore made impossible – in a far more pronounced and transparent manner than in Morris or even Bellamy, in fact – one might suggest that perhaps Wells has simply failed to place enough trust in humanity to determine a balance of freedoms that *would* still enable individuals to thrive. The underlying premise of Wells's Utopia is, after all, that human nature is indeed *not* like a rose bush which requires the correct conditions to thrive, but in fact wracked by rotten and vicious tendencies that poison entire individuals, and that must therefore be eradicated at root through the creation of a society in which these individuals are simply phased out of the system in various ways. The 'interplay of unique individualities' (29) that the narrator lauds so highly in Utopia is thus not only made difficult by social stratification, but also by the systematic elimination of those who do not match the ideal of the Utopian citizen: highly creative, already physically superior and very adept at rule-following. Likewise, the overall focus thus appears, yet again, to not be on the completed 'evolution' of utopian society as a whole, but merely on that of a particular subset of its members – namely, the Poietic and Kinetic classes and especially the members of the samurai – which once more takes away from any achievement of general social eudaimonia.

Indeed, even the individual creativity that this arrangement is ultimately geared towards facilitating, the aim to 'maintain a secure, happy, and progressive State beside an unbroken flow of poietic activity' (183) stemming specifically from the Poietic and Kinetic classes, is ultimately undermined through the spatiotemporal isolation implied by these coercive practices. Here, too, both past and future are closed off, the one through lack of transition from the zero world, the other through a failure to foster creativity and development across the social classes. Moreover, even the Poietic and Kinetic classes themselves are subject to coercion and thus not able to be as creative as they might have been: as Hansot notes, the state is 'wary of any innovation' and sets 'limiting conditions' for individual development in the higher classes, yet these are clearly insufficient, as most samurai are engaged in administrative rather than creative work.[445] Hansot finds this 'disappointing', but it should come as no surprise in such a rigid and coercive system: neither current innovation nor a systemic development or

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[445] Hansot, p. 152.

evolution *towards* more creative conditions are possible in such an environment, despite eugenic coding for creativity. The fundamentally closed system of Utopia is so geared towards maintenance of its existing feedback networks that it would, if anything, become increasingly difficult for divergent and visionary tendencies to survive the contesting selection for docile traits, let alone thereafter find avenues in which to reach their full potential.

Overall, then, as we have seen, coercive practices dominate the homeostatic functioning of Bellamy, Morris and Wells's utopias to various degrees and in various ways – thus once more, as in Plato and More, subordinating the autopoietic functioning of the individual to that of society, while also incapacitating the supposed evolutionary progress that characterises the utopian imaginings of the fin-de-siècle period on the surface level. If there is to be any significant evolution, it is to be merely on the part of certain specific groups of individuals who exemplify the human ideal most likely to maintain the functioning of the homeostatic feedback relations of each specific utopia – and even then, these privileged individuals are not given the chance to fully develop *further* given the general systemic resistance to change and development in all three societies. Once again, utopia is here about the maintenance of the status quo, and no more than that. The result is a system that is not only at odds with the true individual self-realisation championed by contemporary socialist reformers such as Saint-Simon and Fourier, but also fundamentally incompatible both with its apparent utilitarian aims and with the dynamism associated with this period by Vieira and others.

Bellamy, Morris and Wells as Autopoietic Systems:

Having thus determined the harmful effects of rigidly enforced homeostasis in these novels, it would be instructive to briefly explore if it nevertheless engenders autopoiesis, or the *living* quality associated by Maturana and Varela with self-regulating systems. First impressions regarding the presence of life are not promising: in Bellamy's Boston, for example, the nigh-angelic depiction of the Leete family, almost free of distinguishing characteristics, is not aided by the presence of other human connections, as noted. In fact, there is a dearth of visible human life in general: seen from Dr Leete's belvedere, for example, utopian Boston does not even contain 'miniaturised human forms', as Beaumont points out: 'the city glimpsed by West appears to be absolutely empty'.[446] Beaumont adds that 'the absence of people signals the absence of social contradiction' in Bellamy's novel, in 'stark opposition' to West's dream encounter with his pre-utopian past which is 'so densely and dirtily peopled'.[447] Of course, this makes the depiction of utopian economics easier, but it also detracts from the believability of the model itself, while also bypassing 'realistic' feedback relations that allow for human nature and individuality; in fact, Hansot suggests that in Bellamy's utopian construct, 'the sociological level—society organized to ensure economic equality—appears able to alter entirely, or even make

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[446] Beaumont, Introduction to *Looking Backward*, p. xxi.
[447] Beaumont, pp. xxi – xxii.

superfluous, the phylogenetic-biological level', which includes 'basic appetites, such as sex and hunger'.[448]

In Morris's Nowhere, conversely, human appetites and nature in fact appear to be the *main* drivers of utopian (self-)regulation: again, the focus is 'delight in the *life* of the world; intense and overweening love of the very skin and surface of the earth on which man dwells' (113, italics mine). Even critical Ellen, who disapproves of her contemporaries' interest in nature and relationships at the expense of all else, associates utopia with being alive: when her grandfather complains about utopian society, she states 'I love life better than death' (136), and later falls into ecstasies when struck by a sudden bout of the 'passionate love of the earth' (178) that Guest observes in all her kind: 'O me! O me! How I love the earth, and the seasons, and weather, and all things that deal with it, and all that grows out of it' (174). However, as with Hammond's eugenic reference, there is an element of rigidity and control here: utopia is described as 'now a garden, where nothing is wasted and nothing is spoilt' (62), and Hammond explains that this is a matter of quite deliberate planning: 'like the mediævals, we like everything trim and clean [...] as people always do when they have any sense of architectural power; because then they know that they can have what they want, and they *won't stand any nonsense from Nature* in their dealings with her' (63, italics mine). Like the human individuals apparently shaped by eugenics, so the natural world is apparently cultivated, restricted and coaxed rather than left to grow free. Perhaps, then, this utopia is indeed not as representative of life as it first appears, and Ellen's grandfather may have a case when he suggests that people elsewhere may be 'brisker and more alive' (219) – unlike the citizens of Nowhere, who may reside in heaven, as Guest suggests, but one in which one is merely 'sitting on a damp cloud and singing hymns' (131), as the grandfather adds.

Wells's Utopia, lastly, is an interesting case in that the concept of 'autopoiesis' is echoed in the name of the 'Poietic' class; however, it is with this class differentiation that the issue with this utopia as a living system in fact lies. Despite the above mentions of 'flow' in Utopia and the statement that utopian organisation must be 'as mobile and flexible as a thing alive' (119), it is apparently of the Poietic, Kinetic, Dull and Base classes only the former two which 'constitute the living tissue of the State; the latter are the fulcra and resistances, the bone and cover of its body' (179). As such, only roughly half the population can perhaps be taken to be truly alive, and indeed apparently worth *keeping* alive and being allowed to multiply, despite the narrator's assertion in the postscript that individuals are like 'blood cells' or at times 'brain cells' in the 'synthetic wider being, the great State', which can be understood as the 'body of man', 'in which we all move and go like blood corpuscles' (247). Indeed, this clash of intention and execution may once again be the 'incongruity between the whole and the individual' (247) with which Wells struggled in his depiction of a rational, prearranged utopia – a clash that is also evident in the narrator's annoyance with a gregarious character they encounter who arguably stands for the natural world and complains that man has 'ceased to be a natural product' (85). Moreover,

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[448] Hansot, p. 125.

this rift is visible as well in the narrator's frustration with his travelling companion, the botanist, as Ferns points out:

> A botanist is, in effect, a classifier of nature—and as such represents the virtual antithesis of the Wellsian attitude towards it, which involves not so much accepting and describing nature as it exists, but rather taking control of and transforming it. And it is this aggressive imposition of order on the natural world that is one of the most distinctive features of Wells's utopian vision.[449]

In the end, then, it seems that none of these fin-de-siècle utopian systems could be described as truly autopoietically *living*, or even necessarily compatible with the continuation of a full human life, given the various coercive measures described in all three; the attendant lack of truly organic self-regulation appears to simply be at odds with the expression of natural human urges, tendencies and desires. As such, they evidently also do not serve as good extrapolative models of how living humans of the present day would benefit from utopia, even if one is to disregard any eugenic alterations that would have made system and (later) individual more compatible over time; a truly closed state, after all, is simply not conducive to the thriving or even sheer survival of subordinated autopoietic individuals.

Women in Bellamy, Morris and Wells:

Moreover, the apparent absence of utopian citizens in *Looking Backward*, in particular, betokens a wider issue, in that beyond their success as autopoietic models, these utopias can once again be judged as thought experiments on the basis of their totalising *inclusion* of their various human utopian elements. As we have seen above, this inclusion is already fundamentally impaired by the apparent eugenic projects of all three systems, as well as by the slight disregard for the intellectually engaged in *News from Nowhere* and the disproportionately extreme mistreatment of the lower classes in *A Modern Utopia.* However, as in Plato and More, there is a further social group that suffers not only from class-related disregard, but from systematic exclusion in all three novels: women, whose subjugation in the patriarchy of their zero worlds none of these authors appeared to be particularly concerned with, and therefore interested in remedying through a fundamentally different portrayal in their respective utopias.

In Bellamy's Boston, for example, women are, if anything, more absent than the men: Edith and her mother are always 'not visible' (64) or 'retire' (114) before Dr Leete's conversations with West, and when they do speak, it is about fashion and Edith's great-grandmother – 'women's topics'. Moreover, in public life, women serve in an entirely separate industrial army, as noted above, which has been somewhat condescendingly 'granted' to them by the administrators: 'we have given them a world of their own, with its emulations, ambitions, and careers, and I assure you they are very happy in it' (152). Dr Leete elsewhere ascribes the 'average' utopian citizen's claim to economic support and inclusion in the industrial army to 'the fact that he is a man', that is, to 'his humanity' (54); not being men, then, one might facetiously note that women are clearly not afforded the same humanity and thus the same status, but an

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449 Ferns, p. 96.

inferior version thereof. Dr Leete justifies this separation by claiming that women are 'inferior in strength to men, and further disqualified industrially in special ways', which means that the separate industrial armies 'provid[e] every one the kind of occupation he or she is best adapted to' (151); however, the intention is clearly to keep women in their place and entertained, as their work is, for example, apparently not important enough to compete with the immediate demands of childcare when 'maternal duties claim them' (150). Moreover, their choice of jobs is constricted, as 'under no circumstances is a woman permitted to follow any employment not perfectly adapted, both as to kind and degree of labor, to her sex' (151), while higher positions are only open to those who have been wives and mothers 'as they alone fully represent their sex' (153).

Since men's 'humanity' is indicated by their inclusion in the industrial army and women's presumably by inclusion in their own, yet ultimately only on the basis of their performance of gendered social roles, it follows that motherhood and marriage are integral to women's personhood in Bellamy's utopia. Indeed, women are defined solely through their relationships with men and children, rather than possessing socially valid independent identities, and they are almost exclusively spoken of in these terms. For example, Dr Leete immediately follows his claim regarding women's increased happiness in utopia with the claim that 'their power of giving happiness to men has been of course increased in proportion' (153), while their very employment is likewise ultimately for *men's* benefit, and under their control: men only 'permit them to work at all' because it is 'well for body and mind' (151). Ferns, indeed, notes that *Looking Backward* thus fulfils Bammer's claim that 'one way in which utopias of the period sought to allay anxieties aroused by the sweeping changes they imagined […] was by their insistence that the structures of private life would remain reassuringly unchanged', and that in particular, 'gender would remain constant'.[450] Moreover, he argues that 'as with the Renaissance utopias' maintenance of patriarchy, Bellamy's more traditional conception of the role of women needs to be set against the sweeping transformations of society proposed elsewhere':[451] these gendered norms and the work segregation which Kumar notes 'seems to owe more to Bellamy's Victorian patriarchalism than to any anticipation of feminine separatism' persist alongside Bellamy's otherwise radical socialist reforms.[452] This is in itself rather telling, as rather than fully integrating women into the homeostatic utopian system, Bellamy chooses to forcefully set them apart, justifying this step not only through reference to women's supposed physical inferiority and different interests, but also through their supposedly even more pure and quasi-angelic nature than that of their male fellow citizens: they are 'wardens of the world to come' whose 'feeling of duty in this respect amounts to a sense of religious consecration', a 'cult in which they educate their daughters from childhood' (158). Thus even further deprived of their humanity, Bellamy's utopian women *need* not be integrated into utopia as their needs and desires are presumably not fully human; moreover, their individuality fades into such irrelevance that it is,

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[450] Ferns, p. 78.
[451] Ferns, p. 77.
[452] Kumar, p. 164.

for example, of no consequence that one Edith is replaced with another in West's affections. After all, the ultimate aim of these women is to facelessly facilitate the functioning of the homeostatic utopian machine, while they themselves 'sit aloft as judges of the race and reserve themselves to reward the winners' (157).

In Morris's Nowhere, women are not as obviously sequestered away, but nevertheless subject to patriarchal notions of what their position should be – despite the fact that, as Leopold notes, Morris elsewhere 'repeatedly emphasized the importance of equality and community' in 'summary accounts of his socialist principles'.[453] In *News from Nowhere*, indeed, Guest observes that 'the women were waiting on the men', and upon noting 'that seems a little like reaction, doesn't it?' (51), he is informed that in fact 'the women do what they can do best, and what they like best' (51). In fact, Guest is accused by Hammond of deeming housekeeping 'undeserving of respect', an opinion deemed a relic from the 'opinion of the "advanced" women of the nineteenth century, and their male backers' (52). Common knowledge is now apparently that it is a 'great pleasure to a woman to manage a house skilfully', and that of course 'everybody likes to be ordered about by a pretty woman – it is one of the pleasantest forms of flirtation' (52). Like Dr Leete in *Looking Backward*, Hammond thus freely serves up sexist stereotypes; however, in Morris's utopia, women are less angelic and more mere background decoration within Nowhere's mediaevalist pastoral aesthetic. In fact, at some points this aesthetic objectification becomes evident in the sheer futility of the behaviour of some of the women, for example when an unnamed 'handsome' girl is randomly 'scattering little twigs of lavender and other sweet-smelling herbs about the floor' (15), or when a gratuitous total of six women with 'graceful figures' all sweep the hall at once (122). When not engaged in twig-scattering or housekeeping, moreover, the women of Nowhere might be busy with childcare, which is here assigned solely to women as in Bellamy's utopia. Indeed, when Guest asks Hammond about the contemporary feminist aim in the zero world to 'emancipate the more intelligent part of their sex from the bearing of children', Hammond rationalises this arrangement through the declaration that maternity in Nowhere is 'highly honoured' and thus deeply desirable for the women themselves (53).

However, as in Bellamy's Boston, these sexist expectations ultimately restrict women's freedom within the system – not only must they spend their time housekeeping, but they are also dependent on the whims of men in their mental and physical movement: Dick tells Clara to abandon her 'disconcerted whims' (118), for example, and Ellen reveals that her grandfather is making her relocate north with him to leave behind her suitors. Indeed, Ellen's admission 'I must say that I don't like moving about from one home to another' contrasts starkly with her subsequent statement that 'of course people are free to move about' in Nowhere, but that 'except for pleasures-parties, especially in harvest and hay-time […] I don't think they do so much' (163); clearly, Ellen's own forced displacement is due to the fact is that she is not fully in charge of her own life as a young woman. As such, the 'Equality of Life' (165) that Ellen mentions seems to be limited to class relations, as rigid gender roles are apparently a necessary component of

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[453] Leopold, Introduction to *News from Nowhere*, p. ix.

Morris's mediaevalist aesthetic. However, this rigidity in turn again endangers the sustainability of the utopian model – particularly if the 'whims' of Clara, Ellen and others become more pronounced, which may after all alter gender relations to the extent that men are indeed both 'jealous of it [and] injured by it' (51).

Finally, in Wells's Utopia, there is in fact a token attempt at true equality in that women may also become samurai and thus govern utopia; however, as with the women's industrial army in Bellamy's Boston, this appears to be a second-class version of the men's system in that they are only required to adhere to a less strict 'Woman's Rule' to qualify, which possibly entails that their involvement is taken less seriously by the other samurai (197). Indeed, as Ferns notes, 'the *effect* of Wells's attempt at a radical reassessment of society's sexual institutions is often to reinscribe, often more overtly, the assumptions that underlie them':[454] for example, motherhood is treated as a well-paid 'service to the state' (129), but at the same time women are not allowed any other work while raising children. This is, in fact, relates to Utopia's state eugenics and the 'protection of the community from inferior births' (133), but it has extremely one-sided consequences for couples – for example in that the wife's 'chastity' is 'one unavoidable condition' of the contract of matrimony, with infidelity on her part leading to her being 'divorced as a public defender', while 'a reciprocal restraint on the part of the husband is clearly of no importance whatever' (133).

Such arrangements are supposedly the outcome of the completely rational basis of Utopian planning as well as the resulting 'balance of freedoms' described above, but just as general state coercion endangers this balance for the general population, women's apparent freedoms – amounting to possibly being equal co-leaders in the system – are undermined at every turn. On the surface level and 'for all purposes of the individual', 'women are to be as men' (128), but the narrator immediately qualifies this claim by speaking at length of women's *fundamental* inferiority to their male fellow Utopians, a physical insufficiency which brings about an 'economic inferiority' (128).[455] While this apparent disparity exists, supposedly, women's 'legal and technical equality will be a mockery' (128), which is taken to justify all unequal treatment, including the acceptance that women are 'on average poorer than men' (134). Again, this is a matter of what is seen worthy of being addressed and what is not: for example, whether a husband chooses to control his wife or 'leave her to live her independent life' (140) is explicitly left out of state control, while even in the basic matter of whether men and women should be treated 'on a footing of conventional equality', the narrator notes that 'the adoption of either [ideal] is an arbitrary act, and *we shall simply follow our age and time if we display a certain bias for the former*' (137, italics mine). Clearly, as in Bellamy and Morris, equality of the sexes is simply an *irrelevant* matter in Wells's utopian considerations; his Utopia not only reinscribes assumptions, in Ferns' terms, but declares in its choice of which lives are

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[454] Ferns, p. 91 (italics in original).

[455] The full explanatory statement that accompanies this claim on women's 'economic inferiority' is as follows: 'It is a fact that almost every point in which a woman differs from a man is an economic disadvantage to her, her incapacity for great stresses of exertion, her frequent liability to slight illnesses, her weaker initiative, her inferior invention and resourcefulness, her relative incapacity for organisation and combination, and the possibilities of emotional complications whenever she is in economic dependence on men.' (128-9).

even worth taking seriously that utopia is not meant for all, but only for the individuals Wells would most like to cultivate. These, then, are the upper classes of the Poietic and Kinetic, the men within the Poietic and Kinetic, and particularly the men within the Poietic and Kinetic that make up the samurai – the social realm which Wells clearly seems to have identified most strongly with himself, given that the narrator resembles Wells and his double is a samurai. This utopia, then, is once again not the product of wide-ranging social evolution, but of the painfully over-engineered creation and maintenance of a homeostatic system whose end goal and raison d'être is merely to be the ruthlessly exclusive domain of the privileged few.

Bellamy, Morris and Wells as Science-Fictional Utopian Thought Experiments:

To sum up, we have seen in the above that the homeostatic utopian chronotope as represented by the fin-de-siècle utopias of Bellamy, Morris and Wells constitutes a flawed science-fictional utopian thought experiment, as in Plato and More's utopias, for the following reasons: firstly, the estranging transitional connection between zero world and utopia is insufficiently rigorous, at least in Bellamy and Wells, which inhibits the 'logical' connection between the two; secondly, homeostatic feedback relations, though characterising utopian life at a fundamental level, are largely forced through coercion and eugenic practices rather than truly self-regulating; and thirdly, women in particular are largely prevented from full participation in the utopian system, which renders it less totalising in its application of utopian nova throughout society. The result of this is that utopia, rather than providing a society 'organized according to a more perfect principle' for the benefit and eudaimonia of all, instead merely benefits a select few: those perhaps most alike the author in terms of socio-economic background and conception of the good life, and thus constituting the particular type of person best-suited to each individual utopia, be it consumer, artisan, or 'poietic' creator.[456] Moreover, even these favoured groups are prohibited from freely developing as individuals within utopia, alongside everyone else, given that, in the words of Raymond Williams, 'stability blurs to Identity: the manufacture of human types to fit the stabilized model'.[457] However, this prohibition of development ultimately also means, as we have seen, that these utopian systems neither meet the requirements of autopoiesis, thus representing living organisms, nor are they evidently compatible with the continuation of full human lives. Accordingly, they are also not systems that one would necessarily want one's own society to evolve towards, despite their endorsement of evolutionary and even eugenic processes; nor do they provide viable inspiration for social restructuring.

Indeed, this lack of autopoiesis of both human members and overall structure is arguably due to the *closure* of the overall system, which in turn prohibits change and development; it is this which prevents a focus on true utopian progress and the realisability Vieira deems indicative of dynamism. Bammer, in fact, suggests that traditional utopias can be

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[456] Suvin, *Metamorphoses*, p. 63.
[457] Williams, 'Utopia and Science Fiction', p. 61.

described as structurally 'dead', since 'a place which, being "perfect", does not need to – and will not – change';[458] however, the issue in a closed homeostatic system is that the 'perfect' utopian society has no place to develop *towards*: it could not accommodate further changes even if they *were* to arise. Smaller problems, puzzles and projects based on the fluctuations of human existence and desire would presumably emerge fairly regularly even in an 'optimised' state, yet a system that is organisationally closed in its homeostatic self-regulation would presumably seek to counterbalance or *eliminate* these fluctuations as 'disturbances in the organism' rather than allow them to shape the system in any way.[459]

It is this, too, which enables the rigidification from which totalitarianism might arise: indeed, Lewis Mumford terms Bellamy's 'nationalised, centralized and bureaucratically co-ordinated society' a representation of 'the archetypal megamachine' and an 'authentic picture of National Socialism (German Style) or State Capitalism (Russian Style).[460] Likewise, George Orwell suggested that with regard to *A Modern Utopia* and other works by Wells, 'much of what Wells has imagined and worked for is physically there in Nazi Germany';[461] Wheen notes that 'the essay infuriated Wells, who wrote to Orwell denouncing him as "a shit", but he had brought it on himself'.[462] Indeed, a progression towards ever-increasing totalitarianism is even evident within the development of the language that Wells's narrator employs to describe Utopia throughout the course of the text, as Ferns points out: 'it is striking', he notes, 'how often the speculative, tentative tone of voice which Wells strives to preserve slides into the prescriptive, authoritative utterance with which utopian narrative is so much more at home', as 'open-ended verbal formations' such as 'we should…' 'repeatedly give way to more authoritative assertions', such as stating that something 'must' be a certain way or is 'beyond controversy'.[463]

In fact, it appears that this descent into authoritarianism, totalitarianism or even fascism would only be arrested in these homeostatic utopian societies once the privileged elite is surrounded only by a background of the 'perfect' utopian citizens that each author envisages – once again, in the cases of Bellamy, Morris, and Wells, these would respectively be the consumer, artisan, or 'poietic' creator. In bypassing the estrangement of their stated utopian nova such as 'untrammelled sexual selection' or even 'libertarian eugenics' in favour of continued eugenics and coercion, however, these authors seem to indicate that their utopias are not, in fact, at the point where the social makeup is 'ideal' in this respect to the extent where such controlling measures are no longer required. And yet, it is these very measures, enshrined as they are here in the makeup of utopian social feedback systems, that ensure that these systems *cannot*, by design, be utopias for the general population. Ferns points out that we can observe, in the systemic suppression in particular of women and the lower classes, a 'distaste for too much reality' which is reflected in the fact that it 'if poverty and oppression are to be eliminated, it is

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[458] Bammer, p. 2.
[459] Cannon, p. 289.
[460] Lewis Mumford, *The Pentagon of Power* (New York, Harcourt Brace Jovanovich, 1970), p. 216, quoted in Kumar, p. 158.
[461] George Orwell quoted in Francis Wheen, Introduction to *A Modern Utopia*, p. xxiii.
[462] Francis Wheen, Introduction to *A Modern Utopia*, p. xxiii.
[463] Ferns, p. 103.

once again primarily because of the offence they give to society's cultured upper echelons':[464] in Wells's vision, for example, the 'true objection' to the extreme case of slavery is 'not that it is unjust to the inferior but that it corrupts the superior' (337). In Bellamy's utopia, meanwhile, Dr Leete employs a parable to illustrate the same point, comparing living among 'uncultured' and 'coarse' people to someone 'up to the neck in a nauseous bog solacing himself with a smelling bottle'. (130)

Indeed, it seems that rather than concerning themselves with lifting up these uncultured people within their utopias through social programmes and education, these authors would rather start over with a blank slate: in fact, Ferns notes that for example, 'Bellamy's Boston of the future retains the familiar geographical structures, but scarcely a vestige of the human structures that once accompanied them',[465] while Wells requires an entire planet for his own purposes. This, then, gives no space for oppositional forces behind boundaries, as 'there is little room for difference in the modern utopia': 'to be different, given the evident superiority of utopia, is to be inferior, and inferiority is something which utopia ultimately seeks to eliminate'.[466] However, a blank slate is the epitome of spatiotemporal isolation from the zero world, and even its apparent approximation thus helps to explain how these worlds are insufficiently rigorous science-fictional thought experiments on our terms.

Indeed, rather than thus representing change-driven SF at all, it could once again be argued that these novels are more akin to the genre of fantasy: after all, fantasy requires no rigorous connection to the zero world, and in fact is arguably predicated on the *absence* of such a connection. Accordingly, Bellamy's utopia could conceivably be read as a quasi-religious fantasy in which an 'edict of Eden' as 'codification of the law of nature' is the sole fundamental motivation for citizens to serve in the industrial army (68). Likewise, Morris's Nowhere might be the equivalent (though secular) 'garden' of Eden in which human nature is beautifully preserved and cultivated, though without meaningful growth – thus representing an idealised fantasy of the mediaeval period rather than heavenly realms. Lastly, Wells's vision, of course, is already represented as imaginary: a mere 'dream' or incandescent soap-bubble which cannot persist for long before it bursts under the weight of its own internal tensions. In fact, not even the protagonists seem to be fully living and present while in the utopian worlds they are visiting: West, for instance, initially perceives himself as 'neither dead nor properly alive' in utopian Boston (20), and only feels fully integrated when he becomes a mirror figure of his former self in marrying the second Edith and becoming a lecturer on his own past; Guest, meanwhile, is told at the end of his adventures in Nowhere that 'you cannot be of us' (181) and simply fades away. Lastly, the narrator in Wells's utopia, already uneasy with the spartan life of the Utopians despite having come up with it himself, is ultimately expelled from this vision along with the botanist, with his 'dream of utopia run[ing] off [him] like water from an oiled slab' (238). The narrator and botanist's places in Utopia are, after all, already taken by their doubles, whose presence in

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[464] Ferns, pp. 82; 90.
[465] Ferns, p. 102.
[466] Ferns, pp. 102-3.

this world has been established from the beginning. Nevertheless, however, it is notable that not even these utopian visitors, as possible avatars of their creators, seemingly possess the ideal nature to become part of the particular utopian societies that are apparently tailored to be most conducive to their happiness.

As such, it seems that none of these authors are truly troubled with the human *reality* of creating a better world, lest it concern them directly; instead, as in Plato and More, the idea is once again treated more like an intellectual parlour game that offers curious diversions. It is a fanciful amusement, spun up on holiday in the Swiss Alps, for example, but not to be taken seriously – a dispassionate, privileged perspective seeks entertainment, not true social change. Indeed, Bloch writes admiringly of Bellamy's *Looking Backward* that 'the reader can now inspect this construct of the future as through opera glasses; more than in any previous utopia that which is dreamed appears as a fabulous present';[467] however, it is this distancing 'as through opera glasses', I would suggest, that epitomises the sense of privileged detachment that characterises these utopias, and which gives the author the choice of selective rather than universal improvement.

At this stage, then, I would like to challenge Parrinder's claim that eudaimonia can *only* be ensured in utopias that rely on such amoral practices as sustain these societies – practices of the variety, I would add, that uphold privilege. The homeostatic utopian chronotope is clearly very well suited to a conservative, reactionary isolationism in which amoral practices of various sorts can be enshrined; however, the possibilities of SF, and indeed of the utopian imagination, extend far wider than such limiting and thus also dangerous 'end-state models', as McKenna terms them. Indeed, I would suggest, the homeostatic model provides a possible foil or antithesis for other, more rigorous utopian thought experiments that replace coercion with inclusive, totalising rigour. These are ones that posit a truly living utopia in the service of all, and particularly of those who need it most: those whose zero-world equivalents, predecessors or doubles do *not* already benefit from positions of privilege, and for whom a better life is therefore a necessity rather than a pleasant, distracting dream. Parrinder claims that 'whether or not discontent, the very quality that leads us to imagine utopias, can be successfully incorporated *within* a utopia remains an open question';[468] however, I would suggest that it is not so much an *open* question as a question of *openness*.

By re-thinking the basic shape of utopia in order to provide genuine receptivity to the feedback of *all* human elements within the social structure, certain more recent utopian models have provided an alternative to both the homeostatic cyclicality of the classical and Renaissance utopias of Plato and More and to the pseudo-progressive but ultimately asphyxiating rigidity of the 'evolutionary' fin-de-siècle utopias of Bellamy, Morris and Wells. In their worlds, both the static classical worldview, exemplified by the tail-eating Worm Ouroborous, and the rigid inevitability of Newtonian mechanics, which Wittenberg associates with the blind 'evolutionary' thinking of the fin-de-siècle utopia, give way to a more genuinely organic and nuanced

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467 Bloch, *The Principle of Hope*, quoted in Beaumont, Introduction to *Looking Backward*, p. xxiii.
468 Parrinder, p. 20.

perception of what shape a *sustainable* utopian society might take: the homeostatic utopian chronotope, I will argue in the following chapter, is here replaced by that of inherently dynamic *complexity*.[469] As such, I suggest, the classical utopian idea that things would *ideally* be a certain way, as well as the 'evolutionary' notion of the fin-de-siècle period that things *will necessarily* be a certain way provided that reason triumphs, are both superseded by the basic science-fictional postulation that things *could be otherwise* – thus moving utopia from the realm of dreams to that of genuinely inspiring, legitimately sustainable, and fundamentally this-worldly consciousness-raising.

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[469] Wittenberg, p. 37.

The 'Death of Utopia' and the Emergence of the Complex Critical Utopia:

Later on in the 20th century, the production of utopian literature diminished significantly, and in fact the genre was given its last rites by several major scholars in the field: for example, while Frank and Fritzie Manuel proclaimed in their monumental *Utopian Thought in the Western World* in 1979 that the 'twilight of utopia' had arrived,[470] Krishan Kumar spoke of the 'failure of utopia' in his 1987 overview of the genre.[471] Stephen Bann, indeed, wrote in his introduction to *Utopia and the Millennium* in 1993 that 'the "end of utopia" [was] a concept that seem[ed] to fit our contemporary experience of society and politics on the world scale'.[472] This sentiment was in accordance with a general anti-utopianism that can be broadly aligned with three shifts in the 20th-century zeitgeist. Firstly, as Robert C. Elliot writes, 'utopia itself [had] become the enemy', given the sudden historical materialisation of the old adage that one person's utopia is another's dystopia;[473] this led to a boom in dystopian literature by authors such as George Orwell, Aldous Huxley, and Yevgeny Zamyatin, and a reduced production of its utopian equivalent. Secondly, on a more positive note, utopia was declared redundant by sociologists and political theorists such as Seymour Martin Lipset, Francis Fukuyama and others on the basis that the success of Western liberal democracy supposedly meant that there could in fact *be* no more utopian imaginings, given that a stable liberal political state had been achieved that could not feasibly be improved upon. Fukuyama even proclaimed not only the end of utopia, but the 'end of history as such', given its arrival at the 'end point of mankind's ideological evolution and the universalization of Western liberal democracy as the final form of human government'.[474] Lastly, and somewhat paradoxically, the death of utopia was associated with a perceived 'end of ideology' related to a lack of radical socialist spirit: Judith Shklar, for example, claimed that radicalism had 'gone totally out of fashion', lamenting that socialism had 'not been able to recover the lost spirit of utopian idealism' and remained 'neither radical nor hopeful today',[475] while Russell Jacoby later added that 'radicalism no longer believes in itself'.[476]

However, there are issues with all three of these strands of anti-utopianism. Undoubtedly, absolutist utopianism can be disastrous, and even seemingly benign visions such as those in traditional utopian literature may be deeply coercive in maintaining the status quo, as we have seen; and yet, it must not be forgotten that utopia can be deeply liberating as well. Moreover, the idea of a 'stable state' or final form of government is in itself treacherous, as any rigid social system privileges the functioning of the state over individual development. Indeed, as Freedman points out, the post-war period was prone to such rigidification and (homeo)stasis:

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[470] Frank and Fritzie Manuel, *Utopian Thought in the Western World*, p. 539.
[471] Krishan Kumar, p. 422.
[472] Stephen Bann, *Utopia and the Millennium*, p. 1.
[473] Robert C. Elliott, 'The Fear of Utopia', p. 241.
[474] Francis Fukuyama, 'The End of History?', *The National Interest*, p. 4.
[475] Judith Shklar, *After Utopia: The Decline of Political Faith*, p. 219.
[476] Russell Jacoby, *The End of Utopia: Politics and Culture in an Age of Apathy*, p. 10.

he writes that western societies had been 'on the whole frozen', domestically in democratic capitalism and geopolitically in the cold war, and that this 'stasis, with its inevitable pressure to eternalize the status quo' was 'hardly conducive to the production of genuinely critical literature'.[477] Finally, suggesting the 'end of history' or the 'end of ideology' is problematic in that this devalues the experiences of those parts of society that still suffer from economic unfreedom even under the supposed 'final form' of government, and who may indeed be radicalised, though out of the eye of the mainstream media: these are the historically marginalised groups, such as women, people of colour, and impoverished members of the working class.

However, as mentioned in the introduction, a group of utopian novels emerged in the 1970s that addressed the concerns of precisely these communities, particularly from a feminist perspective: utopian literature had a sudden resurgence with novels such as Ursula K. Le Guin's *The Dispossessed: An Ambiguous Utopia* (1974), Joanna Russ's *The Female Man* (1975), and Marge Piercy's *Woman on the Edge of Time* (1976), as well as later on with, for example, Suzy McKee Charnas's *Motherlines* (1978), Sally Miller Gearhart's *The Wanderground* (1979), Le Guin's *Always Coming Home* (1985), and Joan Slonczewski's *A Door Into Ocean* (1988). All of these novels negated, in their very existence, the apparent 'death of utopia', and are in fact genuinely critical of the status quo, thus providing a counterexample to Freedman's criticism. Indeed, as previously discussed, Tom Moylan designated Russ's *The Female Man*, Piercy's *Woman on the Edge of Time* (*Woman*) and Le Guin's *The Dispossessed*, alongside Samuel R Delany's *Trouble on Triton* (1976), 'critical utopias' due to their ability to 'dwell on the conflict between the originary world and the utopian society opposed to it so the process of social change is more directly articulated'.[478] Again, this shift of what Bülent Somay terms the 'utopian locus' from the privileged individual to oppressed communities rendered these novels, Moylan argues, 'more recognisable and dynamic alternatives' to the 'systematizing boredom of the traditional utopia' while 'negat[ing] the negation of utopia by the forces of twentieth century history'.[479]

Moreover, it is significant that the critical utopias emerged from the second-wave feminist movement of the 1960s and '70s; as Bammer suggests, feminism, in its irreducible focus on women's liberation, is 'not only revolutionary but radically utopian'.[480] Unlike the authors of traditional utopias, feminist utopian writers have had to imagine, almost from scratch, a world in which women are treated as full participants in society, which in itself entails a utopian element: in Anne Mellor's words, 'those seeking a viable model of a non-sexist society must […] look to the future; their model must be constructed first as a utopia'.[481] In their writing, feminist utopian authors of the 1960s and '70s thus envisaged not only societies in which women were equal participants, but ones in which the personal was made political as both public and private

[477] Freedman, 'Science Fiction and Critical Theory' in Latham, *Science Fiction Criticism*, p. 243.
[478] Moylan, p. 10.
[479] Moylan, p. 10.
[480] Bammer, p. 2.
[481] Anne Mellor, 'On Feminist Utopias', p. 243.

spheres became subjects of utopian reform – unlike in traditional utopian literature, despite the latter being 'the very sphere in which forms of oppression were institutionalized', as Bammer notes.[482] As such, feminist utopian authors could describe imagined places of happiness and fulfilment in the vein of Bloch's 'homeland' or *Heimat* (in the original German) as spaces in which they had *truly* '[not] yet been', and indeed had socio-historically speaking never been, in that women had always been denied access to equal participation and power in their own worlds. Moreover, they were able to claim *Heimat* in the sense of 'home' in a radical new way, in that their texts – with their inclusion of the domestic sphere – could in themselves represent safe, domestic spaces while also holding subversive potential for a radical re-imagination of the world at large. Finally, it was SF that provided them with the necessary tools to do so: cognitive estrangement proved to be an ideal device for the fundamental reimagination of a society in which a patriarchal system has left comprehensive marks, as its totalising influence can be radically subverted through precisely placed and fictionally realised nova regarding women's role in society – nova which in turn subvert the epistemic paradigm of male hegemony in the alternate world. In fact, Freedman qualified his criticism of a lack of 'genuinely critical literature' following the second world war by saying that 'where exceptions have emerged, it has usually been in works by authors from groups marginalized within the West, or, as with SF, in works whose generic determinants tend to discourage conformism and the uncritical acceptance of reality'.[483] The latter exactly describes the critical utopias, in particular.

However, as Somay notes, 'any genuine attempt to write utopian fiction in the latter half of the 20th century must dialectically transform [...] the structure traditionally associated with the genre', whose main characteristic is 'the imprisonment of the utopian horizon within a closed and ordered utopian locus'; as such, 'any substantial change in this structure entails both a negation of this enclosure and the introduction of an "absent paradigm," which is not to be found in any traditional utopian text'.[484] In our terms, then, the homeostatic chronotope of the traditional utopia, describing homeostatically balanced and closed-off systems in forced equilibrium, must be replaced with a fundamentally different utopian structure. Le Guin, in fact, attempted to describe just such a structure in her essay 'A Non-Eucledian-View of California as a Cold Place to be', suggesting that the 'power trip' of the traditional utopia, 'declared by executive decree, and [...] trapped [...] in a one-way future consisting only of growth', must be replaced with a 'non-European, non-eucledian, non-masculinist' utopia which ensures Victor Turner's notion of 'communitas', and she added that such a utopia must have a truly *organic* structure.[485] Referencing Fritjof Capra's observation that 'the activities of a machine are determined by its structure, but [...] organic structure is determined by its processes',[486] Le Guin asks 'might one not abandon the machine model and have a go at the organic—permitting process to determine structure?'[487] However, in opposing linear growth, Le Guin's proposed

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[482] Bammer, p. 13.

[483] Freedman, 'Science Fiction and Critical Theory' in Latham, *Science Fiction Criticism*, p. 243.

[484] Somay, Bülent, 'Towards an Open-Ended Utopia', p. 26.

[485] Le Guin, 'A Non-Euclidean View', pp. 87; 90.

[486] Fritjof Capra, *The Turning Point*, quoted in Le Guin, 'A Non-Euclidean View', p. 88.

[487] Le Guin, 'A Non-Euclidean View', p. 89.

model is oddly maintenance-focused in itself: she writes that '*Persevering* in one's existence is the particular quality of the organism; it is not a progress towards achievement, followed by stasis, which is the machine's mode, but an interactive, rhythmic, and unstable process, which constitutes an end in itself'.[488] The issue here is that despite the mentioning of an 'unstable process', there seems no obvious outlet for difference and development in this suggestion. Indeed, Le Guin does also mention an integration that would 'transfer mechanical operational codes to machines while retaining organic modes for humanity',[489] thus potentially making growth possible after all in combining yin and yang, balance and movement: 'Mechanical progress; biological rhythm. A kind of superspeed electronic yang train, in whose yin pullmans and dining cars life is serene and the rose on the table does not even tremble'.[490] Ultimately, however, Le Guin's vision stagnates, in that she cannot fully envisage this combination of energies while distrusting any 'mechanical thinking' – she says 'what worries me in this model is the dependence upon cybernetics as the integrating function. Who's up there in the engineer's seat? [...] Is it another of those trains with no brakes?'[491]

And yet, Le Guin need not have worried, as there exists a structure found *primarily* in nature which combines these energies in an organic fashion, in that it is both self-regulating but also structurally open to progress and change: that of complex systems, which are found in the organisation of natural organisms, such as the human brain, as well as man-made ones, such as cities. Complex systems run not only on negative, but also on positive feedback, which enables them to progress in a state of *inherent* dynamism, constantly self-organising and self-optimising; this, in turn, allows them to have an 'interactive, rhythmic, and unstable process' at their core, just as Le Guin hoped for, while still being capable of growth rather than mere perseverance. As such, complexity can serve as a utopian structural model that after all embodies yin and yang, progress and stasis, as well as the mechanical and the organic, given that it is found in both man-made and natural systems – while also being sustainable in 'organic' terms in that its self-regulation is not closed off or forced, but open to organic shifts and changes. In fact, I suggest that it is these open feedback relations of the complexity chronotope that allow the critical utopias to 'give new life to the utopian impulse', as Moylan suggests, juxtaposing the coercive and closed-off homeostatic chronotope of the traditional utopias with the open, adaptive dynamism of complex systems.[492] The remainder of this chapter will thus explore the complexity chronotope within the critical utopias of Russ, Le Guin and Piercy, suggesting that their inherent dynamism represents a utopian sustainability that is unprecedented in the genre, and that these texts moreover present utopia not as a redundancy in itself, but as an ongoing process to be embedded within the deepest structures of a living society.[493]

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[488] Le Guin, 'A Non-Euclidean View', p. 91 (italics mine).
[489] Le Guin, 'A Non-Euclidean View', p. 91.
[490] Le Guin, 'A Non-Euclidean View', p. 91.
[491] Le Guin, 'A Non-Euclidean View', p. 92.
[492] Moylan, p. 31.
[493] I will not include Delany's *Trouble on Triton* in my analysis, as it lacks many structural and content-related parallels to the other three novels that are central to my argumentation. This element of dissimilarity is incidentally also noted by Joanna Russ in her essay 'Recent Feminist Utopias', where she realises that her attempts to identify common features in several contemporary feminist utopian novels persistently fail when she comes to *Triton*; she attributes this to the fact that Delany as a male author writes 'from an implicit level of freedom that allows him to

The 'Lateral Possibilities' of the Critical Utopia in Space and Time:

The critical utopias set themselves apart from both their traditional predecessors and earlier feminist utopias, such as Margaret Cavendish's *The Blazing World* (1666), Sarah Scott's *Millenium Hall* (1762) and Charlotte Perkins Gilman's *Herland* (1915), by providing inclusive utopian visions that are both feminist in their integration of public and private spheres as well as intersectionally so – conversely, Patrick B Sharp describes the novels of Cavendish, Scott, Gilman and others as a 'white educated woman's vision of the future that was predominantly socialist in its politics'.[494] Moreover, unlike these texts, to which Sharp ascribes a 'Darwinian feminism' that sometimes advocates outright eugenics in the manner of the fin-de-siècle utopias discussed before, the critical utopias put forward gentler tools of social improvement, as we shall see below. Finally, they distinguish themselves in that they express the 'conflict between the originary world and the utopian society opposed to it', in Moylan's terms, by placing utopia not merely in the far future or another essentially 'unreachable' location representing the deferred Blochian Not-yet, but in a *possible*, alternate part of spacetime that is continuously accessible within the narrative; this new utopian locus thereby, and in its precise and rigorously estranged nova, provides a genuine focus of feminist critical transformation of the zero world.[495]

In Russ's *The Female Man,* for example, utopian Whileaway is 'the Earth ten centuries from now, but not *our* Earth […] in the future […] but not *our* future' (7), in that it is situated along a possible timeline in the multiverse which may or may not come about, and in fact exists alongside many other possibilities generated by activity in the present:

> Sometimes you bend down to tie your shoe, and then you either tie your shoe or you don't […] Every choice begets at least two worlds of possibility […] or very likely many more […]. There must be an infinite number of possible universes […]. It's possible, too that there is no such thing as one clear line or strand of probability, and that we live on a sort of twisted braid, blurring from one to the other without even knowing it […]. Thus the paradox of time travel ceases to exist, for the Past one visits is never one's own Past but always somebody else's; or rather, one's visit to the Past instantly creates another Present […] and with each decision you make […] that new probable universe itself branches, creating simultaneously a new Past and a new Present, or to put it plainly, a new universe. (6 – 7)

Whileaway, then, exists on a strand of probability that has been exactly favourable to its utopian development; we are told that a plague has wiped out all men and that the women survive through a process of 'merging of ova' (12) and are flourishing. Utopian innovation extends beyond reproduction, however, to include, for example, 'genetic surgery', sophisticated space travel, 'induction helmets' to partly mechanise workflow, and the 'probability mechanics' that allow utopian Janet Evason to visit the zero world in the first place (12 – 13). In fact, Janet is one of four versions of the same woman inhabiting alternate realities who come together in 1969 New York: the others are Joanna, the author's avatar in present-day New York; Jeannine, from a

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turn his attention, subtly but persistently, away from many of the questions that occupy the other writers' (Russ, 'Recent Feminist Utopias' in *To Write Like A Woman*, p. 146).

[494] Patrick B Sharp, *Darwinian Feminism and Early Science Fiction: Angels, Amazons and Women*, p. 98.

[495] Moylan, *Demand the Impossible,* p. 10.

present-day version of New York in which World War Two never happened and the Great Depression continues; and Jael, a part-cyborg feminist avenger fighting on the side of 'Womanland' against 'Manland' in an extended battle of the sexes in near-future Earth. Similarly to the doubles of Wells's Utopia, the four J's are so closely ontologically connected that Bartkowski describes them as 'more than themselves and *parts* of each other'; she writes that as 'women at a number of edges of time, they form multiple, collective protagonists'.[496] Unlike Wells's doubles, however, the kinship of these women is necessary to their continued existence, given that their spatiotemporal locations are contingent yet possibly *concrete* – certainly more so than Wells's incandescent utopian soap-bubble – and may or may not be realised within the story's universe depending on their individual and collective behaviour. Indeed, Jael has summoned the other J's to enlist them in her war, which she believes to have *actually* brought about Whileaway, instead of the aforementioned plague: 'I, I, I am the plague, Janet Evason. I and the war I fought built your world for you' (211). As such, utopia is here intertwined with various other existences and agencies, though the fate of the women on the path towards utopia is ultimately left open.

Utopian Mattapoisett of *Woman*, meanwhile, is also located on an imaginary version of our planet in the far future, in the year 2137, and is likewise connected to the zero world via similar contingencies that produce 'crux times' determining the temporal strand that will follow: as utopian Luciente tells Connie from our zero world, 'all things interlock [...] we are only one possible future. [...] yours is a crux-time. Alternate universes coexist. Probabilities clash and possibilities wink out forever' (191).[497] Connie has been contacted via a telepathic connection by Luciente because she is believed to live in just such a crux time, in 1970s New York, that her actions could make a decisive difference in whether utopia comes about or not. As a middle-aged, impoverished, Chicana woman from Brooklyn, Connie's suffering is located at the heart of interlocking systems of oppression as she battles to survive in a critical period rife with potential for a social justice revolution: as Luciente's friend Barbarossa says, 'at certain cruxes of history . . . forces are in conflict. Technology is imbalanced. Too few have too much power' (212). It is at these points, then, that 'alternate futures are equally or almost equally probable . . . and that affects the . . . shape of time' (212). As Luciente's partner Bee elaborates, 'we must fight to come to exist, to remain in existence, to be the future that happens. That's why we reached you.' (213) Having contacted her, Luciente thus maintains a mental connection with Connie that allows for either woman to visit the world of the other; imprisoned in a mental asylum following her attack on her niece Dolly's abusive pimp, however, Connie mostly travels to Mattapoisett, where she finds exactly the kind of life that is denied to her by her own sexist, racist and ageist society: here, women do not bear the obligations of pregnancy and childcare alone, as mechanical 'brooders' perform gestation and three-parent groups of either gender raise children; for there

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[496] Bartkowski, p. 59.

[497] Technically, Mattapoisett is only one village in a utopian network that spans at least a dozen or so communities, and possibly far more than that; however, I have chosen to refer to this network and Piercy's utopian society as a whole as 'Mattapoisett' since we are not given a collective term for these communities, and it makes no difference to my analysis.

to be 'no chance of racism again' genes are artificially mixed (108-9); and elderly utopians like storyteller Sappho are admired for their wisdom and looked after collectively (139). Moreover, Connie sees herself represented in dark-skinned, nurturing Luciente, while Connie's daughter Angelina, taken from her by the state after Connie injured her in frustration, is symbolically present in Luciente's daughter Dawn. Even Connie's partner Claud, a kind blind man who died in a medical experiment in prison, is represented: through Bee, a loving black man who has a romantic connection with Connie.

In both Russ and Piercy's novels, it is from the social justice movements of the 1970s that utopia must emerge, either through unspecified radical action as in *Woman*, or through the collective radicalisation that might bring about and then resolve Jael's war in *The Female Man* – or perhaps lead to utopia along another timeline. This, in turn, makes the connection between zero world and utopia both tangible and urgent, as well as often violent: Jael's war is mirrored in *Woman* through a 'thirty-year war that culminated in a revolution that set up what we have. Or else there wasn't and we don't exist' (214). Moreover, small-scale actions are seen as the necessary catalysts for larger movement – as Connie is told, 'the powerful don't make revolutions' (214); this becomes apparent in the mere fact that individuals are targeted in both novels to help bring utopia about from their historical leverage points in their own zero worlds. Indeed, just as the Js' realities demonstrate various versions of what the outcomes of such actions might be, Connie also learns of the tendentiousness of utopia when an error in her mental connection with Luciente at one point lands her in a sexist dystopia, described further below, rather than in Mattapoisett.

In *The Dispossessed,* this rigorous and radically charged connection between zero world and utopia is similarly present and depicted in detail, but the challenge here is not for utopia to *come* into existence in the past, but merely to *remain* in existence in the 'present' time. The planet Anarres, located about eleven light-years from Earth (283) as part of nine 'Known Worlds' catalogued by the planet Hain centuries in our future (284), was colonised a hundred and seventy years earlier by settlers from the planet Urras: they were given the planet's moon after their leader, Odo, instigated a successful anarchist revolution.[498] Now, however, the scientist Shevek, who is attempting to come up with a ground-breaking 'General Temporal Theory' of physics, sees the anarchist principles of Anarres, which are based in mutual aid, as endangered by rigidifying public opinion; to escape this stifling atmosphere, he decides to travel back to Urras as the first Anarresti visitor, yet eventually returns to his home planet and its anarchist principles again with renewed faith after finding conditions on Urras much more repressive. As such, though *The Dispossessed* lacks the literalisation of possible utopian futures in alternate timelines within a multiverse, it presents a highly realistic concrete spatiotemporal manifestation of utopia, in that the utopian world has had time to develop so far by the start of the narrative that it is already showing signs of falling into homeostatic patterns. Moreover, in terms of connection to the zero world, we are not only told precisely how the settling of Anarres

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[498] All quotations from *The Dispossessed* are taken from Ursula K. Le Guin, *The Dispossessed* (London: SF Masterworks, 2002).

came about, but also how these homeostatic patterns are being opposed through ongoing debates within the community. Overall, then, *The Dispossessed* offers a comprehensive and unique perspective of a mature utopia fighting for itself despite its fading idealism and human weakness.

Moreover, despite the fact that Anarres does not directly originate from our zero world, it stands in critical relationship to it as well as to Urras: on Urras, Shevek meets the 'Terran' ambassador, who tells him that our future Earth, following environmental breakdown, is homeostatically controlled through 'total centralisation […] the absolute regimentation of each life towards the goal of racial survival' (287). Indeed, this dystopian horror has blinded Terrans to the comparatively minor injustices of Urras, to the extent that Anarres means 'nothing' to them, while beautiful, lush Urras appears as a 'Paradise'; in fact, Keng believes that Terrans 'forfeited [their] chance for Anarres centuries ago, before it ever came into being' (286-7). Nevertheless, Shevek, as an eventual though involuntary ambassador of his own utopia, radiates hope – even for Terrans: he realises that as they would not accept his help, 'we couldn't come to you', but the Anarresti may 'wait for you to come to us' (288).

As such, these three novels all showcase, in various ways, a broad range of 'realistically' spatiotemporally situated present and future possibilities that were, or are, subject to the ideological actions of individuals, marginalised people who must challenge the status quo to reach better lives grounded in fairness and equity. If no action is taken, things may continue as they are, or they may get radically worse – in any case, though, all of these options are equally 'real'. As such, these alternatives represent the abstract 'possible worlds' that Suvin presents as the essential function of utopia,[499] as well as the '"lateral possibilities" of an event or fact' that Raymond Ruyer sees as the essence of the 'utopian mode of thought';[500] moreover, they arguably do so far more directly than their predecessors, and with the moral conviction of social and economic necessity.

Negative Feedback and Russ, Piercy and Le Guin's Utopias as Autopoietic Systems:

The utopian societies described as occupying certain possibilities within spacetime in these novels, then, are in themselves open to change and possibility through positive feedback; however, self-regulating *negative* feedback is also required within any system that functions through internal adjustment: as Capra notes, 'purely self-reinforcing feedback phenomena are rare in nature, as they are usually balanced by negative feedback loops constraining their runaway tendencies'.[501] As such, Russ, Piercy and Le Guin's utopias are internally organised via self-regulating feedback mechanisms just as the traditional utopias are; however, the main difference is that these mechanisms are here arguably at the service of a more organic, complex whole, thus embodying the 'rhythms' Le Guin calls for in her essay as well as representing a

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[499] Suvin, 'Locus, Horizon, and Orientation', p. 76 (italics in original).
[500] Raymond Ruyer, *L'Utopie et les Utopies*, translated by Elisabeth Hansot and quoted in Hansot, *Perfection and Progress,* p. 19.
[501] Capra, *The Web of Life,* p. 63; see also Rosenblueth, Wiener, and Bigelow, 'Behavior, Purpose, and Teleology', p. 19, as quoted by Bruce Clarke in 'Systems Theory', p. 217, and Capra, *The Web of Life,* p. 60.

'pulse' of complexity to give life to Moylan's 'utopian impulse'.[502] As a result, the reified dynamism of the critical connections between zero world and utopia is evident in the structure of these utopian societies themselves, due to the distinctive rhythms and cadenced connections that form the feedback relations of everyday life.

In terms of government, for example, great emphasis is given to decentralisation and cooperation within the communal network, which in turn facilitates a genuinely fluid and organic adaptability – unlike the false fluidity of Wells's utopia, for example – within decision-making processes: Whileaway, for instance, is run by volunteers in the 'Geographical Parliament' or 'Professional Parliament' who may join once they have entered a family and established a 'network of informal associations' (51), while Mattapoisett is run in egalitarian volunteer-based councils both locally and on the higher level of the 'Grandcil', which mostly tries to 'divide scarce resources justly' (162). Moreover, such decision-making is strictly non-hierarchical: Janet tells Jeannine that 'there is no government here in the sense that you mean [...] there is no one place from which to control the entire activity of Whileaway, that is, the economy' (91), while Luciente tells Connie that 'there's no final authority', and that decisions are reached unforced via consensus: 'we argue till we close to agree. We just continue' (164). On Anarres, where there is 'no law but the single principle of mutual aid among individuals' (248), governmental processes are equally non-hierarchical and decentralised, though slightly more regimented in their organisation: as Shevek tells the Urrasti, the anarchist community also has 'no government but the single principle of free association' (248), though the PDC or 'Production and Distribution Coordination' organises workers and syndicates, and 'managerial debates' take place that are non-hierarchical and volunteer-based as in Whileaway and Mattapoisett.

Unlike the consensus decision-making of Morris's Nowhere, however, there is a more explicitly organic connotation to debates in these three societies: for example, Shevek describes those on Anarres as 'like an argument among brothers, or among thoughts in an undecided mind' (291). In addition, he notes that while 'the process, compared to a well-managed executive conference, was a slab of raw beef compared to a wiring diagram', it is also the case that 'raw beef [...] functions better than a wiring diagram would, in its place—inside a living animal' (290); the 'ideal of complex organicism' (81) is thus presented by Shevek as truly organic. Indeed, immediate feedback relations in governing bodies in these societies recall the self-regulation of living organisms that Cannon describes, though without coercion: 'alarming disturbances in the organism' in Cannon's terms are solved through gentle conflict resolution, such as when the people of Mattapoisett 'guest each other' (164) after fights, and when communal 'wormings' are used here to resolve the conflicts of feuding individuals who are 'meshing badly', with 'sparks and bumps' (224).[503] Voluntary duels serve the same purpose on Whileaway, while on Anarres, though fights that are perceived to be fair do happen, the fact that 'people like to do things [...] they like to do them well' (125) is generally sufficient to ensure that disputes are resolved to everyone's satisfaction.

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[502] Moylan, p. 31.
[503] Cannon, *The Wisdom of the Body*, p. 289

Moreover, there is a regular flow of work and play in these communities, with Mattapoisett possibly the most flexible with regard to the former, as jobs are chosen freely and interspersed with sabbaticals; moreover, work is part of the flux of life, Luciente says: 'we're always working, always studying' (138). On Whileaway and Anarres, on the other hand, resource scarcity necessitates some job assignment, with young girls on Mattapoisett being sent 'where they're needed, not where they wish' (50-51), and Anarresti sometimes receiving unwanted postings by the 'Division of Labour Office' or 'Divlab' (125). However, workers here also take pride in what they do: the Whileawayans, for example, 'work too much' (52) despite their work week being only sixteen hours, while the Anarresti language of Pravic 'use[s] the same word for work and play' (79). The latter, indeed, has a 'strong ethical significance' in that 'the cells must work together' for the 'optimum working of the organism' (223), but they do so happily: as Shevek notes, there is 'no other reward, on Anarres', 'no other law', than 'one's own pleasure, and the respect of one's fellows' (125). Indeed, Divlab is seen as a 'ganglion' or 'brain' for the social organism, not an impersonal restrictive force (125).

The same organic flux governs private life in these communities: on Whileaway, for instance, clan-type families maximise resources and women may enter families or start their own after a period of wandering to find their place in life, while on Mattapoisett, adults live separately but come together to raise children, who in turn also go soul-searching before living wherever they please. On Anarres, meanwhile, people live in dormitories to which rooms may be added if demand is high, and move about frequently for job postings. Indeed, travel and infrastructure particularly showcase the free flow of exchange in these communities, which is both emergent from and supportive of the safety and freedom of their utopians – unlike, for example, Wells's 'balance of freedoms', which relies on laws and the restriction of liberties rather than organic feedback-based arrangements. Settlements on Anarres, for instance, are 'connected by communication and transportation networks, so that goods and ideas could get where they were wanted […] with speed and ease, and no community should be cut off from change and interchange' (81); indeed, these connections are so important that 'they built the roads first, the houses second' (81-2). Moreover, in the absence of private property on Anarres, people generally travel and go about their business without fear of assault or robbery, and doors are generally kept unlocked, as an atmosphere of mutual trust prevails. Likewise, on Mattapoisett, people frequently visit neighbouring village communities without fear for their safety, as everyone is 'trained to respect each other' (226), and on Whileaway, free movement is so fundamental to the basic respect Whileawayans show one another that we are told that here

> There's no being out *too late* […] or *up too early,* or *in the wrong part of town,* or *unescorted*. You cannot fall out of the kinship web and become sexual prey for strangers, for there is no prey and there are no strangers—the web is world-wide. […] You can walk around the Whileawayan equator twenty times […] with one hand on your sex and in the other an emerald the size of a grapefruit. All you'll get is a tired wrist. (82)

Moreover, in terms of small social cues rather than general safety, Whileawayans have a specific immediate feedback system of greetings that enables them to communicate either sociability or

their 'characteristic independence' (52), with 'Hello-yes?', 'Hello-no' and so forth indicating everything from friendliness to '*Get away or I'll do that to you which you don't like*' (142). As such, one could say that overall, mutual respect, accountability and clear communication appear to ensure the freedom and safety of individuals in all three societies, within the free passage of their regular feedback networks; as Pamela Annas says of Mattapoisett, though I would argue that the same applies to Whileaway and Anarres, 'the possibilities of human freedom are located not so much within the individual characters as within the social structure and the relations between the individual and the social structure'.[504]

Nevertheless, these free exchanges and other society-regulating mechanisms can be described in terms of homeostasis, which we previously associated with control: for example, the infrastructure of Anarres is termed 'an intricate process of balance: that balance of diversity which is the characteristic of life, of natural and social ecology' (82); moreover, this balance is mirrored even in the signing-in of guests for meals, for example, which is directly described as one of the 'highly mechanised "homeostatic processes" beloved by the early settlers' (303). Similar equilibrium-regulating mechanisms apply to job assignments on Whileaway and Anarres, as we have seen, while moreover, the population is stabilised homeostatically in Russ and Piercy's utopias: on Whileaway, for example, the number of children born is voluntarily informed by population requirement feedback, while in Mattapoisett, the brooders ensure that communities can regulate their size at will and it is agreed that no child shall be born unless someone dies. However, the key difference to the traditional utopias here is that none of these processes are *coercive* and limiting of the freedom of individuals, which is so deeply enshrined in the free exchange of movement and other physical and immaterial feedback relations; the result is that all these feedback processes may, in turn, bring about true autopoiesis or the generation of life within the system itself, which we saw to be hindered through coercion in several of the traditional utopias.

This presence of life, then, is evident primarily in the sense of a *shared* existence as part of a social organism, as it is referred to on Anarres – an organism of which the utopian individuals form freely participating, rather than subordinated, autopoietic elements. Shevek, for example, describes a 'big domicile, two hundred rooms', as 'astir, alive quietly all round them; as their existence entered into its existence so did its existence enter into theirs, as part of a whole' (307). Moreover, this shared energy can be felt in the day-time city life of Abbenay, Anarres' largest settlement: 'the squares, the austere streets, the low buildings, the unwalled workyards, were charged with vitality and activity […] The activity going on in each place was fascinating, and mostly out in full view.' (84) Likewise, on her first visit to Mattapoisett, Connie is taken aback by the 'strong energy level' in the 'fooder', or communal dining hall, where 'people were arguing heatedly, laughing and telling jokes, and a child was singing loudly at the table nearest the door' (76); she notes that 'the pulse of the room was positive but a little overwhelming' (77). On Whileaway, meanwhile, the living energy of society mostly takes the

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[504] Pamela J. Annas, 'New Worlds, New Words: Androgyny in Feminist Science Fiction', p. 354.

shape of joie de vivre, of raucous laughter as a form of art appreciation, and of the general presence of,

> under it all, the incredible explosive energy, the gaiety of high intelligence, the obliquities of wit [...] that makes industrial areas into gardens and ha-has, that strews across a planet sceneries, [...] culs-de sac, comic nude statuary [...] and the best graffiti in this or any other world (54).

Indeed, all the feedback-based interactions of various scales that bring forth such living energy in these utopias can be likened to the complexity of exchange which sociologists Jane Jacobs and Henri Lefebvre saw as crucial to the functioning of cities as living, dynamic networks: Jacobs, for instance, praised the 'complex order' that emerges from the 'intricate ballet' of contacts on the sidewalks of busy city streets,[505] while Lefebvre saw such urban interactions as 'the greatest hope for a vital, liberatory everyday life'.[506]

Moreover, this life force can even be seen to transcend the human in these communities, in that a kinship with the non-human environment also informs their daily lived experience: on Whileaway, for example, the celebration of solstices, equinoxes, the flowering of trees, and so forth form a big part of shared lived experience (101-03), and in Mattapoisett, the 'domes-ticking of corn and wheat', 'the turning of the sun north and south' and so on are considered 'important events' that form the basis of 'tens and tens of holidays' (126). Likewise, we are told that on Anarres, several festivals, 'like the harvest-homes and the Feast of the Solstice', have 'risen spontaneously out of the rhythms of life on the planet' (194). In fact, both these utopian communities have a *Weltanschauung* informed by their place in nature: on Whileaway, 'there is no pebble, no tile, no excrement, that is not Tao' (99-100), while Luciente tells Connie that in Mattapoisett, 'we're part of a web of nature' (303), and adds that 'you might say our—you'd say religion?—ideas make us see ourselves as partners with water, air, birds, fish, trees' (132). On Anarres, any such universal cosmology is less apparent, perhaps due to the harsh conditions of the desert landscape, but Shevek's partner Takver certainly demonstrates this sense of kinship and shared identity in how she engages with the world: she enjoys marine biology 'because it's so complex, a real web, interwoven' (155), and Shevek notes that

> Her concern with landscape and living creatures was passionate. This concern, feebly called 'love of nature', seemed to Shevek to be something much broader than love. [...] It was strange to see Takver take a leaf into her hand, or even a rock. She became an extension of it: it of her. (154)

Indeed, there is also an indication that this identification with the biosphere goes beyond Takver's personal interests: the same sense of being part of a 'web of life' is suggested subtly in the fact that the old Odonian symbol for the anarchists of Anarres is a green 'circle of life', which adorns all official publications, and which also recalls that one of Odo's main works is called *The Social Organism* (86).

Once again, these rhythms and the embracing of life within uncoerced self-balancing feedback, then, appear to render these utopian societies genuinely and sustainably autopoietic,

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[505] Jane Jacobs, *The Death and Life of Great American Cities,* p. 50.
[506] Mary McLeod, 'Henri Lefebvre's Critique of Everyday Life: An Introduction', p. 24.

in that there is no evident restriction or end point to their self-regulatory processes which appear to signify living energy. Indeed, as Capra notes, the chemist Manfred Eigen proposed in the 1970s that even the very 'origin of life on Earth may have been the result of a process of progressive organization [...] involving "hypercycles" of multiple feedback loops';[507] in a similar way, one might say that the multiple feedback loops of Whileaway, Mattapoisett and Anarres come together to ultimately collectively generate a living and sustainable utopia, unlike their predecessors. Moreover, for life to arise, these systems must arguably be fundamentally open to change, despite their foundations in balancing homeostatic feedback – it is this openness that ensures that exploitative power structures cannot (re-)assert themselves. As Moylan puts it in ideological terms,

> The tendency of any system, dominant or oppositional, ruling or revolutionary, to enclose autonomy and establish its own structural hegemony [means that] the struggle for a new society must remain *radically open* both in the course of the oppositional struggle and in the creation of the new society itself;[508]

otherwise, it ends up 'serving the instrumentalization of desire carried on by the present structures of power'.[509] And indeed, life itself has historically been associated with *open* systems. For instance, in one origin strand for the study of 'complexity theory', the Austrian biologist Ludwig von Bertalanffy was inspired by Cannon and others, as mentioned in the introduction, to formulate a new theory of open systems (later expanded into a theory of living systems) termed General Systems Theory (GST). Moving on from the timelessness implied in a mechanistic Newtonian image of the universe, and attempting to reconcile the irreversible loss of energy in the 'arrow of time' of thermodynamics with the conversely *increasing* organisation identified by Darwinian evolution in biological systems, Bertalanffy at least countered the presence of thermodynamic entropy in closed systems with what Capra terms the 'crucial first step': the demonstration that living organisms are not in fact closed but open systems.[510] Bertalanffy argued that due to their 'need to feed on a continual flux of matter and energy' from their environment to remain alive, living organisms cannot in fact be described in the terms of classical thermodynamics:

> The organism is not a static system closed to the outside and always containing the identical components; it is an open system in a (quasi-) steady state [...] in which material continually enters from, and leaves into, the outside environment.[511]

This living openness, then, is expressed in the utopian societies of Russ, Piercy and Le Guin in that the feedback processes described above as underlying and generating communal life are subject to constant external change and revision: regarding the rituals of Mattapoisett, for example, Luciente tells Connie 'we change them, we're all the time changing them!' (124) while at another point she declares more generally 'we're always changing things around. As they say, what isn't living dies...' (71) Likewise, Shevek reasserts the importance of openness to

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[507] Capra, p. 92.
[508] Moylan, p. 26.
[509] Moylan, p. 27 (italics mine).
[510] Capra, p. 48.
[511] Ludwig von Bertalanffy, *General System Theory*, as quoted in Capra, *The Web of Life,* p. 48.

change through diversity of opinion in a council meeting, where he grounds it in the anarchist resistance to top-down control: 'If we must all agree [...] we are no better than a machine. The duty of the individual is to accept *no* rule [...] Only if he does so will the society live, and change, and adapt, and survive' (295). Indeed, the very fact that Shevek, as a regular utopian citizen, is allowed to state his opinion in this way in a public forum, is evidence of his society's openness; the same is true of Mattapoisett and Whileaway. In addition, there are ongoing debates on the basic shape of society in both the latter communities: for example, regarding the induction principle according to whose recent discovery Whileawayan industry is being reorganised (56), and regarding the appropriately named 'shaping' technology of Mattapoisett (246), which advocates for genetic manipulation of plants and is under intense regular debate in council meetings during the time of Connie's visits. The result of such openness to change and debate even within the mechanisms of negative feedback relations, then, are societies in which growth and change form a basic feature of everyday life: as Connie notes in Mattapoisett, 'growth seemed to swarm over the land' (27), which might be taken both literally and metaphorically – despite the fact, indeed, that the bucolic pastoral scene Connie is describing is nothing like the evidently technology-driven utopia she had expected. As with everything else, such progress here takes the shape that communal feedback allows it to, as in the various technological innovations that are not evident here at first sight.

In openness to the environment but without internal control, these worlds therefore create utopias that take whatever shape best suits the community, without preconception, and ones that indeed *have* no final shape, given their openness to further change in the future. In their self-generating complexity without premeditation, these utopias thus evoke Lefebvre's description of dynamic communities, such as his hometown of Navarrenx in France, as comparable to seashells that are shaped by and react to their inhabitants over the years: Lefebvre observed that 'a seashell is the product of a living creature that's slowly "secreted a structure",' and he suggested that in turn, Navarrenx's 'shell' embodied the forms and actions of a thousand-year-old community, 'shaping its shell, building and rebuilding it, modifying it again and again and again according to its needs'.[512] Likewise, these utopian communities both shape their environments and are shaped by them through negative through uncoerced feedback; resulting from this are open, organic entities in ever-shifting harmony with their surroundings, as their survival as living systems is predicated on this constant flux.

Positive Feedback and Russ, Piercy and Le Guin's Utopias as Complex Adaptive Systems:

Having thus determined how the homeostatically regulatory feedback mechanisms of Russ, Piercy and Le Guin's utopias nevertheless bring about living utopian systems through their functioning within open structures, it should now be noted that their capacity for growth and development is furthermore enabled by the fact that these systems do not, indeed, only feature stabilising and self-*maintaining* negative feedback – which may turn repressive when co-opted

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[512] Lefebvre, 'Notes on the New Town' in *Introduction to Modernity*, p. 11.

by dominant forces – but self-*reinforcing* positive feedback. This variety of feedback amplifies tendencies and is ultimately responsible for a particular kind of growth and change within open systems, and it is due to this feature that dynamism can be seen as *intrinsic* to the complexity chronotope of these novels: positive feedback allows open systems to function at a state 'far from equilibrium', or at the state far from the thermal equilibrium of closed systems, which is 'characterised by continual growth and change'.[513] Bertalanffy termed this state *Fliessgleichgewicht* ('flowing balance'), but in the work of complexity theorists such as Mark C. Taylor, Paul Cilliers and Ilya Prigogine, which was partly inspired by Bertalanffy, it is usually referred to as either 'far from equilibrium' or 'at the edge of chaos'. Complexity theorists study 'complex *adaptive* systems', and previous references to Russ, Piercy and Le Guin's utopias as 'complex systems' should now be taken to have been meant in this sense; in fact, I suggest that both these utopian communities themselves and the narrative structures of Russ, Piercy and Le Guin's utopias can be read as examples of complex adaptive systems, with their unique properties of self-organising sustainability. Complex adaptive systems are, indeed, particularly generative of life in that they are *always* open and in a state of constant adaptation, both internally and in relation to their environment; they thereby counter Le Guin's unease with cybernetics yet embrace of 'nature', in that, once again, their mechanisms can be seen to characterise both the organisation of organic entities – such as slime mould, ant colonies and the human brain – as well as man-made structures such as cities, and can even be applied to the organisation of the universe itself. Unlike merely *complicated* processes, which consist of large numbers of components that can be fully described, these systems, whose elements are capable of taking on a variety of roles as needed, are *complex* in that, as Cilliers writes, 'they are constituted by such intricate sets of non-linear relationships and feedback loops that only certain aspects of them can be analysed at a time'.[514] Crucially, moreover, they are *always dynamic* precisely because these relationships are not fixed, but shift and change in a drive towards self-organisation;[515] since they must cope with unpredictable changes in their environment, it is impossible for such systems to stagnate. In addition, despite also being described as 'at the edge of chaos', complex adaptive systems differ from the nonlinear systems that are the subject of 'chaos theory': the latter, though demonstrating 'unstable aperiodic behaviour', are 'deterministic nonlinear dynamical systems' and can thus theoretically be given a complete description, whereas complex adaptive systems maintain their dynamic element of unpredictability by only functioning in a poised state of indeterminacy, this location 'far from equilibrium'.[516] Taylor writes that

> according to complexity theorists, all significant change takes place between too much and too little order. When there is too much order, systems are frozen and cannot change, and when there is too little order, systems disintegrate and can no longer function.[517]

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[513] Capra, p. 48.
[514] Paul Cilliers, *Complexity and Postmodernism*, p. 3.
[515] See Cilliers, pp. iix – ix
[516] See Stephen Kellert, *In the Wake of Chaos.*
[517] Taylor, p. 14.

It is in this way that, in Cilliers' words, 'a self-organising system will try to balance itself at a critical point between rigid order and chaos', which he personally also refers to as the 'point of criticality'.[518] Such a state is achieved when the complex system, 'constituted by a large number of simple units forming nodes in a network with a high level of non-linear interconnection',[519] changes its behaviour in a way that is 'not determined primarily by the properties of individual components of the system, but is the result of complex patterns of interaction': the system reacts to information from the external world by 'alter[ing] the values of the weights in the network'[520] and strengthening the association between elements through frequent use.[521] This, in turn, enforces significant patterns of activity within the network, and tends to happen through a focus on 'attractors', values towards which a system tends to evolve.[522]

These 'points of criticality', then, 'far from equilibrium or 'at the edge of chaos', are not specific instances, but states of being at which change can happen, unlike the state of equilibrium that characterises purely homeostatic systems. They can thus be found at instances in these societies in which true growth is enabled through the continuous potential for a genuine shift: for example, during debates at which consensus may produce resolutions that have the potential to change the status quo; in the state of continued growth and education that the people of Mattapoisett inhabit while 'always working, always studying'; in the complex greetings and duels of Whileaway, which represent shorter instances of a possibly life-changing nature; and in the continued struggle of the Anarresti to resist internal calcification in favour of continuing to 'live, and change, and adapt, and survive' (295). Annas' structure-based 'possibilities of human freedom' thus apply here once more, not in terms of safety and security in interactions, but through the structural promise of continued change, evolution, and adaptation – both communally and individually. In fact, freedom 'far from equilibrium' can in itself be seen as a form of *organisation* that goes beyond the self-regulation of negative feedback: as Toffler notes, 'order and organization can actually emerge "spontaneously" out of disorder and chaos through a process of "self-organisation",'[523] which arises in far-from-equilibrium systems in that 'here non-linear relationships prevail'.[524] 'In this state', he writes, 'systems do strange things. They become inordinately sensitive to external influences. Small inputs yield huge, startling effects. The entire system may reorganise itself in ways that strike us as bizarre'.[525] Indeed, Capra notes that such non-linearity in the interconnectedness of components is 'common to all models' of far-from-equilibrium systems and underlies the feedback relations they exhibit.[526]

This non-linear self-organisation, then, is particularly evident in the presence of *unexpected* developments, as previously mentioned with regard to the societies' self-shaping in the manner of Lefebvre's seashell. For example, the replacement of live birth with the brooder

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[518] Cilliers, p. 97.
[519] Cilliers, p. 91.
[520] Cilliers, p. 93.
[521] Cilliers, p. 93.
[522] Cilliers, p. 93.
[523] Alvin Toffler, 'Foreword: Science and Change' in Ilya Prigogine and Isabelle Stengers, *Order out of Chaos*, p. xv.
[524] Toffler, p. xvi.
[525] Toffler, p. xvi.
[526] Capra, p. 85.

meant the women of Mattapoisett giving up 'the only power [they] ever had, in return for no more power for anyone'; after all, as Luciente explains, 'as long as we were biologically enchained we'd never be equal [...] so we all became mothers' (110). This would undoubtedly have initially encountered resistance, and indeed Connie is aghast when she hears about it – initially calling Mattapoisett a 'ridiculous Podunk future, when babies were born from machines' (109). However, the enabling of women's full participation in society drove this innovation, and it was indeed gained; likewise, the induction helmet of Whileaway was most likely unexpected but revolutionised workflow, enabling Whileawayans to 'run routine machinery, dig people out of landslides, oversee food factories' (51) and then leave early to spend time with their families. Moreover, Shevek's innovation of the General Temporal Principle, unexpected in its final form even by its inventor, goes on to bring about the instantaneous communication device of the 'ansible', which stands to radically alter the relations between the nine Known Worlds; it is not the product of *communal* feedback relations, of course, but made possible by a fundamental openness to change facilitating nonlinearity – for example, in that Shevek's most influential teachers, Mitis and Gvarab, were not held back by sexist power structures.

Indeed, these unexpected developments can be described as occurring at specific *points* within the more extended state of being far from equilibrium. In his work on nonlinear systems in the 1960s, which he termed 'dissipative structures',[527] Prigogine described how the fluctuations in such systems are amplified by positive feedback loops so as to suddenly bring about new forms of organisation: in Toffler's words, 'at times, a single fluctuation or a combination of them may become so powerful, as a result of positive feedback, that it shatters the preexisting organization'.[528] This 'revolutionary moment', then, is called a 'singular moment' or 'bifurcation point' by Prigogine and Stengers,[529] though it is also sometimes referred to as a 'tipping point', defined as 'signifying a critical point after which the system shifts radically and potentially irreversibly into a different equilibrium state'.[530]

Since bifurcation points are *enabled* by states far from equilibrium, it follows that the regulatory everyday feedback relations of these communities – consisting, for example, in consensus-based government, freely performed work, unforced family planning, and autonomy-based public interaction – can be seen as the mechanisms that ultimately make transformative utopian change possible. Indeed, Lefebvre also speaks, in his work on 'rhythmanalysis', of everyday rhythms as potentially constituting 'multiple tensions that will generate an unpredictable transformation', and 'a concrete reality open to the future'.[531] Likewise, such nonlinear innovations as the brooders, induction helmets and ansible, or even the 'kenner' of Mattapoisett which functions as a 'memory annex' (58), are all fundamentally transformative changes which in turn have the potential to create new forms of order. Moreover, they can be seen as driven by the 'attractors' of feminist utopian principles such as social justice and gender

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[527] As Toffler notes, 'such physical or chemical structures are termed dissipative because, compared with the simpler structures they replace, they require more energy to sustain them' (Toffler, p. xv).
[528] Toffler, p. xv.
[529] Toffler, p. xv.
[530] Zhang, Ke, John Dearing and Jason Sadler, 'Complex Socio-Ecological Systems: Linking Theory and Reality'.
[531] McLeod, p. 16; see also Henri Lefebvre, *Rhythmanalysis: Space, Time and Everyday Life*.

equality, the demand for which has become amplified within these systems; and indeed, these innovations also represent the technical connections between utopia and other worlds such as our own by which these principles may be further amplified.

In addition, one can identify transformative bifurcation points in the very cruxes through which the utopian societies themselves are brought about in the formative history of these novels: they (except for Anarres) are literally said to have emerged from the 'multiple tensions' of the second-wave feminist struggle, which in its amplified fluctuations created the new form of order represented by the utopian society, and which still sustains it with its principles. Indeed, Bammer writes that 'the estranged look of the other is also potentially the most utopian [...] for it is they for whom Otherness, in concrete terms, means discrimination and disempowerment, who are likely to express the principle of hope with the greatest sense of urgency'.[532] Likewise, Leo Caves et al. note that periods of instability and crisis are historically 'critical for the emergence of new social orders'.[533] Indeed, such radical processes can, once again, be likened to those of living organisms: Caves et al. quote Crane Brinton's comparison of revolution to a fever, associated with different symptoms such as 'the breakdown of government control, the emergence of radicals, etc', but they also quote his claim that revolution 'in itself is a good thing [...] for the organism that survives it [...] The revolution destroys wicked people and harmful and useless institutions'.[534] It is, then, the pre-existing order of the capitalist heteropatriarchy that these critical utopias wish to shatter through the 'fever' of utopian revolution, and they seek to replace it with a living organism of equity-based adaptive complexity, whose functioning far from equilibrium ensures that no new social rigidity can take the place of the former closed power structure.

In addition, utopia can be seen to emerge within the complexity of what Moylan terms the 'discrete register' of these texts: the fabula and syuzhet (or story and plot, as previously mentioned in the introduction), in addition to the 'iconic register' of the utopian societies themselves, which we have already discussed. Moylan notes that this register is just as significant to the overall utopian literary construct, as the utopian text can be seen as 'a fabric of iconic images of an alternative society through which the thread of the discrete travelogue of the visitor is stitched', representing the 'deep ideological engagement which relates the entire text to history itself'.[535] In these novels, one might then say, the oscillating connections between utopia, zero world and other possible (or real) worlds within the multiverse (or universe), traversed by zero world visitors and utopians, are also manifested in the rhythmic structures of the chapters that depict these travels. In *The Female Man,* for example, the dynamism of the 'twisted braid' of spatiotemporal possibility is represented by short bursts of texts including brief descriptions of Whileaway, outbursts condemning present sexism, and cross-temporal tales of the J's adventures on each other's worlds, while in *Woman*, Connie and Luciente rapidly

[532] Bammer, p. 4.

[533] Leo Caves, Ana Teixeira de Melo, Susan Stepney, and Emma Uprichard, 'Time Will Tell: Narrative Expressions of Time in a Complex World' in Richard Walsh and Susan Stepney, eds., *Narrating Complexity*, p. 280.

[534] Caves et al, p. 280.

[535] Moylan, p. 36.

'pull' each other's consciousnesses back and forth between Mattapoisett and Connie's nightmarish mental asylum. *The Dispossessed* follows a less frenetic pace in its focus on an established utopia searching for its roots, described in alternating chapters that feature adult Shevek's journey from Anarres to Urras and back again as well as the formative childhood experiences that led him there; however, this two-part journey is still complex, as it leads simultaneously '*away* from the utopian locus' and back towards it in ideological terms, as Somay notes.[536] As such, all three utopias also feature utopia-generating rhythms in their discrete registers, though those of Russ and Le Guin are more pronounced than Piercy's in their fragmentation and abrupt nature: indeed, Bartkowski describes the 'twisted braid' of Russ's novel as displaying 'the knotting together of spatial and temporal frames by emphasizing a structure that is disruptive to the reader and reminds us that utopian fiction with its otherworldly setting is deliberately estranging'.[537]

However, far from being 'disruptive' in a negative or arbitrary sense, it is from this very turmoil, and from the gentler oscillations of Le Guin's text (following a less gentle revolutionary period), that the literally 'otherworldly' alternatives to our zero world are born: these frictions and tensions are the 'cruxes' that bring utopia about on the discrete register, just as they do on the iconic one, with utopia itself as the narrative attractor and emergent organisational model. As such, I would suggest that these dynamically intersecting spatiotemporal movements are in fact not 'knotted' at all, as Bartkowski says – given that the term implies stasis – but engaged in a high-frequency dynamic exchange of information that has the potential to catalyse a radical new social system. Indeed, Bakhtin's statement that the chronotope is 'the place where the knots of narrative are *tied and untied*' might be more fitting here, applied particularly to the complexity chronotope: as Bakhtin writes, to these knots truly 'belongs the meaning that shapes narrative'.[538] While the representational text of the traditional utopia is 'broken open' by the critical utopias, in Moylan's words, complexity theory gives meaning to this – locating the crux-based energy of bifurcation points in these breaks, as well as understanding the resulting structure not as fragments or knots, but as a new form of self-generating and -regenerating utopian order.[539]

This new order, then, is ultimately brought about within the narrative through the enlistment of individuals in the fight for utopia; the specifics of this will be explored later, but suffice it to say for now that the discovery of utopian possibilities radicalises these individuals to the extent that they become primed agents for utopia-generating action in themselves by the end of their storylines – or at least one individual in each text does. As such, as Moylan writes,

> Readers once again find a human subject in action, now no longer an isolated individual monad stuck in one social system but rather a part of the human collective in a time and place of deep historical change. The concerns of this revived, active subject are centered

[536] Somay, p. 34.
[537] Bartkowski, p. 59.
[538] Bakhtin, p. 22 (italics mine).
[539] Bakhtin, p. 22 (italics mine).

around the ideologeme of the strategy and tactics of revolutionary change at both the micro/personal and macro/societal levels.[540]

Just as in the original emergence of the utopian societies, moreover, it is the energy of the crux times born of injustice, the frustrated life force of social justice, that thus generates utopia on the discrete register: as Connie says, 'The anger of the weak never goes away, it just gets a little moldy […] growing stronger and more interesting' (50). Utopia, then, represents an attractor or telos within the narrative towards which such revolutionary energy may be directed; as Bammer writes, 'even anger, of course, has a utopian dimension'.[541] In Shevek's journey, which is less driven by feminist frustrations, anger towards injustice also forms a similar impetus back towards Odonian ethics: for example, those moral sentiments voiced by Shevek's friend Bedap, and those expressed by the rebelling working classes of Anarres. Where Connie and possibly some of the Js (particularly Jeannine) are thus driven towards violent utopia-generating action, Shevek is driven to return to utopia and help reform it.

As such, all three novels, on the discrete register as well as the iconic, carry the potential for frustrated life force to be transformed into the birth of a *living* utopia without the oppression that brought about this frustration. The revolutionary energy of the crux times is transformed through complex narrative processes into the vibrant potential energy of utopia, evident in the novels' growing awareness of their 'revived, active subject[s]', which mirrors the autopoietic energy of the utopian societies themselves – an energy that may finally channel itself into everyday passion and creativity rather than sheer survival in an oppressive system. Indeed, the utopian societies' growth-generating position far from equilibrium can in itself be associated with life itself in these novels: as Capra and others claim, 'living organisms continually maintain themselves in a state far from equilibrium, *which is the state of life*'.[542] Toffler even suggests that in the apparent ubiquity of life-generating complexity, 'most of reality, instead of being orderly, stable, and equilibrial, is seething and bubbling with change, disorder, and process'.[543]

And yet, on the narrative level, it is only the *possibility* of utopia that is given life here: after all, as Somay says, in all three novels utopia is still 'struggling to be born'.[544] The texts represent a 'concrete reality open to the future', as in Lefebvre's rhythmanalysis, but for now, the textual crux times themselves act merely as 'brooders' that mix not genetic information but the seeds of possible futures, ready to germinate given the right conditions; these possibilities shift and spark against each other like the 'sparks and bumps' (224) of the wormings, forming points of criticality replete with the potential of utopian life.[545] Utopia is thus never granted exclusive narrative dominance, up until the narrative crux or tipping point at which utopia goes from being one alternative among many to the most likely outcome of the fabula – a point which, of course, is never quite reached within the narrative itself. And even then, utopia might look very different to how the reader has glimpsed it through fragments. Just as with all crux-based

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[540] Moylan, p. 44.
[541] Bammer, p. 56.
[542] Capra, p. 176 (italics mine).
[543] Toffler, p. xv.
[544] Somay, p. 28.
[545] McLeod, p. 16.

change, anything might happen, and that in turn might again change everything else in the unexpected style of nonlinear emergence; as Slavoj Žižek says, 'when something truly New emerges, we cannot go on as if it had not happened, since the very fact of this New changes all the co-ordinates'.[546]

Russ, Piercy and Le Guin's Utopias as Feminist and Science-Fictional Utopian Thought Experiments:

It is through the inherent and life-giving dynamism of open and non-linear complex adaptive systems, then, both on the iconic and discrete registers, that homeostatic rigidification and thus also totalitarianism are avoided in Russ, Piercy and Le Guin's critical utopian models. Such stagnancy is incompatible with functioning far from equilibrium; instead, all three societies appear to be constantly undergoing a 'permanent revolution' (274) such as that underlying Odonian principles, and like far-from equilibrium life itself, 'seething and bubbling with change, disorder, and process'.[547] Moreover, despite the apparent timelessness of such self-perpetuating patterns, this structure is further linked to the second-wave feminism of the novels' emergence, in that beyond here enabling safe movement and equality-furthering technology such as that of the brooder, complexity itself functions through *non-hierarchical* exchange: as Cilliers writes, 'in a complex system, control does not emanate from a single source. Should this happen, the system would become degenerate, lose its adaptability and survive only as long as the environment remains stable'.[548] Moreover, Maturana suggests that to avoid totalitarianism through the subordination of individuals, a community must be

> necessarily a non-hierarchical society for which all relations of order are constitutively transitory and circumstantial to the creation of relations that continuously negate the institutionalisation of human abuse.[549]

As such, the non-hierarchical governance and largely free choice of work in other non-hierarchical institutions are crucial in these utopias, as well as their basic freedom from power structures imposed by sex or race: it makes them able to function freely and sustainably, without risk of further hierarchical rigidification. In fact, Maturana adds that 'such a society is in its essence an anarchist society', based purely on 'social freedom and mutual respect';[550] and indeed, Anarres is of course explicitly anarchist, while McKenna reads Mattapoisett and Whileaway as such, as well.[551] In all three societies, in any case, power appears to exist in a constantly shifting set of force relations, as suggested by Foucault. Foucault has in fact been criticised by feminist writers for failing to account for certain groups, such as women, being affected differently by shifting force relations;[552] however, such an imbalance is addressed if one thinks in terms of 'power-with' rather than 'power-over',[553] as Mary Parker Follett does, or if

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[546] Thompson, p. 44
[547] Toffler, p. xv.
[548] Cilliers, p. 108
[549] Maturana and Varela, p. 40.
[550] Maturana and Varela, p. 40.
[551] See Mc Kenna.
[552] See, for example, Nancy Fraser in *Unruly Practices: Power, Discourse and Gender in Contemporary Social Theory.*
[553] See 'Power' in Mary Parker Follett, *Dynamic Administration.*

one generally adopts a collective model of power in place of one of command and obedience, as Hannah Arendt does in *On Violence*. Such a model, then, in which agency is moreover grounded in a 'network of connection' rather than a rigid hierarchical framework, as Carol Gilligan suggests, is embodied by these complex critical utopias through their flexibility of roles within the system, which hold power as merely fluid and provisional; moreover, it is again enabled by their non-hierarchical nature, in that power accumulation and rigidification is thus prevented.[554]

Indeed, such co-operative models of power relations can in themselves be seen as products of *social evolution* – that is, the 'evolution' of an entire society, of the sort the fin-de-siècle utopias fell short of – in that they represent the social version of the collective symbiosis that Lynn Margulis deems more powerful than other evolutionary forces. In the words of Margulis and Sagan, 'life did not take over the globe by combat, but by networking' – that is, by cooperation and mutual dependence between living organisms.[555] Likewise, a complex social system founded on and sustained by cooperative, feedback-based development represents what Suvin terms a historical movement towards '*humanistic collectivism*'.[556] Hereby, then, one may speak of the 'ethics of complexity': Frederick Turner, for example, argues that moral virtues can be seen as attractors in complex systems, while Heesoon Bai and Hartley Banack make the case that the relational ontology of complexity theory facilitates a special kind of 'participatory ethics'.[557] Cilliers also notes that the 'tooth-and-claw existence' implied by Social Darwinism can be countered with 'another understanding of values which is not only compatible with a theory of self-organisation, but which can be viewed as a result of it': in this view, 'values are understood as emergent properties of the social system'.[558] This understanding results both from the fact that 'distributed, decentralised control makes a system more flexible, and therefore increases its survivability', and from the observation that

> The modelling of evolutionary (or self-organising) systems has shown that purely selfish behaviour by members of a system is detrimental not only to the system, but ultimately also to the particular individuals. Altruistic behaviour is therefore not a 'value' adopted by 'nice' individuals; it is a characteristic necessary for the survival and flourishing of a system (see Axelrod 1984).[559]

Cilliers himself is 'very hesitant' to use the word 'ethics' here and draw moral conclusions, but within the critical utopias themselves, the inference is freely made: for example, in their holistic cosmology, or the fact that Janet is sent to shoot an old woman on Mattapoisett because to willingly exclude oneself from the social network is a crime punishable by death, and the woman has sent her a note saying 'the usual thing: haha, on you, you do not exist, go away' (143). On Anarres, meanwhile, the 'strong ethical significance' of the social organism is evident in the Anarresti's efforts to practice mutual aid even in the face of adversity, such as when Shevek is

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[554] Carol Gilligan, *In Another Voice: Psychological Theory and Women's Development.*
[555] See Lynn Margulis and Dorion Sagan, *Microcosmos: Four Billion Years of Evolution from our Microbial Ancestors.*
[556] Suvin, *Metamorphoses,* pp. 91-2.
[557] See Frederick Turner, 'Values and Strange Attractors', also Heesoon Bai and Hartley Banack, '"To See a World in a Grain of Sand": Complexity Ethics and Moral Education'.
[558] Cilliers, p. 111.
[559] Cilliers, p. 111.

stranded with others on a train during a famine; moreover, he directly relates Odonian anarchism to co-operative evolution: when Vea challenges him on Urras with the assertion 'we follow only one law, the law of human evolution', according to which 'the strongest survives', he answers

> Yes; and the strongest, in the existence of any social species, are those who are most social. In human terms, most ethical. You see, we have neither prey nor enemy, on Anarres. We have only one another. There is no strength to be gained from hurting one another. Only weakness. (183)

Indeed, Peter Kropotkin himself, upon whose anarchist principles of mutual aid Anarres is predicated,[560] advocated for the role that altruism plays in the evolutionary process of social organisms: he stated that 'in the ethical progress of man, mutual support not mutual struggle— has had the leading part', and that 'in its wide extension, even at the present time, we also see the best guarantee of a still loftier evolution of our race'.[561] As such, then, all three societies ground their ethics in the co-operative principles of shared power relations, made possible through the flux of complexity, which again forms a collective evolution not achieved by the traditional utopias; the individual thus functions as a moral entity with irreducible value, yet also as a fundamental component of the community of which they form a part – and whose functioning in itself is only possible through equality-based cooperation and solidarity.

Moreover, it is once again the *spatiotemporal* setting of these novels that illustrates egalitarian utopianism: just as the principles of altruism inform their sustainable co-operation on an egalitarian basis, their existence as fully-illustrated alternatives within a multiverse of possibilities highlights both the *contingency* of such a utopian social evolution as well as the possible *reality* that such a development might bring about in the zero world – particularly in terms of co-operatively led social progress for the marginalised groups who need it most. Indeed, as previously discussed in the introduction, the four-dimensional Minkowskian spacetime underlying the larger complex system of these connected worlds makes these options tangible and *relevant* within the larger system of historical possibility, just as the ethics of complexity showcase the relevance of each individual for the functioning of the whole. This four-dimensional reality, then, is expressed for example in that when Janet first visits earth, her fellow teleportation experimenters are reduced to violent laughter, 'for it was not a dream' (5), and in that she breaks the arm of a man at a party in New York for infantilising her; moreover, utopian Luciente is given substance when Connie's niece, Dolly, overhears the two women speaking on Luciente's first visit ('I thought I heard voices', 4), and when both women note that Luciente has left behind a warm chair. Anarres' reality, meanwhile, lies in its 'actual' existence within the nine Known Worlds, but also especially in Shevek's journey to Urras, as well as in the eventual ansible-facilitated closer connection between worlds, including Terra, which ultimately renders Anarres a political model for other worlds. As such, these novels are not merely 'dreams of freedom',[562] in Ferns' terms, nor do they in fact 'reject utopia as a blueprint while preserving it

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[560] See Le Guin, 'Introduction' in *Ursula K. Le Guin: The Hainish Novels & Stories,* vol. 1.
[561] Peter Kropotkin, *Mutual Aid: A Factor in Evolution*, pp. 189 – 191.
[562] Ferns, p. 15.

as a dream',[563] as Moylan suggests: instead, it is in the perceived reality of possible change within a larger spatiotemporal complex system, facilitated by four-dimensionality, that the 'lateral possibilities' of utopia can be expressed, as explored in the introduction. In fact, Bammer notes that the present in which the four Js in Russ's novel meet 'opens on to a fourth dimension in which past, present and future converge',[564] while Janet describes love, one of the fundamental human connections, as a 'fourth-dimensional curve' (70). Lastly, Shevek locates four-dimensionality in the ethical act of the promise: 'to break a promise is to deny the reality of the past; therefore it is to deny the hope of a real future' (187).

Ultimately, then, the reader is also invited to take the consequences of individual and communal actions seriously in terms of how they might shape life in the future, and to embrace unexpected change resulting from complex interactions: as Shevek discovers, 'You can go home again [...] so long as you understand that home is a place you have never been' (48). The complexity chronotope thus combines the rhythms of cyclicality with crux-generated progress, amplifying utopian possibility, and brings together personal and political, yin and yang, maintenance and growth. Moreover, it arguably provides a dynamic synthesis of the pre-existing Bakhtinian chronotopes of 'on the road' and the 'parlour', the former of which stresses forward movement and the latter of which centralises the making of connections; within utopian complexity, both interconnectivity and crux-based change and growth are required to bring about a better world.[565]

It is this connection, too, that allows these novels to be rigorous and successful science-fictional thought experiments: rigorous in that their utopianism as communal eudaimonia is ensured, and successful in that social-justice-driven nova are extrapolated in four-dimensional spacetime and embedded directly within sustainable systems directly extrapolated from the zero world. As such, then, utopia is here no longer merely Bloch's 'real-possible',[566] but a *real possibility* in many ways, given the complex depiction of 'time tak[ing] on flesh' in the alternate realities of these worlds.[567] Moreover, what Bloch calls the 'darkness of the lived moment' gives way not only to 'glimpses' of utopia through 'patchy fog', as Peter Thompson describes Bloch's Not-yet,[568] but to the clear light of real-life possibility, an 'alternative on the same ontological level as the author's empirical reality',[569] as Suvin suggests. It is what Shevek sees on his journey from Anarres, when 'the light of his world filled his empty hands' (77); the reader, too, must thus come to utopia with an open mind, so as to appreciate without preconceptions the complex and radical possibilities inherent in the complexity chronotope, presenting its multi-layered refutation of the 'death of utopia'.

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[563] Moylan, p. 10.
[564] Bammer, p. 94.
[565] See Bakhtin.
[566] See Bloch, pp. 258 – 288.
[567] Bakhtin, p. 15.
[568] Peter Thompson, 'What is Concrete about Bloch's "Concrete Utopia"?' in Michael Hviid Jacobsen and Keith Tester, eds., *Utopia: Social Theory and the Future*, p. 37.
[569] Suvin, p. 88.

The remainder of this chapter will examine in more detail the distinct shape the complexity chronotope takes in Russ, Piercy and Le Guin's novels on the discrete level, particularly in relation to the journeys of their protagonists. After all, unlike their traditional predecessors, the critical utopias do not only possess a fleshed-out plot that goes beyond the visitor's linear journey to the utopian locus and perhaps back again, but they also engage with the particular potentialities of complexity on the discrete level, as mentioned above and described in the following in a more in-depth fashion.

Multiplicity and Reality in Joanna Russ's *The Female Man:*

In Russ's *The Female Man*, to begin with, the fragmentation of narrative rhythms mentioned above is particularly notable: again, Bartkowski describes these tensions themselves as a 'twisted braid' to mirror the novel's description of spatiotemporal alternate possibility, and though I have noted that it does not quite seem appropriate to refer to these rhythms as 'disruptive' to the reader, it is nevertheless notable that they define the text so entirely;[570] to this, I would suggest that it is perhaps the very *multiplicity* of these declarative and observational fragments that forms the feminist utopian nexus itself within this text, in that it showcases a full range of experiences and viewpoints that can never fully be reduced to a singular perspective. Again, Jeannine, Joanna, Janet and Jael, whom Bartkowski describes above as 'more than themselves and *parts* of each other',[571] are presented as versions of the same woman in alternate timelines, but the main difference between them is that they are, as Vint notes, 'differentiated by distinct regimes of gender conditioning', which means that the novel thus 'interrogates gender ideology as a technology that damages women's lives'.[572] Jeannine, after all, is trapped in a reality that is still dominated by gender norms from around the Second World War (which, again, never happened in this timeline), despite the fact that it is now 1969; Joanna embodies the voice of Russ herself, deriding our present-day social structure in her rants about this 1969 zero world; Janet, visiting our world from Whileaway, is so disruptive by refusing to act submissively that she stands out like the man's sore thumb that Joanna later shuts a door on; and Jael sees the war of the sexes that she is viscerally engaged with as the only option to ever overcome gender inequality for good.

The fast-paced rhythm of these intermingled viewpoints, punctuated at times by what could almost be called snippets of poetry, thus makes up almost the entirety of the text in a way that showcases the deeply felt frustrations of these women – juxtaposed only with the images of Whileaway that give them hope. In fact, Ferns suggests that the novel is therefore 'clearly far more interested' in 'questions of sexual politics' than in devoting itself to a more thorough and unbroken depiction of utopia;[573] indeed, he claims that the 'fertile and life-giving tension in so

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[570] Bartkowski, p. 59.
[571] Bartkowski, p. 59.
[572] Vint, p. 117.
[573] Ferns, p. 205.

many earlier fictions' thus gives way to 'what is more in the nature of a thought-experiment, where utopia becomes primarily a device for defamiliarizing and calling into question the assumptions which we bring to reality'.[574] However, this assessment arguably misses the basic point of this defamiliarisation: of course this utopian model represents a thought experiment – how could it not when dealing with notions of a feminist utopia that is by definition not grounded in reality? – and it is therefore also the 'sexual politics' of the text that *make up* the entirety of this experiment: it is the different personal dynamics of the J's, informed by their everyday lived experiences as women within particular (and mostly repressive) social structures, that generate the clearly visible 'fertile and life-giving tensions' out of which utopia might finally emerge. These tensions, moreover, function through the self-amplifying energies of feedback relations between the Js, which we have already identified as eventually setting the stage for the 'crux' that might finally lead to utopia beyond the text; for the time being, though, the narrative is all about these energies, and how they shape and spark one another while showcasing and even satirising different reactive approaches to a life lived without the possibility of full self-determination.

For example, Jeannine can be seen as stuck without means of escape in a world that is almost cyclical in its unchanging nature and rigid gender roles; she lives a myopic life with her cat, her ailanthus tree, and her boyfriend, Cal, whom she knows she will eventually marry despite clearly having no strong feelings for him at all – her willpower is in fact so depleted by her environment that she cannot even *imagine* not doing so. Indeed, when Janet suddenly makes her appearance from Whileaway, Jeannine is so set in her ways, 'relieved of personality' to the extent that she enjoys becoming 'entangled with furniture' (92-3), that she barely notices the disruption: just as Keng says regarding Anarres in *The Dispossessed,* this particular utopia is so alien to her experience that it simply means nothing to her.

Joanna, on the other hand, registers Janet's arrival with great interest, and serves as her host in her own New York milieu, cocktail parties and all; representing the zero world, Joanna is the most neutral observer, the intellectual assessor of what is happening, and thus the embodiment of our zero-world society at its own poised historical point far from equilibrium. She is thus open to be influenced easily one way or another, and clearly is – torn between keeping up her social façade and joining Janet in her antics at the cocktail party, for example, Joanna ends up 'turn[ing] into a man' (20) and asserts her righteous feminist anger in the thumb-slamming mentioned above; it is her personal act of equilibrium-disruption within a society in which women are always 'Learning to/despise/one's/self' (217).

Janet herself, conversely, represents the *established* point of criticality that defines the self-sustaining everyday feedback relations on Whileaway, while also enabling its non-linearly self-amplifying ones; fully at ease and in balance herself, Janet therefore initially feels no real emotional investment in her connection with the other Js, and employs herself in her own amusement on the zero world – for example, in gleefully breaking the only Whileawayan taboo, that of inter-generational sex, in her seduction of young Laur, and thereby breaking out of even

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her own society's more progressive social patterns in life-affirming, nonlinear manner. Janet is thus a fleshed-out vision of everything that Joanna, Laur and their fellow zero-world women are not, or think they cannot be. Indeed, she is thereby arguably *more real* than they are, and 'infects' them with this reality, just as Jael later pretends the J's are infectious in order to move them safely through Manland (169): Janet inspires Joanna to revolutionary action, brings Laur from chanting 'Non Sum, Non Sum' to sexually fulfilled self-assertion (59), and gives Joanna the conviction to likewise seduce Laur, whereupon she finds that 'reality itself tore wide open at that moment' (208) – again, a glimpse of the four-dimensional spacetime through which the J's travel.

Jael, finally, who according to Bartkowski represents 'agonistic heroism',[575] arguably does not, as Bammer says, 'embod[y] all possibilities' as the representative of 'yet another dimension [...] neither past, present, nor future'[576] – instead, I would suggest that she very much, like the other J's, represents her *own* time and her particular approach to sexist oppression, which is to meet it with extreme counter-violence. In doing so, moreover, she embodies a thoroughly *linear* dynamic, thus providing an exact foil to Janet's utopian nonlinearity, and sees everything in terms of cause and effect, black and white, Manland and Womanland: indeed, she goes so far as to envision herself as the 'Grand-daughter of Madam Cause' (192), taking lives so that she herself may finally fully live, and transferring Laur's 'Non Sum, Non Sum' into a battle cry to *make* herself exist. In fact, Jael has succumbed so far to her binary thinking that she says she has 'decided long ago that men weren't human' (170) so as to make her violent crusade easier; paradoxically, however, she has essentially given up her own life in the process, which again stands at odds with Whileaway, here in terms of vitality: it is revealed that her lover is a robot, that she herself is largely cybernetic with murderous retractable claws and silver teeth, and at the conclusion of the narrative she 'fed on Jeannine's ear' 'like a vampire' (163) in attempting to enlist her in her war.

In the end, then, Jael does not succeed in shifting the energies and potential agency of the other J's in her favour, despite the fact that she shocks them with her suggestion that her war led to Whileaway rather than the plague Janet mentions, a claim which disturbs even Janet's balanced equilibrium to the point of tears. Jael does, in fact, manage to enlist Jeannine for her cause, a woman who has nothing to lose and nothing to gain from utopia; however, at the end of the story, their resolution is still at odds with Jael's polar opposite, the life-giving utopian force of Janet, who simply states 'No. I don't believe' (212) when told about Jael's utopia-causation claim. Janet thus asserts her utopian reality as equally existent and possible within the multiverse, even on the strength of its own utopian crux-based growth rather than through Jael's violent criticality; her choice in this respect, demonstrated to the reader and observed by neutral, crux-time-based Joanna, thus exemplifies a powerful alternative to Jael's black-and-white response to a black-and-white social imbalance. Indeed, Janet's stance exemplifies, in its gentle assertiveness, that there is another way of doing things – that established power

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[575] Bartkowski, p. 57.
[576] Bammer, pp. 94-5.

structures may indeed be subverted through peaceful methods such as co-operation, rather than through violent means, with communication and mutual respect forming the essence of life on Whileaway. Her statement of disbelief towards Jael thus does not express a lack of belief in the *reality* of non-utopian possibilities within the universe, but merely a firm belief that, in Audre Lorde's words, 'the master's tools will never dismantle the master's house'.[577]

Ultimately, this tension between linear and complex paths to utopia is left unresolved and in dialogue. However, in the end, utopia lies in the *coming together* of the multiplicity of viewpoints and experiences of the J's, and the insights they are able to bring one another. Moreover, it is the *text itself,* the 'little daughter-book' (213), that ultimately emerges from this impasse and is sent out into the world: it thus ends up performing the last, vital step in possible utopia-generation beyond its own pages, and in doing so brings forth, after all, Whileaway's core message of co-operative, feedback-led and communication-based utopian complexity in its consciousness-raising connection with the reader.

Agency and Action in Marge Piercy's *Woman on the Edge of Time*:

Marge Piercy's *Woman* has a slightly different focus to *The Female Man*, reflecting certain shifts within the feminist movements of the 1970s: multiplicity and consciousness-raising are less central to its message than individual agency. As such, possibilities here are more binary than those in the charged textual fragmentation of *The Female Man*, with fewer possible worlds. Indeed, the novel's steadily alternating narrative rhythm leads Bammer to suggest that it is 'at once more conventional and less hopeful than *The Female Man*', given that the 'range of possibilities' in the latter are replaced here with 'either/or' options.[578] However, this does not *overall* represent a regressively binary approach such as the one exemplified by Jael in *The Female Man*: in the unfolding of the narrative in *Woman*, there is no focus on finding a black-and-white solution such as the one represented by Jael's war. In fact, as Ferns notes, 'what Piercy emphasises […] is the process of problem-solving […] she represents a world in which decisions are still in the process of being taken'.[579] This is visible in Mattapoisett's complex self-organisation, but also in Connie's personal path towards utopia, expressed in terms of competing dynamics: her journey from being trapped in the deadening , homeostatic cyclicality of her zero world (much like Jeannine in *The Female Man*) towards becoming an agent for the complex, ever-changing community of Mattapoisett defines the novel's narrative progression and ultimately challenges the reader's own sense of complacency with its portrayal of radical utopian activism.

When we first meet Connie, even before her stay in the mental asylum, she is imprisoned by homeostatic patterns of intersectional oppression; as such, she is confined within cycles of abuse and dependence, trapped like Jeannine by the patriarchy but with the added

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[577] Audre Lorde, 'The Master's Tools Will Never Dismantle the Master's House' in *The Master's Tools Will Never Dismantle the Master's House.*
[578] Bammer, p. 95.
[579] Ferns, p. 208.

complications of poverty and structural racism. Having lost her partner Claud to state violence and her daughter Angelina to state custody, Connie perceives her life as a monotonous succession of pain and loneliness: 'usually a sensation of repetition upon waking was a waking to: again bills, again hunger, again pain [...]. Again no Claud, again no Angelina, again the rent due, again no job, no hope' (30). Agency and individuality are meaningless in Connie's world, as further symbolised in Claud's blindness making his life into a 'pattern of disease' (23) and the three minority-background wives of Connie's aspiring petit-bourgeois brother beginning to 'blur' in Connie's mind (384). Connie would like to break out of the cycle of her poverty-induced misery by at least providing a better life for the next generation, but cannot do so without her daughter or at least her niece Dolly's willingness to form a family together. Indeed, all of Connie's attempts to make deep human connections are thwarted: her relationship to Claud is not taken seriously due to his blindness and criminality; there is no attempt to return her daughter to her; and when Connie tries to assert herself in the asylum, her behaviour is dismissed as 'random hostility patterns' (216). Connie, in fact, is barely perceived as human by her environment: she notes that her doctor 'stared at her, not like she'd look at a person, but the way she might look at a tree, a painting, a tiger in a zoo' (95). Moreover, this systematic lack of respect for humanity and individuality also translates into a lack of connections within Connie's community: 'her life was thin in meaningful "we's"' (33).

The first real connections that Connie makes during the narrative are in fact in the mental asylum she is unjustly imprisoned in, following her assault on Dolly's pimp Geraldo in Dolly's defence. Like the prison islands in *A Modern Utopia*, the asylum forms a liminal space of alterity: it is here that Connie meets people such as her witch-like friend Sybil, whom she is free to have lengthy philosophical exchanges with, whereas 'outside, whole days of her life would leak by and she wouldn't have one good thoughtful conversation' (88). With Sybil, Connie shares a joyful fantasy of 'a secret network of covens all over New York' that frees everyone from confinement like their own: 'Imagine the bars crumbling on the windows!' (373); however, any such escape must remain a fantasy, as unlike Wells's prison island, the asylum is not only firmly in state control, but represents almost a fetishistic perversion thereof, enacted on the bodies of those whom the system has made defenceless. As such, Connie's only other possibility for escape is in the mental connection to Mattapoisett she has already established with Luciente, who tells her she is not in fact insane, as her imprisonment suggests, but a 'catcher' (40), made to deeply connect with others on a mental level. This reflects both Sybil's spiritual, holistic understanding of the world, as well as the scientific practice of 'inknowing' on Mattapoisett, within which the utopians ground their complex, holistic cosmology (147). Connie's resulting connection with Mattapoisett as a possible future utopia, then, provides a counterforce to her current downward spiral of misery, and she escapes to utopia for hours in subjective time – it may not 'nourish' her in real terms, as Burling points out, but its physical traces, in voices and warm chairs, suggest just enough four-dimensional presence for complex entanglement with the zero world, thus giving Connie real hope for something different.[580]

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[580] Burling, 'Reading Time', p. 15; see also *Woman*, p. 172.

On her visits to Mattapoisett, however, Connie is still not quite able to open herself to such a radically different system, and to free herself completely from the remaining small individualist pockets of connection and meaning she has found in her zero world: in particular, her pride in being a mother is stung by the replacement of pregnancy with brooder gestation, by hormonally-induced gender-neutral lactation, and by shared parenthood without genetic links. Angry that the women of Mattapoisett have 'let men steal from them the last remnants of ancient power, those sealed in blood and in milk' (142), Connie then distracts herself by focusing possessively on what it might be like for *her* to raise a child there. However, in dreaming of being a co-mother and jealously imagining Luciente's daughter Dawn as her own, Connie projects zero-world patterns of ownership into utopia, and Luciente scolds her for this: 'Birth! Birth! Birth! [...] That's all you can dream about!' [...] That isn't women's business anymore. It's everybody's (274).

Eventually, though, Connie learns to let go of these individualist ideas, rooted in linear natalist notions of meaning and survival rather than in communal connectivity; she realises she can only 'give birth' to the idea of utopia in her own mind if she allows the 'death' of her own old thought patterns and preconceptions, imposed by her coercive zero world. In place of this, Connie embraces a certain interchangeability of identity that characterises Mattapoisett, evident for example in the aforementioned population-stabilising custom of only beginning new babies after someone has died; in the gentle celebration of life and renewal surrounding storyteller Sappho's death; and even in the inclusion of men into the domestic sphere, which Connie had been so at odds with. Moreover, just as the taking on of different jobs and governing roles is vital to the community's function as a complex adaptive system, personal and social roles are likewise shared in a complex dance, supporting community while maintaining selfhood: Luciente, for example, 'becomes' her departed lover Jackrabbit in dancing like him after his death (345), while Bee takes on the role of Connie's lover while reminding her 'I am not Claud. [...] I am also me, Bee, friend of Luciente, friend of yours' (205). Connie, too, is thus part of this system of identity and interchangeability via her connection with Luciente: indeed, she realises that she is an ancestor of these utopians, 'dead among them' (196), yet charged with the responsibility of making their communal lives possible within the multiverse. Ultimately, then, she accepts this responsibility on behalf of future generations rather than herself, by extension agreeing to fight for Mattapoisett, while symbolically allowing them the care of Angelina: 'You can have my child, you can keep my child. [...] People of the rainbow with its end fixed in earth, I give her to you!' (150).

However, precisely when Connie embraces this intergenerational agency, she begins to lose agency in her zero world. Right at her personal crux point, Connie is drawn into far more oppressive homeostatic control within the asylum, as she is implanted with an emotion-regulating 'dialytrode' which robs her of selfhood and agency in a way that borders on death or zombification: 'Connie was an object . . . She felt distanced from her own life, as if it had ended with the implantation of the dialytrode' (329) This device, which in fact directly evokes cybernetics as 'something that would rule her feelings like a thermostat', is crucially based on

external regulation: as Sybil says, it is simply about 'control. To turn us into machines so that we obey them' (217). Moreover, it stands in direct contrast to one of Mattapoisett's utopian attractors being to 'root that forebrain back into a net of connecting' (148), which, as we saw previously, exemplifies the utopia's open organicism. Somay, in fact, believes that Connie's device-implantation is a 'barrier' between humanity and utopia which 'lacks social, cultural, and economic dimensions' and strikes an 'over-serious tone';[581] however, it precisely represents the story's central battle of cruxes, which centres on autonomous control: as Luciente says, 'the crux, we think, is in the biological sciences. Control of genetics. Technology of brain control'. (242) It is after Connie's operation, accordingly, that Connie accidentally lands in a dystopian timeline rather than utopia: here, she meets Gildina, a 'cartoon of femininity' (314) resembling Dolly, who herself suffers from total subordination of the individual in an exploitative corporate society. Indeed, Gildina's superiors ironically control not only others but their own minds and bodies, in true homeostatic fashion: as Gildina says of her quasi-pimp, he has 'been through mind control. He turns off fear and pain and fatigue and sleep, like he's got a switch. He's like a Cybo, almost! He can control the fibers in his spinal cord, control his body temperature. He's a fighting machine, like they say' (324-5). Gildina, on the other hand, has no control over her life whatsoever, and will in fact pay for entertaining Connie by losing her own life, becoming a human organ bank.

The intervention of Connie's dialytrode-implantation, then, temporarily throws off the spatiotemporal path of possibility towards utopia, even bringing about a battle in the war for Mattapoisett that later disappears from the timeline: 'Not in my life, Connie. Not in this continuum…' (401) However, Connie's encounter with Gildina and her epiphany regarding identity and motherhood have strengthened her resolution to fight for Mattapoisett, and she begins to 'study […] control over her own nervous system' (245) in order to reach Mattapoisett more easily and stay there for longer. Thus allowing her utopian convictions to gather momentum and amplify as positive feedback, Connie finally reaches the bifurcation point at which she feels she must act, telling Sybil: 'We can imagine all we like. But we got to do something real' (373) – once more, incidentally, an allusion to the expanded reality of four-dimensional spacetime. In the book's final pages, then, Connie exerts her utopia-generating agency in the most powerful and effective way she can think of, pouring poison into the coffee that her doctors are about to drink. She knows full well that she is thus most likely ending her own life as she knows it, but she intends to exchange it for a better life for all – unlike the better life for a few described in the traditional utopias – and her enhanced convictions have set her firmly on this path. In doing so, moreover, Connie is thus symbolically 'reborn' herself, completing full autopoiesis as an active agent of change: as Josephine Carubia Glorie writes of Hannah Arendt's concept of 'natality', 'action, according to Arendt, is like a deliberate second birth: it is the free insertion of oneself into the political world through word and deed'.[582]

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[581] Somay, p. 31.
[582] Josephine Carubia Glorie, 'Feminist Utopian Fiction and the Possibility of Social Critique' in *Political Science Fiction*, eds. Clyde Wilcox and Donald M. Hassler, p. 150.

In the end, just as in *The Female Man*, it is not in fact entirely clear whether Connie chose the correct path towards utopia: the reader has no way of finding out, and indeed is shown hospital documents certifying Connie's insanity. Moreover, even if Connie is not insane, she may have been misguided in choosing violence: in fact, the complex utopia-generating system of possibility is closed off before Connie even acts on her decision, as Connie says 'she thought of Luciente, but she could no longer reach over. [...] She had annealed her mind and she was not a receptive woman. She had hardened. But she thought of Mattapoisett' (411). Despite this uncertainty regarding utopian methods, however, it is still in the *possibility* of utopia that *Woman*'s utopian value undoubtedly lies: it is this possibility which gives Connie a belief in utopia as a genuine option, empowers her as an intersectional feminist agency of change, and presents both her and the reader with a richly illustrated model of utopian connection and communality that raises hope for a better world.

Individuality and Community in Ursula K. Le Guin's *The Dispossessed*:

On the discrete level of Le Guin's *The Dispossessed,* the competing energies of utopia and its alternatives are, at first glance, more gentle than in either *The Female Man* or *Edge*: the urgency of consciousness-raising and violent agency gives way to more measured re-engagement with the ideas that led to utopia in the first place. The anarchist principles that guide Shevek into adulthood and then on to Urras in one set of chapters, and then physically and ideologically back to Anarres in the alternating set, thus form a guiding 'light' (77) within the narrative; Shevek's journey loops around it as he tries to find the right path in escaping rigidity and returning to an embrace of mutual aid. In doing so, I argue, Shevek reasserts the basic roles of individual and community within Anarres' complex utopian network, rather than furthering any unresolved binary that some critics have ascribed to the text: Moylan, for example, claims that the Anarres/Urras divide and Shevek's traditional family choices render the 'utopian matter [...] locked into a series of binary oppositions',[583] while Nadia Khouri speaks of a 'reduction of the dialectic to binary oppositions with points of gravity congealed in static equilibrium'.[584] I suggest, on the other hand, that if one looks beyond Shevek's family life, then, rather than representing a 'regressive dialectic endowed with an apparent dynamism',[585] in Khouri's words, the text in fact interrogates and *challenges* the very dialectics and regressive equilibria that are at odds with utopian complexity. Indeed, it moves between binary oppositions in order to eventually *incorporate* their competing energies into a larger complex whole, a whole whose synthesis of dynamics generates an unprecedented ethical sustainability.

The first set of regressive equilibria being challenged, then, lie in the new invisible 'walls' of Anarres which portend its social rigidification, and which Shevek hopes to 'unbuild' (11): they are not physical like those of Connie's asylum, nor do they represent generalised gender- or race-based social discrimination; instead, they are erected to hold down people like

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[583] Moylan, p. 109.
[584] Nadia Khouri, 'The Dialectics of Power: Utopia in the Science Fiction of Le Guin, Jeury, and Piercy', p. 51.
[585] Khouri, p. 51.

Shevek, who are attempting to keep positive feedback alive in the system rather than letting negative feedback mechanisms become set in their ways. However, power has already begun to 'inhere in [the] centre' (51), as Mitis warns Shevek before he goes to study with leading researcher Sabul in Abbenay; 'power-with' is thus again becoming 'power-over' in Parker Follet's terms. Warned that he will become 'Sabul's man' (50), Shevek finds this to be true as he loses intellectual independence; moreover, his work is systematically discouraged as it appears to conflict with the established 'sequence principle'. Indeed, Sabul tells Shevek that his research represents 'a certain disaffection, a certain degree of privatism, of non-altruism' (200) – yet far from being true, this merely indicates that the established collective on Anarres no longer leaves sufficient space for individual initiative. Shevek also learns that the same blocking of organic social feedback relations is in fact evident throughout the system: his friend Tirin, for example, who writes socially critical plays, finds himself in a mental asylum just as Connie does in *Woman* (though presumably a slightly more utopian one), while the composer Salas is not given work in his chosen field as it apparently fulfils a less important role in the social organism. As Shevek's friend Bedap complains,

> The circle has come right back round to the most vile kind of profiteering utilitarianism. The complexity, the vitality, the freedom of invention and initiative that was the centre of the Odonian ideal, we've thrown it all away. (146-7)

And indeed, following a series of global emergency measures, Shevek notes that 'five years of stringent control may have fixed the pattern permanently' (271); meanwhile, on the interpersonal level, 'social conscience, the opinion of others', which Shevek terms 'the most powerful force motivating the behaviour of most Anarresti' (95), now 'completely dominates the individual conscience, rather than striking a balance with it' (272). In other words, Anarres' free flow of self-regulating feedback is endangered, which in turn threatens the freedom and free expression of individuals, who would otherwise articulate change through positive feedback: as Bedap says, 'we've made laws, laws of conventional behaviour, built walls all around ourselves, and we can't see them, because they're part of our thinking' (272). Shevek is stuck in these walls as in a physical restraint, even contemplating suicide; however, he sees his escape in going to Urras as the first Anarresti visitor and exercising his intellectual freedom there, thus also demonstrating to other Anarresti that their walls *can* be broken down: as Takver says, 'if you talk about it and nobody goes, you've only proved that custom is unbreakable' (309).

On Urras, however, Shevek not only encounters more walls in the form of extremely repressive gender norms and gaping clefts between rich and poor (in the country of A-Io), but realises that whereas individuals were repressed on behalf of the community on Anarres, here it is the other way around: the upper classes lead lavish lives financed by the poor, who live in miserable conditions. Moreover, Shevek soon realises that he himself is a prisoner on Urras, almost as Odo was before her revolution: he is being held so the government may exploit his research for faster-than-light travel to a martial advantage. With Shevek thus trapped in a narrative energetic stalemate in disillusionment with both Anarres and Urras, both of which feature homeostatic repression, some kind of break or a crux is needed – and it comes in the

form of Shevek's breakthrough in developing his General Temporal Theory. He realises that the theory will only work if time is seen as having two aspects, sequency and simultaneity, embodying both cyclicality and linear evolution. As Shevek explains to upper-class Urrasti at a party,

> Time has two aspects. There is the arrow, the running river, without which there is no change, no progress, or direction, or creation. And there is the circle or the cycle, without which there is chaos, meaningless succession of instants, a world without clocks or seasons or promises. [...] A true chronosophy should provide a field in which the relation of the two aspects or processes of time could be understood. (185-6)

Shevek's breakthrough, then, lies in positing that these two aspects of time support one another rather than needing to be proven independently; they thus come together in an *irreducible* complexity that represents the irreducibility and interconnections of life itself. As Shevek says,

> We don't want purity, but complexity, the relationship of cause and effect, means and end. Our model of the cosmos must be as inexhaustible as the cosmos. A complexity that not only includes creation but duration, not only being but becoming, not only geometry but ethics. It is not the answer we are after, but how to ask the question... (187)

Shevek's discovery therefore symbolises the inherent dynamism of complexity in its maintaining as well as generative tendencies – that is, employing positive *and* negative feedback – both of which are vital to the complex utopia in its self-generation. However, Shevek notes that in the same way, his utopia must allow for *individual freedom* to spark such crux-based generation alongside social responsibility, and that it is indeed just as important: after all, 'revolution begins in the thinking mind' (274). Shevek, for example, must be free to play his own role in the system in order to perform his 'cellular function' within the organism: 'the analogic term for the individual's individuality, the work he can do best, therefore his best contribution to his society' (274). Indeed, Shevek notes that 'a healthy society would let him exercise that optimum function freely, in the coordination of all such functions finding its adaptability and strength' (274); moreover, he points out that this 'was a central ideal of Odo's *Analogy*', which Anarresti society has now fallen short of, and Urras never achieved in the first place.

Moreover, once again, it is the four-dimensionality underlying Anarresti thought, and indeed Shevek's own research on the General Temporal Theory, that gives this conjunction of social and individual functions weight and realisability: as Daniel P. Jaeckle points out, the four-dimensional view of time implied by the aforementioned act of promise-making shows a 'logic of complementarity' in underlying both utopian ethics and Shevek's temporal research.[586] In addition, the corresponding 'realness' of all times is illustrated in small moments within the story that also have ethical significance: for example, when Shevek escapes the university on Urras and joins a protest of the dispossessed working classes there, who form a singing crowd, whereby

> The melody seemed always to be lagging and catching up with itself, like a canon, and all the parts of the song were being sung at one time, in the same moment, though each singer sang the tune as a line from beginning to end. (246)

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[586] See Daniel P. Jaeckle, 'Embodied Anarchy in Ursula K. Le Guin's The Dispossessed'.

This pattern, signifying both aspects of time as Shevek sees them on four-dimensional terms, thus also represents complex collective movement, as the individuals making up the crowd 'like the particles of atomic physics, could not be counted, nor their positions ascertained, nor their behaviour predicted' (246-7). They thereby exemplify nonlinear behaviour as well as the crux-based emergent utopian energy that so many years ago gave rise to Odo's movement – in the same location, in fact, and in very similar crowds – and Shevek briefly feels hope for a similar new utopia-generating crux on Urras. However, the spell is broken by the 'mindless yell of weaponry, the meaningless word' (248) when Urrasti law enforcement begin to massacre the protesting crowds with machine guns; the homeostatic 'coercive mechanism of extraordinary efficiency' that Shevek compares to 'a kind of seventh-millenium steam engine' (251) is thus turned on the emergent life force of the Urrasti rebellion, and shuts it down, at least for the time being. Clearly, the homeostatic mechanisms that Shevek has said will make Anarres 'no better than a machine' (295) are already in full effect here.

In his final escape from Urras at the end of the narrative, then, Shevek aims to go back to Anarres despite its shortcomings, as he there hopes to again find organic, self-regulating utopian life rather than machine guns, coercion and death: Anarres, after all, may appear 'dead' on the surface – and may indeed become so if it puts up more walls – but its founding principles remain inherently dynamic and need only be revived. Indeed, this sense of potential, hidden or dormant life is mirrored in the ecosystem of Anarres, which unlike Urras is brimming with life not on the surface, but literally underneath it: the oceans of Anarres are 'as full of animal life as the land was empty of it', to the extent that 'their variety was bewildering' (154-5). Similarly, the dynamism of complex communal life on Anarres is present in the society's foundations and need only be brought back into a flourishing state, just as the desert landscapes of Anarres are reanimated with the planting of thousands of trees. Within four-dimensional reality, moreover, such fluctuations do not retract from the overall utopianism of Anarres, as it is the overall pattern of utopia that matters, not the instant; as Odo's gravestone says, 'to be whole is to be part'.

Of perhaps equal importance, then, is the second half of the gravestone inscription, which states that 'true voyage is return', and so Shevek after all returns to Anarres to help revive its dormant potential – or at least it seems that he will. However, his return does not, I would argue, represent the 'premature literary détente' that Moylan believes to occur here as a mere convergence of systems at the expense of a 'not yet realized emancipatory future'.[587] Instead, I suggest, it is the radical openness, connectivity and self-organising unpredictability of utopian complexity itself that holds within it the potential of such an 'emancipatory future'; as such, it embodies both Odo's emphasis on cyclical return and Shevek's belief in the fundamental non-linearity of true progress, in that, once again, 'you can go home again [...] so long as you understand that home is a place you have never been' (48). The value of Shevek's personal utopian journey thus lies not in the choice of one binary system over another, but in the *idea* of the open nature of complex connections, which make the intrinsic dynamism and living

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[587] Moylan, p. 109.

sustainability of utopian Anarres both possible and recoverable. It is this idea that is given renewed vigour through Shevek's scientific discovery, as well as through the promise of further utopian change after his return to Anarres. Moreover, its strength lies in its *adaptability*, in that it can for example be shared with others in the form of the eventual ansible, whose essential function is to enable the connections that allow complexity to function. Through the ansible, Odonian complexity may well spark change in other societies as well; in fact, this is a process which has already begun, as the Hainish traveller Ketho decides to 'walk through this wall' (318) with Shevek at the end of his journey and join him on Anarres. Thus, notwithstanding Moylan and Khouri's misgivings, the text does not in fact end on a 'premature détente' between irresolvable binaries, but on a *crux,* a fundamentally open bifurcation point from which many possible utopian futures may emerge – including one that may be similar to the utopian past, though, again, never the same; after all, as Le Guin writes on *The Dispossessed* in 'A Response, by Ansible, from Tau Ceti', 'the book doesn't have a happy ending. It has an open ending'.[588] It is thus, in the words of Friedrich Kümmel, an '*open circle* of future and past […] in which the past never assumes a final shape nor the future ever shuts its doors'.[589] There is no premature détente to the narrative of *The Dispossessed* because there is, in fact, no ending at all, much as in *The Female Man* and *Woman* – and utopia once again lives on beyond its pages within the seeds of possibility it has sown in the reader's mind, like the planted trees of Anarres, always poised to flourish given the right conditions.

Concluding Notes – The Complexity Chronotope and the Reader:

As shown, the critical utopias of Russ, Piercy and Le Guin present, in their employment of the complexity chronotope on both their iconic and discrete registers, open, inherently dynamic and therefore sustainable utopian models that do not rely on inconclusive fragmentation or the perpetual deferral of utopian hope to create meaning. Neither, once more, do they locate utopia purely in the 'dialectical interaction between text and reader', as Ruppert argues; instead, utopia here lies in the *structure* of utopia and the utopian text itself, embodying the living processes of self-organisation and self-optimisation through complex adaptive complexity.[590]

It is also through this complex dynamism, however, that the complexity chronotope *does* after all include the reader of these utopias in a crucial way: the critical utopias, by being both fundamentally open to their environment in their complexity on the discrete level, as well as by being charged by real-life dissatisfaction in the reader's zero world, evoke the sense that they are directly calling on the reader in their quest to exist, just as they call on the protagonists. As such, the reader is ultimately *included* in the overarching utopia-generating system of the narrative, and thus becomes a 'practical experimenter in the creation of utopia', as mentioned in the introduction, just as Wittenberg believes that the reader of general time travel literature

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[588] Le Guin, 'A Response, by Ansible, from Tau Ceti' in Laurence Davis and Peter Stillman, eds., *The New Utopian Politics of Ursula K. Le Guin's The Dispossessed,* p. 308.
[589] Friedrich Kümmel, 'Time as Succession and the Problem of Duration' in J. T. Fraser, ed., *The Voices of Time* (italics in original).
[590] Ruppert, p. xi.

becomes a 'practical experimenter in the philosophy of time'.[591] In other words, the reader becomes part of the 'utopian laboratory' that the complexity-based utopian model forms at multiple levels, and is thus invited to help shoulder the cross-temporal responsibility for the creation of a better world that the protagonists have already been tasked with. The ethics of complexity thus transfer to the reader's own lived experience, as she is given to understand that it is both equity-based freedom and an awareness of lived experiences beyond our own, as well as the consequences of our collective and individual actions, that are necessary for the creation of sustainable change.

In order to create such change, however, these novels seem to suggest that we must look beyond the utopian presentism that informs both traditional utopian literature and contemporary capitalist thought, and instead both reconsider what we can learn from our own past as well as acknowledging our responsibility for future generations. Indeed, particularly in the age of man-made environmental catastrophe on a global scale, it is absolutely critical to adopt a change-led mindset, such as that of the critical utopias, that asks us to take our effect on the future seriously. By thinking of our responsibility for future generations in terms of interconnectivity and four-dimensionality, we may yet avert the most disastrous consequences of our current patterns of socio-political behaviour before it is too late – just as, for example, moral philosopher Tim Mulgan urges us to do in *Ethics for a Broken World: Imagining Philosophy after Catastrophe*. Only through moral systems that thus take into account those most in need of aid both now and in the future, thereby looking beyond the immediate needs of the present and the privileged as an ethics of complexity does, can the wellbeing and even survival of all be attempted, and rigidifying (homeo)stasis be avoided.

I would thus suggest that it is this crosstemporal ethical mindset that makes the critical utopias of Russ, Piercy and Le Guin 'potential gestures of defiance and weapons of struggle', in Moylan's words.[592] Moylan claims that 'as the content of utopia is rejected as too limiting and subject to compromise and co-optation, the open form of the new utopia becomes a subversive new content in its own right';[593] however, I argue that this open form can be found not only in the socially engaged nature of the critical utopias, as Moylan suggests, but, again, in the openness of their structural utopian chronotope itself. It is this open structure, after all, which presents a radically dynamic form of social organisation in which equality makes feedback-based self-organisation possible in the first place, and in which the cruxes generated by positive feedback allow growth and change to emerge and thrive. Moreover, it is this openness that embeds true dynamism and sustainability at the heart of utopia in these novels; this, I would argue, renders the critical utopia not only an unprecedented development in the history of utopian literature, but one which should be taken seriously and learned from if we are to after all resist the 'death of utopia' and keep hope alive.

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[591] Wittenberg, p. 8.
[592] Moylan, p. 47.
[593] Moylan, p. 50.

Ecofeminism and Complexity:

I have been locating the complexity chronotope in the critical utopias of Russ, Piercy and Le Guin, but as mentioned, the resurgence of utopian writing in the form of feminist utopias around the 1970s also included other novels; I will focus here on two of them, Slonczewski's *A Door into Ocean* (*Ocean*) and Mitchison's *Memoirs of a Spacewoman* (*Memoirs*), for the reason that they both centralise relationships with the non-human other in their depictions of utopia while also showing signs of complexity within their utopian social structures. As such, they appear to extend their complex web beyond the human to include the non-human animal, natural and even alien environment in a far more direct way than even the critical utopias with their nature-based cosmology. While Mattapoisett in *Woman,* for example, features limited communication between humans and non-human animals, these novels also showcase more in-depth communication and even cooperation with both non-human animals and even aliens, which makes them worthy of a quick excursion here, particularly in that they thus seem to emphasise the parallel nature of systems of oppression for women and non-human animals that ecofeminist philosophers stress. Moreover, they appear to showcase the sensitivity and subjectivity that molecular biologist Mary McClintock described as a 'feeling for the organism' in her own practice,[594] and which can be applied to the whole of the concept of 'Gaia', conceived by James Lovelock and Lynn Margulis in 1979 to describe our planet and biosphere in holistic terms as a complex living model of co-operating human and non-human autopoiesis. However, it must be examined whether Mitchison and Slonczewski's models are truly inclusive and open to change, such that they feature the inherent dynamism of Russ, Piercy and Le Guin; they must thus reflect in their equality-based connections the flux that also underlies rigorous scientific thinking, and which Kumar indeed deems incompatible with the utopian as *traditionally* conceived: 'pure science knows no end', he points out; 'it has no point of rest or stability. It constantly undermines existing beliefs and practices'.[595]

However, since neither *Memoirs* nor *Ocean* explicitly feature utopian societies described at length in the manner of the classical tradition of literary utopias – instead focusing on more straightforward science-fictional or fantasy-based plots, respectively – I will not dwell on their utopian structure in great length; for example, I will not substantially identify the negative and positive feedback relations that fundamentally characterise the traditional and critical utopias previously discussed. Instead, I will treat this chapter as a brief coda to the substantial preceding analysis of the complexity chronotope in the critical utopia, investigating the limits to the application of this chronotope even in other examples of the same subgenre of feminist utopian writing of the mid-to-late 20th century, and thus perhaps giving further credence to the historical singularity of Russ, Piercy and Le Guin's inherently dynamic complex utopianism.

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[594] Evelyn Fox Keller, *A Feeling for the Organism*, p. 101.
[595] Krishan Kumar, *Utopianism*, p. 59.

Posthuman Ethics and New Barriers in Naomi Mitchison's *Memoirs of a Spacewoman*:

Memoirs features far-future Terran communications expert Mary, whose story is told almost entirely through accounts of her expeditions to other planets where she must establish communication with the non-human natives in various ways; it is in fact in the morally interpreted behavioural differences between humans and aliens that much of the narrative tension lies. A quasi-Wellsian world state, Terra's lack of conflict, post-scarcity conditions and advanced technology on this future Earth mean humans have gained enough personal freedom for space travel to have become a major source of entertainment and fulfilment. It thus reflects a fascination of many science-fictional texts of this period regarding space travel, inspired by the beginnings of human space exploration in the 1960s; Parrinder notes that it 'had become a new frontier of the imagination [and] the ultimate target of capitalism's drive towards perpetual expansion''.[596] In *Memoirs*, however, the focus is on the furthering of knowledge rather than capitalist expansion: the advanced science of communication, pioneered here by women, allows Terrans to work as 'explorers' on other planets, which creates 'elementary solar loyalties which are common to all our childhoods' (156). Sympathy and empathy play an important role in the engagement with the non-human others one encounters: as Mary's partner Peder reminds Mary at one point, 'one must be ready to be taken in [...] because there must be no barriers between oneself and other entities' (45). As such, communication is central to the utopians' education, and there is an entire intellectual history that gives prestige to the 'soft' sciences, which primarily feature well-known female scientists. Therefore, while the reduction of barriers here suggests the flow of connective feedback within complex systems, this feminist re-casting of intellectual history likewise suggests a four-dimensional temporal awareness, as in the critical utopias: here, however, the focus is more on honouring and reenvisaging the *past* that made utopia possible, as is also suggested by the novel's title.

Moreover, the reenvisaging of one's temporal standpoint plays an important role in the subjective experience of utopia here: when travelling, the explorers go into 'time blackout', meaning that they lose no subjective time to their endless space travel, which would otherwise take over most of their lives. This means that they have intensely personal experiences of temporality, thus reflecting their society's enhanced focus on relative subjectivity within communication-based relations: as Mary says, 'I think of my life in terms of time: my own time and the very different times of other people' (15). Moreover, this enables the most clearly feminist element of utopian life on (or off) Terra: the temporal requirements of space travel mean that women are not expected to spend much time raising their children, but to merely dedicate one 'customary slow-motion year' to them after birth, in a 'temporary surrender to time' (18), after which point the children apparently raise themselves within their age groups. As such, female Terran explorers lead highly independent lives while still experiencing

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[596] Parrinder, *Utopian Literature and Science,* p. 73.

motherhood, which is incidentally the result of one-off casual partnerships with men that they happen to like at the time.

It is in their thus expanded stretches of work time that Terrans form various connections with non-human others: certain non-human animals on Terra, for example, are their collaborators in laboratory experiments or choose to live in close proximity with humans, such as the dog Daisy, who 'retires' to live with Mary and Peder (146). Others maintain their independence but engage in intellectual exchange with the humans, such as dolphins, who are seen as equals and even superiors to humans 'on certain subjects' (72). In fact, Mary notes that the term 'animal' is a 'rather archaic classification', and instead prefers the term 'friends' where appropriate (70, 75). This inter-species proximity is also reflected in that the Terrans are mostly vegetarian, though they may become 'temporary carnivores' in adolescence – Mary never did, but interestingly attaches no moral judgement to the idea and instead attributes her decision to remain vegetarian to her own 'greed' for delicious plant-based foods.

The non-human animals the explorers encounter are approached in much the same way as non-human animals on Terra – indeed, they are described in animal-like terms, such as the 'five-armed starfish' or 'radiates' (20); the 'Epsilons' or 'Epsies', who are 'distressingly like centipedes' (33); and the 'butterflies' who share a planet with 'caterpillars' (88). In attempting to build relationships with these groups or at least learn from them, Terrans must overcome their speciesism – and they indeed treat the non-humans as moral equals, avoiding 'interference' with their social systems as far as possible. As such, they appear to operate along the lines of the 'posthumanist ethics' described by the likes of Cary Wolfe and Elana Gomel: Wolfe, for example, notes that a posthumanist 'decentring of the human' in turn 'points us toward the necessity of an ethics based not on ability, activity, agency and empowerment but on compassion that is rooted in our vulnerability and passivity', and thus 'foregrounds the necessity of thinking ethics outside a model of reciprocity between "moral agents".'[597] Gomel, meanwhile, takes an approach that does not even include what she calls this 'subtle return to humanism' on Wolfe's part, instead writing in her analysis of literary human-alien relations that we must 'escape the paradox of posthumanism, in which empathy is triggered by humanness and humanness is demarcated by empathy'.[598] And indeed, the Terrans engage with the aliens on the latter's own terms as much as possible, treating them ethically even when their behaviour or appearance arouses little empathy or sympathy in them: for example, Mary attempts to overcome her revulsion at the Epsies who have none of what she perceives as 'lovable qualities' (33), while she tries to avoid over-empathising with the playful and baby-faced 'Rounds' (38). As such, Mary and her colleagues seem also to practice what Lori Gruen terms 'entangled empathy', which stresses the importance of 'maintain[ing] a clear sense of one's self while nonetheless acknowledging our entanglements with others': in their interactions with genuinely different non-humans, the Terran explorers have the chance to 'genuinely avoid projection while [they]

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[597] Cary Wolfe, *Animal Rites: American Culture, the Discourse of Species, and Posthumanist Theory*, p. 141.
[598] Elana Gomel, *Science Fiction, Alien Encounters, and the Ethics of Posthumanism,* p. 51.

are empathizing',[599] thus respecting 'beings who have their own perspective, their own ways of flourishing, their own distinctive wellbeing'.[600] Indeed, Mary notes that 'thinking oneself into the shape of one's contact was elementary when considering communication techniques, but sometimes one had to be very careful to think oneself back' (35).

This, then, also appears to represent the fluidity of interaction in a complex system: without preconceptions, one may act ethically while adjusting one's behaviour without force or expectation of reciprocity; and indeed, Mary and others are reminded to 'continually change [their] focus' when they are having trouble connecting with the local inhabitants (78). Likewise, Mary says at another point 'I had, of course, like a dancer to adapt myself to my communicators', and even adds that 'that's the kind of reason why, as I've said, I believe communication science is so essentially womanly. It fits one's basic sex patterns' (26). And yet, despite years of communication practice and focus on nurturing empathetic tendencies, the Terrans are apparently still so hardwired in a form of binary, hierarchy-based thinking that they cannot break out of it. Mary finds this to be the case when she attempts to empathise with the starfish-like radiates, who have five arms and an accordingly multiplicity-based worldview; finding her own mentality changing away from bi-lateral terms in trying to empathise with them, Mary soon realises that she can no longer make binary decisions, for example to save herself from the attacking 'jags' or on the matter of whether to have a baby with handsome T'o. Evidently, even Mary's training as a communications expert has not prepared her for this.

Indeed, this also reflects another curious feature of Terran society which likewise seems to somewhat contradict their ostensible talent for empathetic communication: this is a strong emphasis on explorers being 'stable' in how they engage with other worlds, and on always returning to this point of stability after disturbance. For example, they must be 'passed as completely stable' before going on any expedition to other planets (21), and asserting stability in children is the main goal of a mother's slow-motion year. Clearly, the Terrans value homeostatic self-regulation, with its constant return to stability; however, it seems to come at the expense of genuine connections with others, which might otherwise allow Terran society to develop in interesting ways: for instance, the fact that Mary is not *encouraged* to relate completely to the non-binary thinking of the radiates – and is in fact discouraged, as well as the focus on non-interference with non-human others, seem to indicate that exploration is mainly intended as dispassionate information-gathering rather than true connection.

Interestingly, however, this *theoretical* emphasis on homeostatic self-regulation is betrayed by the fact that in *practice*, the Terrans are not dispassionate observers at all: not only do they over-empathise, as Connie is tempted to do with the Rounds, but they also *judge* non-human others on their perceived humanity and other anthropocentric terms, such as assumed intelligence. Mary, for example, declares that 'as a child one learns to love all life, but inevitably some more than others' (33), and regarding the latter she speaks of the 'humiliation of going into relation with an unintelligent form of life', asking 'could one go any lower?' (52). Mary also

[599] Lori Gruen, *Entangled Empathy,* p. 73.
[600] Gruen, p. 73.

notes of horse-like animals on Mars 'not that the znydgi are important...' (158) when describing failed attempts at communication. As such, the black-and-white thinking Mary is urged not to abandon around the radiates in fact *informs* Terran society on a deeper level than expected, given that it is supposedly defined by non-evaluatory posthuman ethics, and value judgements are applied even where this seems to constitute interference: for example, the 'grafts' are taken from their own planet for experimentation because they are seen as too unintelligent to mind, while of course they could be in possession of other forms of intelligence or ways of evaluating experience. As such, it seems that the Terrans *do* in fact ascribe moral value to the apparent ability of others to communicate and display empathy, which falls into the 'paradox of posthumanism' that Gomel critiques, as well as drawing a harmful distinction between 'moral agents' and 'moral patients' on both Wolf and Gruen's terms. This, then, represents another apparent imbalance in the Terrans' supposedly extended complex system of posthuman ethics, as they appear after all to close themselves off to truly engaging with others on terms of equity and mutuality, which in turn restricts free feedback; indeed, this imbalance might lead to totalitarianism in Terra's future, if the Terrans see themselves as justified in exploiting others due to their perceived lack of intelligence, for example.

Moreover, the apparent feminist focus of Terran society, which sees communication as 'essentially women's work and glory' (18) as well as 'womanly' in that it fits basic female 'sex patterns' (26), is in fact undermined in that it replaces misogyny with sexism towards men, for example when Mary is asked to host a graft because a woman might relate better and it is therefore 'not a man's job' (50). This association, though, risks further gender-based discrimination and additional rifts within the complex system; in fact, it presents another instance of Mary's black-and-white thinking, and might lead to other feedback blockages in the inter-planetary network due to the genders involved.

At the same time, moreover, there paradoxically exists a sexist push-back against communication and empathy in Terran society. For example, parental detachment is so encouraged that some parents form no bond whatsoever with their children, while even animals are taught to be more distant, with Mary's canine friend Daisy for example feeling 'so ashamed of herself when she finds herself making emotional noises instead of communicating sensibly with those she loves' (149). Indeed, empathy is so discouraged on interplanetary expeditions, in order to prevent interference, that explorers are indoctrinated with 'modern ethical standards and behaviour patterns' to such an extent that to commit interference after all throws them into 'a state of block', and the memory of it must be 'dug out of them, with all the resulting unpleasantness' (125) – a process which in fact suggests dystopian mind control similar to that of the dystopian zero world in *Woman*. As a result of this conflict of values, compassion is incongruously perceived on Terra both as biologically essential to women and as a form of atavistic illness that must be cured; moreover, this state of affairs paradoxically carries the risk of eliminating morality entirely: fear of such retribution against interference, which takes the form of imprisonment for life on Terra, leads Mary to do nothing while the Epsies end up

lobotomising the Rounds in front of her eyes, and while her colleague Françoise is indeed sentenced to life on Terra after interfering with the 'butterflies' of Mary's later expedition.

And yet, just as her experience with the radiates strengthens Mary's resignation to her own binary nature, this condemnation of excessive empathy is also given justification within the text: during the graft experiment, for example, Mary's connection with her symbiont is indeed as strong as she had suggested it might be with a woman, but the bond becomes so overwhelmingly close that Mary's behaviour is completely changed by it, just as Pete had feared, and the same goes for the other female hosts and their grafts. Mary ends up embarrassing herself and having to be forcibly restrained as her graft is cut off, while her non-human co-experimenters are even worse off: one of the jackals requires an operation for ovary removal and the other dies, both having been hormonally influenced to enter water and be accidentally fertilised by the foreign body. The suggestion, again, is that a superior ability to empathise is both a laudable trait specific to women and non-human females, as well as simultaneously being somehow atavistic and even dangerous. In fact, if anything, the text overall dwells disproportionately on such communication *failures* that emerge through women's apparent tendency to over-empathise: most of the novel is taken up with the description of the failed butterfly-planet expedition (described in four chapters out of fourteen) as well as the failed graft experiment (also four chapters), both of which are projects taken on exclusively or almost exclusively by women and become catastrophic failures due to empathetic over-identification with the non-human other.

As such, despite all its focus on homeostatic stabilisation, the Terran society of *Memoirs* cannot seem to find a healthy balance between feminist sensibility and utopian 'rationality', a disjunction that is expressed in the diametrically opposed poles of Terrans both finding fierce feminist pride in empathetic communication and deriding it entirely, or in the unstable dichotomy between relating to others as closely as possible and punishing individuals for doing just that. This reinforced black-and-white thinking, however, inhibits both the stability of individual personality that is seen as essential to the Terrans' space travel, as well as prohibiting the truly equity-based, judgement-free relations with non-human – and indeed, human – others that ecofeminist philosophers advocate and that could otherwise possibly lead to the emergence of further utopian developments via free-flowing feedback, as in the critical utopias.

Finally, even the supposedly free flow of space travel apparently suffers from this contradictory binary thinking within the Terran utopia, which also leads to new barriers that are indeed *enabled* by the very things that supposedly make this society utopian: most notably, the fact that the majority of Terran adults are explorers means that those left behind on Terra are genuinely pitied, which is why being made a 'prisoner of time' on their home planet is perceived as such a punishment for people like Françoise. Mary goes so far as to speak of this as being 'wingless in the Galaxy', doomed to ordinary life on 'dull, safe old Terra' (125). Indeed, Mary also declares that 'space travel is obviously the most expensive thing we do, though, of course, the most worthwhile' (140); however, while becoming an explorer is represented as a

straightforward career choice, there remains a bitter aftertaste of privileged bias in Mary's implicit disparagement of all other career paths.

As a result, as in the traditional utopias discussed before, it seems that this utopia is in fact not a utopia for all – women and men, human and non-human – but in fact only for the privileged subset of people (though presumably substantial in number) who are able and allowed to become explorers, and who then also do not fall into Terra's complicated traps surrounding sexism and empathy and perhaps even become 'grounded' again due to overly empathetic behaviour. It is only these privileged individuals, after all, who are able to lead the lives of travel and research that are here seen as most worthwhile, and who benefit from their society's main utopian innovation of time blackouts, thus gaining both subjectively longer lives and near-total freedom from childcare. All other Terrans, in whatever number, are mere 'prisoners of time' not only in they cannot escape the relentless march of clock time, but that they lack the *control* over their own temporal experience that the explorers enjoy. As such, the temporal manipulation of the critical utopias – the nonlinear travel within four-dimensional reality that gives them their critical urgency and interconnected sense of agency – is here merely a tool of the already privileged, in a more recent twist on the privilege-based focus of the traditional utopias. It is only these individuals, after all, who are allowed to 'steep' themselves in '3D and 4D' as part of their travel preparations, which also include practising 'taking bizarre points of view', before they venture out to 'the other worlds waiting' (17) – worlds which their time-bound fellow Terrans will never see. Indeed, this privilege is evident in the very language of the text itself: while the explorers may take on other points of view, the first-person narrative perspective of *Memoirs* is very firmly that of Mary – someone who is so defined by her identity as an explorer that she cannot fathom her reader being someone in a less privileged position. Indeed, some phrases addressed to the reader, such as 'got there?' (20), directly suggest that the reader is a Terran explorer as well. And yet, the self-evidence of the reader's shared privileged position – and even of Terran reality itself – that is implied through this language does not carry the same weight that the self-evidence of a feminist utopia based on communications holds here, in *Memoirs'* re-casting of intellectual history on these terms; instead, combined with the evident exclusivity of the explorers' position, the effect here is one of slight alienation.

In the end, it thus seems that *Memoirs* has both erected new barriers and allowed the resulting social structure to become set in its ways – like those of the traditional utopias – despite its explicit focus on travel, communication and ethical relationships with those most unlike ourselves. Indeed, Parrinder describes space travel as a 'form of positive evolutionary adaptation',[601] but in terms of social evolution, Terran society has in fact closed itself off to adaptation, particularly of the complexity-based variety: after all, space travel here represents feedback routes whose exclusivity ultimately belies their ability to carry free-flowing information, while further connections are shut down through sexist and anthropocentric discrimination before they can begin. As such, the Terran network precludes its own autopoiesis as well as any significant further utopian development based on non-linear, feedback-generated

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[601] Parrinder, p. 74.

cruxes, focusing instead on maintaining equilibrium within the 'stable' quality of life of its most privileged inhabitants. Any significant change, after all, would be a dangerous disturbance in Cannon's terms, given that the overall system is not kept open enough – both within and outside of its Terran basis – to re-calibrate itself through positive feedback as well as negative. In the end, then, the Terrans find themselves in the very position to which Mary attributes the physical features of the Epsies she so abhors: 'once evolution has gone so far in a certain direction', she suggests, 'one cannot do much about it, as many forms have found to their cost. The patterns harden; mutations cannot change the structure' (33). Likewise, *Memoirs'* Terrans, who see themselves as barrier-breaking communicators, have in fact built new walls that are essentially insurmountable, 'harden[ing] patterns' – yet they still think themselves 'fine as they [are]' (33), just as the Epsies do. Overall, therefore, despite their laudable attempts at ethical posthuman relations and their feminist convictions, the Terrans are firmly walled in at the deadeningly homeostatic 'point of rest or stability' that Kumar deems incompatible with a scientifically-minded and thus change-oriented utopia, neither of which *Memoirs* accordingly represents in its essentially unchangeable and thus not-quite-complex structure.[602]

Self-Organisation, Symbiosis and Control in Joan Slonczewski's *A Door into Ocean*:

While *Memoirs* thus tries and fails to sustain an interplanetary posthuman ethics on a sustainable basis, Slonczewski's *Ocean* seems to pursue a similar goal on a smaller scale, within the realm of the biosphere on the planet Shora; as such, whereas *Memoirs* reflects the peak of interest in space travel in the 1960s, *Ocean* situates itself within the vein of rising ecofeminist awareness in the 1980s. Though its setting is more fantastical than science-fictional in that Shora is a far-off planet with no causal links to our zero world, its utopia is nevertheless an interesting object of study in relation to complex utopian models, given that it represents the flux of complexity in many elements of its functioning, as well as apparently extending it into both co-operation and symbiosis with its non-human environment. In what is thus arguably a further step on from the posthuman relations of *Memoirs, Ocean* seems to attempt an even more holistically connected and co-operative utopian network on feminist principles of communication and relational subjectivity. Additionally, despite its spatiotemporal isolation from our world, *Ocean* is notable in that it also employs these principles in its defence against outside threats, which in themselves strengthens our understanding of its networked relations as well as their shortcomings, as we shall see. However, it is in the Sharers' structural utopian functioning that, once again, our main interest lies; therefore, despite the importance of the relationship between humans and their non-human environment in this text, we shall begin this analysis with a description of the functioning of its utopian society on a *human* level, since it is here that its fluxed-based relations become more evident. Later on, we shall see how this both ties in with and fundamentally informs the relationship of these utopians with the non-human.

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[602] Krishan Kumar, *Utopianism*, p. 59.

In their basic social functioning, the Sharers, a large community of amethyst-coloured women who inhabit the post-apocalyptic ocean planet of Shora, indeed seem to exhibit the very feedback-based, non-hierarchical self-organisation that characterises the complex critical utopia. The only descendants of the 'Primes', an ancient race of sophisticated humans, the Sharers have survived and thrived by managing their affairs through non-hierarchical 'Gatherings' that are held regularly in every raft community and include all mature adults, or 'self-namers': those individuals who have chosen a self-deprecating name for themselves in order to demonstrate their self-awareness and emotional maturity. In classic bottom-up fashion, then, all decisions taken in the Gatherings must be arrived at communally via complete consensus. This gives them a strong collective quality, allowing the Gatherings to see themselves as 'Shora Herself' (245, 257); moreover, it allows self-organisation to arise as an emergent property of the feedback that constitutes the decision-making process – a process that produces only decisions supported by unity and a feeling of personal responsibility on the part of each self-namer.[603] In the place of a designated political leader, there is only a 'wordweaver', Merwen, who takes her impartial role as a discussion-facilitator very seriously – occasionally 'remind[ing] herself that as a wordweaver she [has] to weave not just her own words but those of all others into a truth that all [can] share' (75). Communication is thus clearly seen to be as central to the Sharer society as it is to the Terrans of *Memoirs*; and indeed, unlike in *Memoirs,* we are shown its successful functioning in a non-hierarchical government. Moreover, also unlike in *Memoirs*, there is no sexist connotation to this focus, given that the Sharers are an all-female society; this can in itself be seen as unsustainable and thus problematic in terms of sustained complex functioning, of course, but I shall leave that discussion for another time. In any case, this apparent lack of boundaries is also evident in the Sharers' job-sharing, which reflects that of the critical utopias: Merwen, for example, also has several other occupations that she pursues in accordance with their necessity for the community, as does everyone else. Though some Sharers are drawn primarily to one occupation, most spend their time working on whatever task within their skillset is currently required on Shora – be it the repair of housing, the preparation of food, or the broadcasting of news through an underwater system involving the song of massive 'starworms'. Rather than defining themselves through their occupations, the Sharers thus demonstrate the flexibility characteristic of individual elements within a complex system, living by the adage 'we are what we need to be' (14).

Indeed, general openness towards change and development is of vital importance to the Sharers, thus suggesting an embrace of positive, crux-forming feedback, unlike in *Memoirs.* The Sharers' precarious placement in ever-changing seas in itself dictates the virtue of adaptability, for example, as they are frequently forced to rebuild their houses from scratch after storms; likewise, they attach great importance to mental flexibility and keeping an open mind, for example by encouraging life-long learning (87). Overall, then, the gently flowing pace of life on Shora provides an excellent case study for the rhythms of complex systems, with the constant

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[603] All quotations from *A Door into Ocean* taken from Joan Slonczewski, *A Door into Ocean* (London: The Women's Press, 1987).

flow of energy they require to be maintained. Indeed, the actions of Sharers are often directly described in terms related to dynamic, flowing movement to indicate the women's ability to cope with change and assert themselves: their minds 'flow' (44), they are 'drifting' rather than 'swimming' when they feel uncertain (309), and one Sharer distances herself from another by stating 'I swim a different stream' (309). This fluidity, then, directly symbolises and appears to embody the free passage of negative feedback relationships that must be in place for true development and change, as described above, to emerge, while moreover suggesting the vitality of autopoietic self-regulation that is missing from the Terran society of *Memoirs*. In fact, even the Sharers' communal name relates to both the flow of energy in their community and to a sense of interpersonal feminist subjectivity: their language and philosophy revolve around sharing, or the notion that because 'each force has an equal and opposite force', what you do to others is at the same time done to you (36). As Slonczewski writes on her academic web page, 'the deconstruction of polarities is mediated in part by the unique language of the Sharers which conflates subject and object',[604] and which thus gives rise to verbs as actions that are 'shared', with consequences that go in both directions: loving is replaced by 'lovesharing', for example, learning by 'learnsharing', and even judging someone becomes 'sharing judgement'.

This philosophy, then, sets the Sharers at odds with their neighbouring planet, Valedon, and it is this juxtaposition which gives rise to the main events of the narrative, and in which, indeed, certain inconsistencies in the flux-based nature of the Sharers' philosophy begin to appear. Merwen and her 'lovesharer', Usha, travel to Valedon to gain a greater understanding of their neighbours, with whom they have an uneasy trading relationship, to 'share judgement' with them – a connection that is in fact a far more explicitly integrative endeavour than the expeditions to other planets in *Memoirs*, and that perhaps even has colonialist overtones despite the Sharers' pacifism. After all, the Sharers are explicitly intent on exporting their own flux-based philosophy to Valedon, and there is, for example, no shared history such as between Urras and Anarres in *The Dispossessed* that would excuse such an attempt – which would certainly be deemed interference in *Memoirs* – as a well-intended gesture from within an established relationship. And indeed, the Sharers' efforts at connection fall somewhat flat: the only person willing to 'share' this endeavour is Spinel, a 'stonecutter's' son seeking opportunities, who ends up travelling back with Merwen and Usha to Shora. Attempting to integrate into Sharer society, Spinel is mystified by the peculiarities of the Sharers' language and challenges Merwen to defend them:

> 'Do you say "hitsharing", too? If I hit a rock with a chisel, does the rock hit me?'
> 'I would think so. Don't you feel it in your arm?'
> He frowned and sought a better example; it was so obvious, it was impossible to explain.
> 'I've got it: if Beryl bears a child, does the child bear Beryl? That's ridiculous.'
> 'A mother is born when her child comes.'
> 'Or if I swim in the sea, does the sea swim in me?
> 'Does it not?' Helpless he thought, She can't be that crazy. 'Please, you do know the difference, don't you?'
> 'Of course. What does it matter?' (36-7)

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[604] Joan Slonczewski, '*A Door into Ocean*: Study Guide'.

Unlike the Valans of Valedon, or indeed Jael of *The Female Man* or *Memoirs'* Terrans*, the Sharers clearly do not think in terms of cause and effect – their non-hierarchical perception of the world allows them to be aware of the multi-layered impact of action, whereas the Valans are bound by their binary-based structure of thought, just as Mary in *Memoirs* ends up caught in her society's black-and-white rigidified mental patterns. And yet, there is also a certain binary aspect to the Sharers' attempt to export this philosophy, as well as in the suspicion that it may strive for homeostatic balance rather than true openness.

In any case, however, this movement-based philosophy reflects the flux-based energy of the Sharers and their ever-changing seas, while the Valans literally and metaphorically live on a planet of stone: this is reflected in the latter's names and place names (Spinel, Beryl, Galena, Chrysoport), in the respected business of stonecutting in which Spinel aids his father, and in the 'stonesigns' that all working adults wear in order to signify their trade. To the Sharers, on the other hand, the very notion of 'stone' is frightening and repulsive, as it signifies 'never-life', and therefore stasis and death. Not only do they associate stone only with the floor of the ocean, where the dead sink, but the perfect rigidity of stone's molecular structure – and, indeed, perfection itself – are abhorrent and thanatoid to them, for 'only death achieves perfect balance among life's living molecules' (151). Indeed, despite previously mentioned reservations, this visceral rejection of rigid stasis thus seems to provide further evidence that the Sharers' social functioning must be fundamentally life-giving, and thus autopoietic in its very nature – at the very least in terms of open feedback relations on the level of basic self-regulation, though most likely also on the level of the crux-based amplification of positive feedback, given the emphasis on change and development in the society's general 'flux' described above.

In fact, it is the tension between ideologies of stasis and flux that makes up the main plot of *Ocean*, which largely does not give further indication of any problematic aspects to the Sharers' philosophy. The storyline that follows, though driven by Merwen's adoption of the Valan Spinel into the Shoran community, is dominated by the invasion of Shora by Valans who are intent on controlling the natives in order to eventually exploit their planet's natural resources – primarily the untapped seabed of stone – and thus by the clash between the dynamic, life-affirming philosophy of the Sharers and the profit-driven, cause-and-effect rigidity of thought of the invaders. These Valans act in the name of the Patriarch, the galactic ruler resident on a distant planet, who controls all other planets in Shora's vicinity with the help of envoys. When the envoy to Valedon, appropriately named 'Malachite', visits Shora in order to gather intelligence, his pride in the 'perfection' of the Patriarch is met with abhorrence due to its association with stasis and thus death among the Sharers: in response to Malachite's reference to him as the 'perfect judge of humankind', Merwen remarks 'Then he must be dead', and elaborates, 'Listen, […] What is the name of the perfect good? Is it freedom? Perfect freedom is death. Is it peace? Perfect peace is death. Is it love? Perfect love is to choose death, that others may live' (151). Later on, Merwen is moreover horrified to hear that Malachite himself is a robot – made of 'coldstone' – and thus the very embodiment of the death-like perfection that the Sharers abhor, threatening to disrupt the Sharers' own flux-based living system on Shora.

And yet, when the Valans, under the leadership of the general Realgar, attempt to subdue the Sharers by using force in order to capitalise on their fear of death, they are puzzled to find that their strategies are fruitless, as it is not in fact *death itself* that the Sharers fear, but the state of *having never been alive* and filled with life force, as Usha tells Spinel when he enquires about the Sharers' aversion to stone:

> 'People fear stone,' Usha said, 'because it contains never-life.'
> 'Non-life? You mean, death?'
> 'Nonsense,' she repeated vehemently. 'What's to fear about death? Death is natural. Stone is *never*-life.' (101)

As such, there also appears to be an element of holistic four-dimensional thinking to the philosophy of the Sharers, as in the critical utopias and *Memoirs*, in that it is not necessarily what happens *now* that is of primary or exclusive relevance, but of what occurs in the overall shape of time: a system embodies life if it has the *capacity* to generate it, even if certain elements within the system may not be living at the present moment. Indeed, this also suggests an element of selfless identification with the communal whole, in that individual lives are sacrificed to the life of the community; however, the key difference to the individual autopoietic subordination that Cannon and Maturana describe is here apparently that this process occurs through the *free will* of the individuals in question, who are acting on their most deeply held principles of communal interconnectivity and solidarity.

In any case, the Sharers' philosophy is deeply at odds with that of the Valans. Death and the fear of death are the only weapons that the subjects of the Patriarch understand; as a result, they are confused when their violent tactics elicit only non-violent resistance from the pacifist Sharers, who protest the Valans' imprisonment of some of their number with peaceful tactics such as silent witnessing and the adoption of 'whitetrance', a deep meditative state that allows its practitioner freedom from pain, yet can easily lead to self-induced death. This state, indeed, could be read as a method for the Sharers to concentrate their efforts on individual autopoietic homeostasis on the most basic level, ensuring survival as far as possible at times when the positive feedback relations of everyday utopian life are not feasible; again, death is acceptable to the Sharers to a certain degree, but that does not mean it is their first resort. In this way, then, the Sharers are able to preserve their integrity and resist the oppressive regime of the Valans by refusing to participate in their forced actions – despite, moreover, never being fully able to understand the Valans' objectives, whose one-sidedness is entirely at odds with Sharer philosophy and therefore incomprehensible to them. And indeed, the eventual departure of the Valan invaders at the story's conclusion is ostensibly a testament to the success of the integrity of the Sharer's flux-based self-organisation, while simultaneously being greatly at odds with the Valans' persistent belief that the Sharers' deaths are in fact a sign of the impending victory of their own system: as Realgar notes at the height of the conflict, 'around the planet, hundreds were dying daily [...] the Sardish machine was in control' (346).

In fact, that the Valans eventually leave Shora is not actually a clear and direct result of any action on the part of the Sharers: in a highly uncharacteristic move, Realgar ends up resisting an order from Malachite to wipe the Sharers out completely, and resigns his position before

returning to Valedon. This leads Peter Fitting to remark that 'the novel's positive ending is misleading', as 'the women do nothing to repel the invaders, and it is the Valans' own fear about what the women could do that drives them from the planet' (346). However, it is incorrect that the women 'do nothing', though their methods are indeed passive: they have previously used their aforementioned 'lifeshaping' skills of genetic engineering as part of their passive resistance to exploitative traders, for example through insect infestations, and Realgar's change of mind could be seen as precipitated by the fear of what could happen if the Shapers unleash the full extent of this power. One of his men, in fact, believes that they are all 'hostage to lifeshaped pathogens, already "living dead," contaminated with the seeds of our own destruction—which only *they* can cure' (392-3). This fear is unfounded, and yet, the Valans' departure – and the fact that several Valan invaders begin to resist Realgar's commands even before this point – represents clear evidence of the persuasive power that the Sharers' non-violent co-operative system has over these soldiers. As Realgar resigns, he even goes so far as to call the Patriarch's regime into question in front of his superior, pointing out that they as Valans could, in fact, resist their overlord's control just as the Sharers have been resisting that of the Valans: 'Why do we have to bow and scrape to the Patriarch's servo every decade? [...] If every planet in the Patriarchy refused to be ruled, *we all would be free*' (393). Ultimately, then, the peaceful defence mechanism of the Sharers' self-regulating community can be seen as successful, albeit in a less overt way than Fitting might have expected – it is a triumph of ideas rather than a triumph of force; and indeed, to expect a triumph of force from a community whose internal workings are seemingly premised on the dynamic flow of complexity, rather than on direct forces of cause and effect, is arguably to fundamentally undervalue the power of such an approach. Moreover, it is a further testament to the apparent self-regulatory strength of the Sharers' community that this resistance happens in accordance with their *pacifist* principles: despite their well-functioning and flexible social organisations, after all, the complex utopian societies of *The Female Man*, *Woman*, and *Memoirs* all rely on the option of violence as a last-resort defence, with even Mary of *Memoirs* carrying weapons to use on non-human others in case of a disastrous breakdown in communication. The Sharers of *Ocean*, on the other hand, are intent on not reflecting the violence of those who would subdue them, which adds a further interesting element to their complex self-organisation.

Ocean's main storyline, then, can be read as a case study of a complex adaptive system overcoming an external disturbance by stepping up its internal feedback systems in order to eventually achieve at least its most basic homeostatic self-regulation once more. However, as suggested, the Sharers' community does not indeed function through negative feedback alone; at times when social functioning is not reduced to basic survival as through 'whitetrance', fundamentally utopian crux-based emergence, evidence of positive feedback, can be seen in such innovations as the immensely sophisticated practice of 'lifeshaping', which again represents the main scientific advance on Shora, and which has allowed the Sharers to adapt both themselves and various other occupants of the planet over time in order to facilitate their utopian lives. The extra-long webbed fingers and toes that they have developed in this way, for

example, help them to swim, while their communication system between rafts consists of messages passed by genetically engineered 'clickflies', which store information in their chromosomes (116), as well as the song of the massive starworms. In addition, they have programmed their environment to serve as both learning and teaching equipment and as giant memory storage devices: the clickflies spin incredibly sophisticated webs which aid the Sharers in their nightly 'learnsharing', and the living rafts contain the DNA of all Shora's inhabitants – 'every living cell of every raft held a library within its genes, millions of units within a cell too small to see' (268). This stands in stark contrast to the Valans' unsophisticated technology, which appears comparable with that of our present day. Indeed, when Merwen is forced to recover in an impromptu Valan hospital on Shora, she is horrified at the basic equipment and techniques used, which pale in comparison with the Sharers' medical sophistication, as evidenced for example in their ability to regrow human flesh with the aid of other organisms: 'Cutting? To repair?', she asks, 'Why not program a virus to tell the cells how to heal?' (352). In fact, progress in science is explicitly discouraged on Valedon – not a surprising state of affairs given its submissive position with regard to the all-controlling Patriarch on Torr (212). Moreover, the practice of lifeshaping stands in contrast to both the critical utopias and *Memoirs* in that the residents of this utopia not only use their technological innovations to directly impact and improve their *own* lives, as utopians do through the brooders and kenner of *Woman* and the induction helmets of *The Female Man*, but they attempt to do the same to the very environment in which they live, including non-human animals. As such, it seems that the Sharers fully include their non-human co-inhabitants in their holistic utopian web, not only in terms of holistic awareness as in the critical utopias, or in terms of cooperation as in *Memoirs*, but in terms of posthuman symbiotic co-existence made possible through utopian technology.

Indeed, this technological integration explicitly serves to broaden and highlight the Sharers' own holistic cosmology as merely forming part of a complex web of existence: as Sherryl Vint writes, 'their ecofeminist technology is based on ways of working with the natural capacities of other species and a sense of themselves as part of a larger web of life'.[605] As such, the Sharers treasure being part of 'one sea of life' (259), as Merwen says, and accordingly also match their genetic integration with their non-human co-utopians through more direct co-operation of the kind described in *Memoirs*: for example, they travel great distances by harnessing the powerful 'rocket squid' (69), and they rely so heavily on their starworm-based communication system that its cessation feels to one Sharer 'as if she had lost her own ears' (219). In the end, then, this idea of shared existence extends so far that even the violent 'fleshborers' are accepted and respected by the Sharers – despite their one-sided un-cooperative and predatory behaviour – as are the massive 'seaswallowers' (123), red-blooded cephalopods,[606] despite the fact that the latter's twice-yearly migration from pole to pole causes great destruction to the Sharer rafts. As Merwen explains to Spinel, even behaviour that is on the surface level harmful to certain elements of the complex biosphere can play an important

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[605] Sherryl Vint, 'Animal Studies in the Era of Biopower', p. 447.
[606] I.e., of the class of marine mammals that includes squid and octopi.

role in the system, given its delicate life-generating balance: Spinel asks why Merwen is spreading 'fingershells' in a raft's undergrowth, and Merwen replies,

> 'Fingershells eat parasites that ravage the silkweed when they grow too many.'
> 'So why not spray the raft with something to clear out the pests?'
> 'Then seasilk would choke the raft. And fingershells would go hungry, and tubeworms die of the poison; then fish and octopus would have nothing, and what would Sharers eat?' (60)

It is in this non-judgemental co-operation and co-existence of species, then, that *Ocean* seems to display utopian ethics of complexity, with the Sharers approaching their non-human co-utopians on terms of equality as well as with what appears to be an ecofeminist acceptance of difference – thereby, indeed, seemingly embracing 'entangled empathy' on Gruen's terms. Vint, in fact, terms *Ocean* a 'new political fable [...] about sovereignty, agency, and ethics', and relates the rebalancing of power we have previously identified in complexity-based ethical systems to Derrida's reading of sovereignty as groundlessly claiming the precedence of human life over animal life: Vint suggests that because the state of being *human* rather than animal on Shora is linked to the inability to kill, the human/animal divide in this world is premised on compassion rather than sovereignty.[607] This suggestion, then, again speaks to a strength of the Sharers' apparent complex system that relies more on communality than individual force and agency: while *Woman*, for example, is premised on the power of individual action to bring about utopia for all, which includes the possibility of violence, it seems that a more 'passive' yet equally strong compassion-based system is seen as sufficient to uphold the functioning of the Shoran utopian system. In this, it more clearly appears to embody what Wolfe, again, terms an ethics 'based not on ability, agency, and empowerment but on a compassion that is rooted in vulnerability and passivity',[608] while simultaneously indicating that this 'passivity' in no way signifies a lack of power.

And yet, Laurel Bollinger grounds the moral and political relationship of the Sharers with their environment in quite a different manner, which in turn suggests a slightly different approach to an understanding of Shoran complexity and power relations. She focuses on the 'breathmicrobes' that the Sharers, as part of their carefully executed physical adaptation to Shora, have allowed to live in their skin, and thus exist in symbiosis with; these help the women breathe for longer periods underwater, and also have the side effect of turning their skin the characteristic purple shade that visibly marks them as so entirely integrated with their environment. In any case, this clearly distinguishes the Sharers from the Valan invaders, who are terrified of being 'infected' in the same way, while the Valans who side with the Sharers – Lady Berenice, who is Realgar's fiancée, and Spinel – show their solidarity with the Sharers' aims and lifestyle by allowing the process to occur on their own skin. In fact, Bollinger goes so far as to claim that 'Slonczewski's Sharers define their identity and religion in terms of microbes',[609] much as the utopians in *Woman* define theirs in terms of being 'partners with water, air, birds, fish, trees' (132); for this, Bollinger cites as evidence the following passage, in which Lady

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[607] Vint, p. 446.
[608] Cary Wolfe, *What is Posthumanism?,* p. 141.
[609] Laurel Bollinger, 'Containing Multitudes: Revisiting the Infection Metaphor in Science Fiction', p. 386.

Berenice attempts to explain the Sharers' fear of stone to Spinel: 'Sharers ... envision a life force, a sort of living ether, that pervades every atom of their universe. Each drop of water, each breath of air, holds a thousand bits of life in it, growing and struggling' (102). This emphasis on co-operative symbiosis, then, can be seen both as further evidence of collective autopoiesis, given the multiple mentions of 'life', and as a further indication of advanced utopian complexity, in that it might be read as an example of the 'social evolution' that characterises the critical utopias, yet not *Memoirs*. Once again, Margulis claims that 'the formation of new composite entities through the symbiosis of formerly independent organisms has been the more powerful and more important evolutionary force',[610] speaking for example of the 'merged organisms' made up of early mitochondria that 'went on to evolve into more complex oxygen-breathing forms of life': 'here, then', she says, 'was an evolutionary mechanism more sudden than mutation: a symbiotic alliance that becomes permanent'.[611] On the other hand, the Valans' fear of being 'infected' through such a deep merging with the other seems to indicate the brittle rigidity of their own sense of self: they are mainly afraid of the breathmicrobes because they identify them with illness, but one might extrapolate that on a higher level, they are so insecure in their sense of self upheld by coercion-based power structures that they are afraid that any close contact with 'lesser' others could threaten their precarious status, rather than leading to something greater and stronger through co-operation. In a way, this also recalls Mary's 'humiliation' in *Memoirs* regarding 'going into relation with an unintelligent form of life' (52): she is afraid that she herself might be seen as less intelligent and thus less deserving of respect if she 'lowers' herself to someone else's 'inferior' position. However, of course, such an approach is not sustainable, and once again, such complete integration appears to strengthen the Sharers rather than weakening them, as their strength lies in the very connections of their community that they are thus further enforcing; and neither, indeed, does it seem to take away from their humanity, as previously defined. In fact, it is within such evolutionary symbiosis that Bollinger *locates* the Sharers' humanity, in disagreement with Vint: where Vint singles out their stated ability to kill and yet remain human, Bollinger points to passages in which Sharers question the humanity of their Valan invaders because of their refusal to be infected by the breathmicrobes.[612] She concludes from this that

> In *A Door Into Ocean* Slonczewski constructs infection as a necessary, even essential, means of enabling individuals to become truly human, and because her focus and sympathy remain so fully with the Sharers, readers are inevitably drawn to that definition and away from the Valans' more negative response to microbes.[613]

Ultimately, then, Bollinger sees *Ocean* as coming quite close to 'imagining the full potential for transformative embodiment microbes offer' in this favourable account: 'Far from constructing microbes as contagions to be evaded even at the cost of bodily death, the novel envisions microbes as supporting an all-female culture in its efforts to express the linked ideas of

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[610] Capra, p. 226.
[611] Margulis and Sagan, p. 17.
[612] See *Ocean*, pp. 25, 58, 98.
[613] Bollinger, p. 388.

nonviolence and eco-sustainability'.[614] Indeed, it can also be argued that *Ocean* thereby comes closest, among all the feminist utopias discussed thus far, to representing a fully holistically integrative complex system in its essence, given that co-operation goes here to the very deepest level of life's biological makeup.

And yet, if we are to see the network of microbes, animals and humans on Shora as essential to its pacifist eco-feminist philosophy – and indeed as part of an enlarged complex adaptive system that is perhaps driven by shared values or attractors of compassion, nonviolence and sustainability – it seems somewhat odd to focus on the importance of being *human*, as both Vint and Bollinger do. The notion of 'humanity' is perhaps helpful in the illustration of the compassionate attitude that the Sharers hold towards their fellow-beings, but it seems contradictory for a social system that values inter-species empathy and co-operation to at the same time stress the distinction between humans and non-humans in the way that Vint and Bollinger suggest. Indeed, it seems directly at odds with any ecofeminist ethics that calls for moral behaviour regardless of the other's species or ability to empathise, such as Gruen's 'entangled empathy', despite the previous indications that just such an ethical framework formed the heart of Shoran communal life. However, this focus is not an overstatement on Vint and Bollinger's part – in fact, the distinction is central to the narrative: for one, Merwen adopts Spinel in part to demonstrate his humanity to her fellow Sharers (290), and the Valans themselves, who used to identify the Sharers as non-human parts of the local fauna (243), justify their violent treatment of these people by regarding them as 'inhuman […] wild things' (299) and continuing to refer to them as 'catfish' (208).

Moreover, the Sharers themselves constantly debate the question of the humanity of the invading soldiers separately to that of Spinel (80) – if the Valans turn out not to be human in the Sharers' eyes, there is nothing to stop the Sharers using their lifeshaping skills to disable the occupation, as mentioned above; however, in the absence of certainty regarding this fact, the Valans are provisionally classified as human children who do not know their own actions and must thus be treated gently (80). In fact, there are *several* definitions of humanity that are mentioned throughout the text, wherein Bollinger's infection-based interpretation is only an implication; further definitions include 'having a soul', a state Merwen ultimately ascribes to Spinel (290); being 'aware of the universe, and self-aware' (354); and being able to 'share love', which Merwen recognises in General Realgar's apparent feelings for Lady Berenice, and which he immediately denies (377). The definition that Vint employs, however, which identifies humanity with the inability to kill, is certainly very important to the Sharers, as Merwen tells Realgar: when he asks her what would happen if the Valans taught the Sharers to kill, she answers 'we would be like animals again', and nearly adds 'like you' (354) – a very shocking statement indeed in a society seemingly premised on the moral equality between human and non-human animals. This intelligence, then, is employed by Realgar as a tactical tool in order to try to break the Sharers' resistance: he creates an image that makes it appear that Spinel has killed a Sharer, thus perhaps hoping to demonstrate to Merwen that no Valan can be human in

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[614] Bollinger, p. 384.

Sharer eyes, and thus compelling the Sharers to finally strike back against the invasion – a move that would, in turn, enable the Valans to obliterate the Sharers without guilt. Merwen is shocked and confused; however, Realgar's deception does not have the consequence he intends, as several Valan soldiers have at this stage already refused to kill Sharers directly in the face of their non-violent resistance, thus proving themselves human by 'not-killing' – 'after all, who ever heard of a fleshborer who learned not to hasten death?' (385)

Up until this point, though, the fate of the Valans at Sharer hands is not certain – Lady Berenice's assertion to the Valans that 'so long as Sharers know that you are *human*, you have nothing to fear from Shora' (132), has a threatening ring to it, almost inviting the Valans' later fear that the Sharers are 'a people whose weapons are too deadly to be used' (349). In fact, the Sharers end up maintaining their peaceful resistance until the Valans have left on their own accord, thus validating one soldier's claim that 'Sharers never take *any* action toward you which they would not gladly accept for themselves' (349). However, this principle, if in fact true in practice as well as in theory, as described above, appears to apply *only to fellow humans* – the Sharers' definition of humanity as being able to not-kill does *not* include the not-killing of non-human animals, as evidenced by the fact that most Sharers eat fish and other fellow members of the 'one sea of life' (84) (thus recalling the moral difficulty of temporary carnivorism on *Memoirs'* Terra), and the Valans appear to face a similar fate if their humanity cannot be proven. In the heated debates in the Gatherings regarding this matter, the Valans' presence is in fact seen as a threat to all creatures of Shora ('from snail to swallower, not one is untouched by the Valan pestilence!', 309), which again might be tolerated or even embraced just as the disruptive presence of the fleshborers and seaswallowers is; however, the Sharers' generally highly pacifist approach suddenly becomes tilted towards aggression, even including threats of death, in light of the Valans' possible non-human status. It turns out, in fact, that the Sharer philosophy is clearly not only one that is far more based on reciprocity than non-judgemental care, after all, but also one that apparently does not hold across species lines:

> 'Death hastens those who hasten death,' someone murmured. 'What other response can there be?'
> 'Exactly,' said Yinevra. 'That is why the death-hasteners must die. As humans, in spirit, they have already died. Their race has regressed and decayed.' (310)

Merwen alone, the voice of peace and reason, seems to uphold the values of compassion and nonviolence that Vint and Bollinger identify as fundamental to the Sharers' utopia – she manages to derail the Gathering's violent agitation merely by pointing out that the Valans' terrible violence is mirrored in what she has just heard (310). Crucially, Merwen is also one of the only Sharers to refrain from the killing of fish and other creatures on Shora, as she is a vegetarian and refuses to eat her 'lesser sisterlings' (235): here, unlike in *Memoirs,* moral conviction underlies this dietary choice, which is made all the more ethically critical considering the lesser sisterlings' moral status. Moreover, Merwen is alone in wondering about the existence of 'in-between humans' after encountering more human-like animals on Valedon than she has seen on Shora: 'did they have minds and souls, in-between souls?' (259) And yet, this again points to ethical difficulties, as it once more suggests not, in fact, Gruen's 'entangled empathy', but Gomel's

'paradox of posthumanism' that only non-human others that appear capable of meeting certain requirements, including being able to display empathy, are worthy of kind moral treatment. It thus also reflects Mary's preoccupation with perceived intelligence in *Memoirs*: having a 'soul', after all, does not entail the presence of truly morally relevant criteria, for example that of being sentient or being able to feel pain, just as the concept of 'intelligence' appears largely irrelevant to one's deserving moral treatment. All these considerations, in any case, seem incompatible with a feminist ethics of care which is truly predicated on compassion rather than perceived moral desert.

As such, in arising from the Sharers' de-facto moral leader, these deliberations on Merwen's part also seem to point to a deeper general issue in the Sharers' apparently compassion-based utopia: if their sphere of care, their web of life, does indeed include the entire surrounding ecosystem of Shora as part of their complex adaptive system, then this clear focus on the pre-eminence of humanity creates an artificial and discomforting chasm in the wider supposed unity of the system. This chasm, indeed, goes beyond the threat of killing, which the Sharers at least attempt to atone for, as mentioned above; it also, and perhaps more importantly, includes the *manipulation* of their fellow creatures. This is evidenced, for example, in the Sharers' extensive lifeshaping to their own ends: for example, that of the message-delivering clickfly, of the mosses they use for healing, and presumably of other countless creatures and plants that surround them. Moreover, the Sharers' 'co-operation' with the larger fauna of the rocket squid and starworms is, on closer inspection, possibly very one-sided indeed, and could be seen as similarly exploitative: after all, the Sharers have no explicit communication system in place with either entity. Unlike the canines in *Memoirs*, for example, the rocket squid and starworms therefore cannot explicitly express consent to being harnessed or used as a messaging service, respectively; and indeed, there is no other clear indication that this consent is present.

In fact, this apparent manipulation necessarily extends to the very substance of the planet itself – as Slonczewski herself admits on her academic page, Shora must have been extensively terraformed in order for the Sharers to survive there to begin with:

> An aspect of evolution not discussed in *A Door into Ocean* is that of biochemical compatibility between Earth creatures and those of an alien biosphere. In *A Door into Ocean*, Spinel from Valedon can immediately eat and enjoy the plants and animals of Shora, many of which resemble Earth organisms. Apparently they all contain DNA and the same twenty amino acids that make up our proteins, the building blocks of terrestrial life. This can only be explained if the Sharers have systematically replaced most, if not all, of the pre-existing ecosystem of Shora with Earth-evolved organisms—in other words, in their own way they must have terraformed Shora, just as Valedon was terraformed. This problem bothered me...[615]

It seems, then, that the extended complex system of Shora is in fact after all one in which there is a great deal of *control*, which in turn fundamentally hinders the free feedback of its apparent complexity, despite the fact that it is not as overt as that of the coercively homeostatic traditional utopias described before; as such, our previous concerns regarding the slightly colonialist

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[615] Slonczewski, 'Study Guide'.

overtones of the Sharers' judgement-sharing, as well as regarding the somewhat binary and overly homeostatic nature of their 'sharing' philosophy, appear to have been justified.[616] Symbiosis, it seems, does not necessarily entail respect and moral behaviour, while the 'paradox of posthumanism' in fact may not even represent a problem here because moral reciprocity is not sought in the first place: if, as seems to be the case, the non-human animals of Shora are primarily seen in terms of the *value* they provide for humans rather than in terms of equity-based co-existence and true co-operation, then it is indeed *irrelevant* to the Sharers whether these individuals appear capable of empathy. In any case, they will not in turn be treated empathetically by what is essentially, and in practice, the dominant species. *Memoirs* may reintroduce hierarchical thinking into its otherwise complex ethical system in various ways, but in *Ocean*, despite its deep interlinking of life forms and non-hierarchical human government, it seems that true equity-based ethics would require a fundamental paradigm shift in the Sharers' assumed exceptionalism; control here is after all not inadvertent, but fundamentally part of their social structure and utopian innovation, right down to genetic interference. Again, then, this recalls the homeostatic coercion described previously in traditional utopias, and as in their cases, appears to undermine social autopoiesis and sustainability, after all; unlike the traditional utopias, however, *Ocean* thereby displays an inherent contradiction with its own apparent ecofeminist principles, while likewise ultimately undermining systemic eudaimonia for *all* inhabitants of utopia. This, in turn, means that the utopia is after all *unsustainable* despite its complex presentation, both in practical terms in that it might become unbalanced – for example, the rocket squid and starworms might rise up against their exploitation and attack the Sharers – but also on a theoretical level, in that its practices stem from a school of thought that sees the divisions between humans and nature as increasingly less relevant, yet it is just these divisions that are artificially upheld within its system.

Perhaps, indeed, the much-touted, and evidently problematic, humanity of the Sharers should therefore be primarily located not in their not-killing, and thus in their somewhat partial sense of compassion, but in their *self-control*, expressed by their ability to enter whitetrance, the deep meditative state that plays such a central role in their non-violent resistance. After all, they take care to teach it to their more favoured Valans, Lady Berenice and Spinel, and the inability of the other Valans to perform it is in fact the main proof of their lack of humanity that is brought up in the Gathering before their killing is advocated. As one Sharer remarks, 'Valans don't learn whitetrance, and they can't control their own pain. So how can they control anything else? Their souls are trapped by their shells' (309). If the Sharers' true humanity, as they define it, thus lies more in a sense of general control rather than in their advertised compassion, then control of others might ultimately be facilitated through this control of themselves. And indeed, unlike the related 'inknowing' of *Woman*'s Mattapoisett, which after all is predicated on a desire to 'root the forebrain back into a net of connecting' (148) and is described as the ability to 'feel with

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[616] This control is not something that can be shared, it seems: at the end of the Valans' occupation, Merwen diplomatically offers them the choice between returning home or staying and choosing self-names, thus assimilating themselves into the Sharers' system as full (human) participants – an assimilation that they would never be able to achieve, as both parties know (see *Ocean*, p. 260).

other beings' (147), whitetrance is in fact a highly individualist practice that moreover seems inaccessible to other life forms: it relies heavily on the Sharers' own life of the mind, yet is again denied their 'lesser sisterlings', and appears thus to merely be another form of coercion by the Sharers, even voluntary and self-focused, rather than a potential path towards true connection.

Bollinger, indeed, ends her own analysis by pointing out that the Sharers' openness to co-existence with microbes is compromised by their dependence on being able to 'evade the demands of the body' through whitetrance, which 'enacts an almost Cartesian split between mind and body'[617] and thus ultimately prevents the co-operative balance that could have otherwise also existed between them and others. She then in fact qualifies this by claiming that Slonczewski's shifting metaphor of infection might be read not as one of contagion, but of 'what one might hope to share',[618] which might again point to complex interconnectivity, instead. However, it appears that the damage is done in this respect: although the Sharers themselves seem convinced of their sharing-based philosophy and at peace with their own place in their ecosystem, they appear to be similarly misguided as to the complex sustainability of these arrangements as Slonczewski herself was in respect to her inadvertent implication of terraforming on Shora. As such, then, as in *Memoirs,* the complex functioning of the system, rooted in the basic homeostasis implied by the 'sharing' philosophy and whitetrance and leading to the crux-based creation of such innovations as lifeshaping, is fundamentally undermined by the coercion at the base of these operations. Free-flowing feedback is replaced with new hierarchies and control, which ultimately threaten the longer-term functioning of the system, including its ability to create further utopian crux-based change. Again, as in *Memoirs*, the best of intentions seem to have been at work here, both within *Ocean* and in its creation – after all, the Sharers are ultimately prepared to sacrifice themselves for the survival of the planet, and their pacifist resistance is successful against the Valans – but the outcome once again falls short of truly equity- and feedback-based ecofeminist complexity, which is particularly surprising given *Ocean*'s publication at the height of interest in ecofeminist philosophy. It seems, then, that there is still a waiting opportunity for a utopian model based on a posthumanist ethics of complexity which is held back neither by covert homeostasis, as present in the focus on 'stability' in *Memoirs* and the 'sharing' philosophy and equivalent self-control of whitetrance in *Ocean*, nor by renewed hierarchies, as between men, women and non-human aliens in *Memoirs* and between the Sharers and their non-human environment in *Ocean.* A truly sustainable complex utopia, after all, must be both based in fundamental equality among *all* elements of the system as well as open to fundamental change; it is only then that Kumar's 'point of rest and stability'[619] may be overcome in favour of a truly and inherently dynamic 'point of criticality' on utopian terms.

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[617] Bollinger, p. 388.
[618] Bollinger, p. 389.
[619] Krishan Kumar, *Utopianism*, p. 59.

Some Final Thoughts and the Posthuman Utopia in the Anthropocene:

In the preceding chapters, I have presented and defended the hypothesis that literary utopias are best understood as examples of science-fictional utopian thought experiments, and moreover as models whose success in terms of sustainability and eudaimonia for all members of the utopian society is most clearly visible in their structural interpretation through dynamism-based Bakhtinian chronotopes. Initially, I argued that the stasis and latent totalitarianism that has quite rightly been associated with certain well-known examples of traditional utopias can in fact be directly explained through the spatiotemporal isolation and internal rigidity that characterises closed homeostatic systems which are fundamentally incompatible with autopoiesis, and thus with organic life. Following this, I conversely identified the novels classified as critical utopias by Tom Moylan as ground-breaking in the history of utopian literature due to their functioning as literary examples of inherently dynamic, and thus 'living' and sustainable, complex adaptive systems – systems whose fundamentally coherent flexibility, inclusivity and resilience could provide valuable lessons in real-life governance and community-building. Accordingly, I presented the underlying structures of the utopian 'homeostatic chronotope' and 'complexity chronotope' as useful tools for our understanding of spatiotemporal systems in general that can be described as more or less successful, or even utopian, given their internal dynamic functioning; moreover, I further explored the boundaries of the complexity chronotope in more recent utopian fiction by investigating two additional utopian models that showed potential for even greater complex dynamic integration. However, these models fell short of complexity, and thus sustainability, in significant ways – therefore perhaps further underlining the singular importance of the critical utopias in representing sustainable complex utopianism, although further analysis of other recent utopian texts and their structural chronotopes would be beneficial in continuing to test this claim. At this stage, though, it does seem to be the case that the most successful examples of complex utopian structures could possibly be measured by their holistic integration of all living elements in the system, thus facilitating a constantly emerging and re-emerging renewal of life in its most sustainable form.

And yet, the difficulties that even such well-intentioned, equality-based utopian models as *Memoirs* and *Ocean* evidently retain in recreating, on *posthuman* terms, the complex dynamism of the critical utopias, are notable, and therefore perhaps worth dwelling on briefly in the remainder of this study. They bring to mind the fact that, just as with Slonczewski's inadvertent terraforming of Shora, we homo sapiens have in many ways – and far worse ways – likewise fundamentally shaped our planet, and indeed all of our complex biosphere of Gaia, to suit us, which has already had catastrophic consequences both for us and for our unwitting non-human 'co-Terrans'. Moreover, this may have already destroyed any chance in our own world of the complex and non-judgementally ethical co-existence beyond the boundaries of the human that Mitchison and Slonczewski at least attempt to envisage, and which are given shape in more limited human terms in the critical utopias through complex feedback relations. Indeed, the very complexity of our *own* system reinforces and magnifies errors leading to our unwitting (or semi-

witting) initiation of disastrous processes such as global heating, ozone depletion and acid rain; Deborah Danowski and Eduardo Viveiros de Castro in fact refer to this man-made deterioration of environmental conditions as driven by 'perverse feedback loops' in themselves.[620] Meanwhile, Dipesh Chakrabati speaks of the 'transformation of our species from a mere biological *agent* into a geological *force*'[621] – that is, into an element within the biosphere that is forcing its way through, rather than acting and reacting in harmony with the flux of environmental feedback.

Given this destruction, and the fact that we apparently find it difficult to even *imagine* utopian worlds in which we do not end up negatively impacting the non-human others that we insist – time and again – on seeing as somehow unworthy of ethical treatment, it might be worthwhile to take a step back and consider for a moment, reflecting on the utopian fiction we have thus far examined, whether it is perhaps *we humans* who are the problem – perhaps any kind of more perfect world *could* only exist if we extracted our arrogant and destructive human selves from the mix, and let everyone else get on with their lives. In *Memoirs*, Mary suggests that 'perhaps in another dozen generations or so we shall get to the point where we feel it is wrong to commit even the interference of being in an alien world', and adds that this 'would mean the end of space travel […] or would it?' (128 – 9). Likewise, having realised that *we* are the ones committing countless cases of harmful interference in our own multi-species environment, it stands to reason that we might seriously reconsider our domination of, and even presence in, our own 'Terran' ecosphere. Viewed dispassionately, indeed, this makes sense: Stengers, in fact, explicitly regards humans as 'the enemy' within Gaia, and Danowski and Viveiros term 'humankind itself […] a catastrophe: a sudden, devastating event in the planet's biological and geophysical history, one that will disappear much faster than the changes it will have occasioned in the Earth's thermodynamic regime and biological balance'.[622] Indeed, the positive feedback relations that are responsible for the creation of much utopian innovation and sustainable self-organisation in the complex critical utopias can also be responsible for the rapid self-amplification of *harmful* tendencies rather than qualitatively positive ones; in our own world, this is leading to such catastrophic cruxes as the tipping points we are already globally reaching in the ongoing climate catastrophe. As such, mankind may well already be on the quickest path to eliminating itself from the complex global system in which it is wreaking such havoc; in any case, Levi-Strauss suggests that 'the world and life started without us and will end without us',[623] which arguably is quite possibly for the best.

In fact, the sudden disappearance of all humans, due to any cause, is the thesis that underlies Alan Weisman's 2007 book *The World Without Us,* in which he explores in detail how various life forms and landscapes would indeed welcome the sudden disappearance of non-human life and quickly re-establish the thriving, complex interrelations that they enjoyed before we wrought destruction on them. It turns out, Weisman writes, that the only non-humans who

[620] Déborah Danowski and Eduardo Viveiros de Castro, *The Ends of the World,* p. 3.
[621] Dipesh Chakrabati, *'The Climate of History: Four Theses'* (2009), quoted in Danowski and de Castro, p. 14.
[622] Danowski and de Castro, p. 15.
[623] Danowski, p. 17.

would actually be worse off after our departure are those who 'cannot live without us because they've evolved to live *on* us':[624] the likes of head and body lice, follicle mites and gut bacteria. Apart from this small subset of living things, most life forms would indeed thrive in a world without us; in fact, Weisman's book beautifully describes a handful of the numerous other parts of the planet and ecosphere that have no dependence on us whatsoever, and that moreover clearly form their own self-organising complex systems which we regularly block and disturb through our presence: this includes everything from migration patterns, to the oxygen-ozone balance, to something as seemingly inconsequential as the rain and ground water cycle of the land on which New York City is built, which indeed already attempts to assert itself within its current confines: 'whenever it rains hard', Weisman writes,

> Sewers clog with storm debris [...] and the water, needing to go somewhere, plops down the nearest subway stairs. Add a nor'easter, and the surging Atlantic Ocean bangs against New York's water table until, in places like Water Street in lower Manhattan or Yankee Stadium in the Bronx, it backs up right into the tunnels, shutting everything down until it subsides.[625]

Given that we are thus, apparently, in many ways merely blocking elements to the natural feedback systems that would fully reassert themselves in our absence, it remains to ask what the best course of action would be so as to minimise this impact on a world that would most likely thrive without us. Eventually, of course, we will be forced out of the system in any case, given the speed of our current global destruction: regarding the waters of New York, for example, global heating is anticipated to make them warm and rise so quickly that at some point soon they 'simply won't subside',[626] as Weisman notes, and at this point our existence will be in peril in any case. However, there is even an ethical argument to be made, as Weisman notes, for the voluntary hastening of our departure: in fact, there are various movements that advocate this route, from the brutal 'Church of Euthanasia' advocating suicide and cannibalism down to the more level-headed 'Voluntary Human Extinction Movement', who simply urge humans to stop procreating. These are all options that would have as their eventual outcome a future in which our non-human environment could end up re-asserting itself in its full complexity and thriving. And yet, besides the cognitive dissonance required for the pursuit of one's own extinction, there are other issues with any kind of voluntary human disappearance: most notably, perhaps, that we humans are arguably not, in fact – contrary to what *Memoirs* and *Ocean* suggest – special or significantly different from our co-species in any fundamental way, despite our seemingly unique capacity to cause destruction. It is therefore arrogant to assume, just as Burling assumes that the future will provide no opportunities for mental time travel, that no other species would evolve to take our place as a violent, coercive and damage-wreaking dominant group: chimpanzees, for instance, demonstrate immense technical ingenuity, strategic intelligence and nigh-human levels of aggression and power struggles. Moreover, our replacement might come from outside of our current Gaian limits, just as Terrans explore other planets in *Memoirs* – and as Weisman points out, 'our seas, forests, and the creatures that dwell

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[624] Weisman, *The World Without Us*, p. 135.
[625] Weisman, p. 24.
[626] Weisman, p. 24.

in them might quickly prefer us to hyper-powered extraterrestrials who could stick an interstellar straw into the planetary ocean for the same purposes that induce us to siphon entire rivers out of their valleys'.[627] As such, before endorsing voluntary euthanasia, it is worth considering whether there might be other options for a better world in which humans live in a less harmful relationship with their environment, if not in complete utopian harmony.

Another possibility, indeed, is a far more in-depth integration of humans into the non-human environment to the extent that we truly become one with it, and one with its many existing complex feedback mechanisms – perhaps even to the extent of separate human action becoming impossible, which might mean that we are no longer even *able* to exert such destructive dominating force over other parts of the system of which we already form a part. This, then, might represent a less morally dubious version of the symbiosis of Sharers and breathmicrobes in *Ocean*; moreover, one might see it as a more ethical incarnation of the total identification of selfhood with community which Plato describes in the *Republic*, in that the aims of the individual would truly be the aim of the whole. In fact, this idea of the merging of the self into the collective might be taken to the extreme of the full *dissolution* of selfhood on behalf of the community; Connie, indeed, appears to embody this approach in a literal manner in *Woman*, in that she sacrifices her own life so that the utopian community of Mattapoisett might live. If one thinks in less literal and more posthuman terms, in fact, such a dissolution seems not only potentially possible, but plausible: philosophers such as Derek Parfit endorse a psychology-based view of selfhood that relies on the psychological criterion to determine personal identity, which in turn relies on self-reflective consciousness and memory;[628] one might therefore easily envisage this consciousness and memory being transferred into the community using some kind of cybernetic technology. Indeed, a similar process is already in place with the memory-holding kenners of utopian Mattapoisett, which are considered 'part of [the] body' (356): in fact, these are so central to these utopians' sense of self that Connie is told of a woman, Marigold at Treefrog, who killed herself after her kenner was destroyed in an accident – as Luciente explains, 'for some it's only a convenience. For others part of their psyche' (356).

Alternatively, one might think of identity in terms of 'entities unified by psychological connectedness' rather than as person-shaped units of identity, as David Shoemaker suggests in an extension of Parfit's view, which takes us closer to the idea of an extended collective consciousness.[629] In fact, the critical utopias already seem to represent some version of such a connectedness on a more abstract level, though of course without literal dissolution of selfhood: here, the focus lies more on a general alignment of goals and a focus on communal wellbeing, both of which are achieved through well-functioning feedback systems of both the negative and positive variety. Moreover, Mitchison hints at the idea of literally disembodied consciousness in *Memoirs*, when Mary notes that her partner T'o has, 'very rightly and properly, etherialised' (21), and Iain M Banks famously describes the 'Minds' in his Culture series of novels as artificial

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[627] Weisman, p. 241.
[628] See, for example, Derek Parfit, *Reasons and Persons*.
[629] David Shoemaker, 'Utilitarianism and Personal Identity', p. 195.

intelligences with complete personalities that inhabit vast spaceships and even planets.[630] A representation of a *merging* of identity or even merely non-coercive symbiosis, however, seems harder to find in speculative fiction, and indeed, where present, it tends to take on quite a dark or even dystopian bent: in Mira Grant's *Parasite* (2013) and Slonczewski's later novel *Brain Plague* (2000)*,* for example, symbioses of humans and brain parasites turn sour in the parasites' quest for self-determination. Moreover, Le Guin provides an interesting critique of dissolved human identity in terms of cross-species genetic engineering in her short story 'Porridge on Islac' in the collection *Changing Planes* (2003), where she describes a society in which genetic cross-breeding between humans, plants and animals has led to disability, disease, poverty and wide-spread discrimination against human individuals whose human genome percentage is not deemed high enough for them to contribute meaningfully to society. Also, another short story from the same collection, 'Feeling at Home with the Hennebet', explores the disconcerting effects of personal identity being similarly blurred, though across time rather than species: among the Hennebet, a mysterious form of reincarnation or the presence of multiple simultaneous identities leads to a general inability to hold any opinion whatsoever, as well as to the higher social valuing of certain individuals, for instance with regard to how many votes they hold.

Indeed, such a blurring of selfhood seems like it would be at odds with any equality-based community that functions on democratic principles – and it is for this reason, if nothing else, that one might after all question the possible utopian value of shared or dissolved identity. After all, without clearly defined individuals, the problems we have identified with regard to individual versus social evolution could easily arise again, in that it would be far less straightforward to determine whether anyone's wellbeing or rights were being harmed at the expense of the whole; once more, this would accordingly raise the spectre both of coercive eugenics and of the subordination of the individual to collective autopoiesis, though in a less tangible and thus possibly far more destructive form than in the traditional utopias. Indeed, Parrinder points out that just such a shared identity, the 'establishment of some sort of collective mind or intelligence incorporating the whole human race', was seen by Wells and his successors as 'the "spiritual" goal of the evolutionary process' – Parrinder notes, however, that although 'the realisation of the collective mind implies the attainment of an unprecedented harmony between the minds of individuals', 'such a prospect may have authoritarian or liberal overtones; indeed, the mixture of individual subordination and fraternal intimacy that it involves might be said to exist at the vanishing-point where "total democracy" equals "totalitarianism".'[631] As such, this endeavour appears quite dangerous in moral terms; if the welfare of individuals is at all at risk of totalitarian subordination, then such a utopian dream might very quickly become a completely and utterly dystopian nightmare, possible far worse than in the traditional utopias which also feature such subordination.

And yet, one might note that Parrinder's warning again implies the notion of the 'individual' to some extent – what, then, of a scenario where the dissolution of selfhood into a collective is

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[630] See, for example, Iain M. Banks, *Consider Phlebas*.
[631] Parrinder, p. 75.

indeed complete to such an extent that there *can* be no ethical mistreatment within the final entity? Indeed, we may at length find a depiction of a such a truly shared consciousness not in speculative fiction, but in scientist J. D. Bernal's futuristic essay *The World, The Flesh and the Devil*:

> Finally, consciousness itself may end or vanish in a humanity that has finally become completely etherialised, losing the tight-knit organism, becoming masses of atoms in space communicating by radiation, and ultimately perhaps resolving itself entirely into light. That may be an end or a beginning, but from here it is out of sight.[632]

As Bernal himself mentions, however, there is ultimately not much to say about such a complete convergence of consciousness, given that the conditions under which it might occur are simply not imaginable to us under our current conditions; in addition, as Parrinder notes, 'Bernal was aware that the prospect of a dissolution of individuality, however poetic in expression, must prove abhorrent to many people'.[633]

Moreover, in the search for a better world undamaged by destructive human tendencies, there is another case to be made both against voluntary human extinction and against the dissolution of human identity into a collective in an effort to reduce individual harmful tendencies in total identification with one's environment; this is the aforementioned argument that what is ultimately essential to the success of freely self-organising and self-optimising systems is not only inclusivity and equality, but the free functioning of the individual *within* the collective, *not* their removal or total dissolution as part of it, as for instance in Wells's utopia. Indeed, *The Dispossessed* makes this very point through Shevek: difference is not to be erased, but embraced, just as those who are at risk of being mistreated within traditional hierarchies must be supported through a non-judgemental ethical system of care. Rather than facilitating the maintenance of old hierarchies, as in the traditional utopias, or bringing about the construction of new ones, as in *Memoirs* and *Ocean*, a true ethics of complexity must therefore arguably encourage and support the development and free expression of individuals while simultaneously ensuring the inclusion of all relevant entities within the system. It is only through this, I propose, that all possible feedback connections may be kept open to the fluid self-regulation of any complex network of individuals, and that both regular self-maintenance and crux-based change may be ensured. After all, giving everyone a voice, even if it does not sound like one's own, is how one avoids a 'melting pot where everybody ends up with thin gruel', in the words of Luciente's partner Bee in *Woman*; in telling Connie about the gene-mixing in Mattapoisett's brooder, he notes instead that 'we want diversity, where strangeness breeds richness' (104). Only if all experiences and individualities are thus respected and taken seriously within a moral system based on equity, not equality, can a better world be arrived at in terms of living complexity, as the critical utopias also suggest.

Indeed, as we have shown, the critical utopias are successful as ethical thought experiments, unlike many of their predecessors and successors, precisely because they include *all* individuals within their self-optimising systems, regardless of background and status; our own world might

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[632] J. D. Bernal, *The World, The Flesh and the Devil*, p. 47.
[633] Parrinder, p. 78.

therefore likewise attempt to organise itself by drawing energy from communal networks and the emerging strength and wisdom that can be more than the sum of its parts. Moreover, if other utopian models fall short in terms of complex sustainability in that they fail to acknowledge and integrate elements of their own complex environment, such as non-humans animals, then that, as well, should give us pause, and allow us to reflect more deeply on the true interconnectedness of our own world. Likewise, as our world does indeed include our own species, our removal would arguably also be as uncalled for, after all, as the suppression or elimination of any other element within a complex system. In fact, Lovelock himself notes in his 2016 introduction to *Gaia* that 'we humans are as significant for the further evolution of Gaia as were the plants',[634] while Danowski and Viveiros point out that we exist in a 'consubstantiality or oneness, precisely like the surface of [a] Moebius strip' – 'Humanity and world', they suggest, 'are literally on the same side; the distinction between the two terms is arbitrary and impalpable'.[635]

Even if this were not so, however, the appeal of the complexity chronotope in the critical utopia, as opposed to the traditional homeostatic chronotope, is that it is able to serve as a science-fictional *model* of living, self-organising and self-optimising feedback relations in which the utopian nova are conceived of so as to create better lives *for the existing elements of the system*, not for some arbitrary new configuration; if the nova did not do so, the utopian thought experiment would not be truly rigorous in its cognitive estrangement, which is after all arguably where its primary intellectual appeal lies. As such, the truly complex utopia must, I submit, reflect and recreate life in its fullest and most inclusive, just as John Dewey, for example, suggests that philosophy should not 'abstract and reify concepts derived from living contexts', but instead be seen as an 'activity undertaken by interdependent organisms-in-environments'[636] – a proposal akin to Shevek's assertion in *The Dispossessed* that raw beef functions best inside a living animal. As David Hildebrand notes, Dewey thus believes that 'minds are not passively observing the world; rather, they are actively adapting, experimenting, and innovating',[637] which can indeed also be seen as the primary aim of science-fictional utopian thought experiments. After all, as Drucilla Cornell suggests, 'what is possible always changes as we change with the transformations we try to realise'.[638]

In terms of real-life lessons one might take away from utopian complexity, then, one might finally include, along with the insurance of equity and inclusivity in social systems, a simple focus on keeping the feedback channels open for these unexpected transformations. In practice, this might mean, for example, a general emphasis on both communication and education: two sets of networks whereby information and knowledge may be passed on widely and to great effect, and whereby social systems may embed the inherent dynamism of complexity at their own core, even if they do not embody the free feedback of complex systems in their overall structures. Indeed, it is also these two networks, of communication and education, that appear

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[634] Lovelock, p. x.
[635] Danowski, p. 113.
[636] David Hildebrand, 'John Dewey' in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy*.
[637] Hildebrand.
[638] Drucilla Cornell, *At the Heart of Freedom: Feminism, Sex, and Equality*, p. 186.

to facilitate better ethical relations within social systems, which might in turn lead to the emergence of something more akin to a truly equal and inclusive ethics of complexity. Finally, while, as Frye points out, 'nearly all [writers of utopias] make their utopias depend on education for their permanent establishment',[639] literature can in itself be seen as an essential mode of communication and education, as Dewey notes:

> Words furnish a record of what has happened and give direction by request and command to particular future actions. Literature conveys the meaning of the past that is significant in present experience and is prophetic of the larger movement of the future. Only imaginative vision elicits the possibilities that are interwoven within the texture of the actual.[640]

Within this realm of imaginative vision, then, science-fictional utopian literature stands out as particularly adept at literally representing such possibilities: after all, as Moylan suggests, 'to write utopia is to perform the most utopian of actions possible within literary discourse',[641] while Freedman notes that 'SF does possess the critical potentiality to play a role in our own liberation. That is why SF is worth writing about'.[642] Indeed, Ferns suggests that Moylan is in fact overly confident in the abilities of the science-fictional literary utopia, particularly the critical utopias he originally designated as such, and that he defends them with an 'almost messianic zeal'.[643] In Moylan's defence, however, it is these utopian models which, as we have seen, appear to be especially unique and ground-breaking within the history of their genre – and perhaps within literature in general – in that their depiction of open and dynamic utopian structures, fundamentally connected to our own world, not only allows for the communication of alternatives truly 'interwoven within the texture of the actual' to their readers, but allows these novels to moreover *include* the reader in their agency-based ideological framework of doing so, which in turn allows for further 'feedback relations' of such ideas to be passed on in our own world.

Utopia thus does not remain merely a vanity project or a diverting game, as in its traditional literary shape, but dynamically transforms into a complex, living and sustainable communal project in which the reader is herself engaged, and which she might even use as inspiration for the creation of a better society on her own world. This world, moreover, necessarily includes *all* of us, in our rich diversity – and can thus only become truly improved, the critical utopias argue, if we are all ultimately part of any efforts towards a better social system that we may eventually inhabit together. After all, as Frye writes, 'the question "Where is utopia?" is the same as the question "Where is nowhere?",' and as the critical utopias demonstrate, 'the only answer to that question is "here".'[644]

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[639] Frye, 'Varieties of Literary Utopias', p. 335.
[640] John Dewey, *Art as Experience*, p. 348.
[641] Moylan, p. 38.
[642] Freedman in Latham, p. 244.
[643] Ferns, p. 232.
[644] Frye, p. 347.

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