Exploring Ecotopian Futures: Solarpunk Narratives and their Multifaceted Modes of Engagement

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Introduction

“We’re solarpunks because the only other options are denial or despair”
Flynn

When all narratives about our future on this planet are terrifyingly disheartening, how can we hope for better? While some of us are consumed by fear, others are attempting to change the narrative. Especially in recent years many talented and inspired writers have been attempting to circumvent this matter by exploring other, more optimistic, avenues in the realm of climate fiction.

SOLARPUNK is a genre or arguably subgenre of cli-fi dealing with similar climate change themes such as sustainability and environmental justice. However, solarpunk also has science fiction (henceforth sf) tendencies as these narratives are additionally characterized by representations of science and technology, such as sustainable food sources, solar power, and environmentally friendly ways of living. Jeet Heer summarizes solarpunk as a “mix of green technology, economic ideology, sociology, science fiction, architecture, and even fashion . . . [he calls it] an aspirational mindset and lifestyle” (Heer). Both solarpunk and cli-fi deal with the consequences of human-induced climate change, albeit, the manner in which these two genres deal with the contextualization of climate change differs.

The term Anthropocene coined by chemist Paul Crutzen describes this human influence precisely, namely how “a key transformation in the planet’s life began some two hundred years ago when human activity began growing into a ‘significant and morphological one’” (Adamson 170). Consequences of the Anthropocene era such as “the thawing cryosphere, toxic drift, biomagnification, deforestation, the radioactive aftermaths of wars, acidifying oceans, and a host of other slowly unfolding environmental catastrophes” (Nixon 2) are being felt all across the planet and the situation will only deteriorate further if nothing changes. Much of the environmental injustice occurring relates to petrocultures that exploit poorer countries for profit in the oil business; in other words, a world running on oil is causing the slow destruction of the world and its people (Valentine; Nixon). Rob Nixon argues in his book Slow Violence and the Environmentalism of the Poor (2013) that “we urgently need to rethink—politically,
“imaginatively, and theoretically—what [he calls] . . . ‘slow violence’” (2; emphasis added). He defines this as violence “that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon 2; emphasis added). Experiencing this slow violence often results in climate grief, fear, and hopelessness (Filho et al.).¹ Such frightening images are extremely prominent in our media and in many narratives, however, they are not automatically accompanied by the ability to understand and process them. Whilst any attention put on such disheartening depictions or thematizations of climate change can surely help the cause, the solarpunk movement and genre has been developing with a more hopeful and optimistic tone.

While climate change became a topic of debate in the public realm at the beginning of the twentieth century and the consensus among scientists remains consistent, the prominence of climate change deniers, ignorers, or skeptics has carried on to this day (Chakrabarty 199). Generally, policymakers, non-scientists, and the general public do not act in accordance with scientists’ dire calls for action as science as an institution is becoming increasingly undermined (Janda et al. 7; Chakrabarty 199). When discussing climate change or global warming the initial and primary source of information naturally originates from within the scientific realm (Filho 3). However, the need for other and arguably more effective forms of messaging is evident as progress and change with regard to climate change issues have been minimal in the grand scheme of things.

The urgency for other types of communication necessarily opens the conversation to other groups of people, namely non-scientists. Interestingly, due to various reasons including the initial trust in politicians, topics such as global warming were not dealt with in the same manner by the humanities and social scientists as globalization was for instance (Chakrabarty 199). Only with the turn of the century as signs of the coming climate crisis became even clearer (droughts, wildfires, extinction of species, and more) and messaging became more critical, did the humanities become increasingly involved with the issue of climate change (Janda et al. 1; Chakrabarty 199; Buell 1).

This environmental turn in literary and cultural studies led to further ecocritical study in fields such as postcolonialism, Queer theory, and feminism. Also, in recent years a new literary

¹In Addressing the Challenges in Communicating Climate Change across Various Audiences (2019) many of these emotional states and their consequences are discussed in the context of climate change communication.
genre, the as beforementioned “cli-fi” or climate fiction has gained prominence within the field (Johns-Putra and Trexler 185). Works that are marketed or labeled as cli-fi deal with climate change in various ways often making “otherwise-difficult-to-interpret data about the future legible to its audience” (Evans 95). In 2015 Adeline Johns-Putra maintains that “[i]t is not a genre in the accepted scholarly sense since it lacks the plot formulas or stylistic conventions . . . However, it does name a remarkable recent literary and publishing trend” (Johns-Putra). Yet, a few years later cli-fi has gained a reputation among scholars as an increasing number of works are being marketed or labelled as cli-fi (Evans 95).² The significance of such increasing interest not only stems from the beforementioned exclusion of scholars of the humanities, voluntary or involuntary, from climate change discourse but also highlights the gaining traction of investigating climate change communication and its issues within literary and cultural studies. Scholars such as Sean Munger, Julie Jacquet et al.³ or Alexa Weik von Mossner⁴ want to study effective ways of expressing the direness of our situation and through certain methods of messaging inspire action.

Additionally, climate change fiction can expose the effects of climate change on those who lack resources and power, “[t]heir unseen poverty is compounded by the invisibility of the slow violence that permeates so many of their lives” (Nixon 4). As climate change disproportionately affects those less privileged, climate fiction and solarpunk offer a productive mode of exposing said injustice. Many of these studies or articles highlight literature’s potential as they can embed scientific concepts and the direness of the situation within narratives (Evans 95). However, cli-fi and as an extension solarpunk is often branded as didactic or activist fiction, literary texts which instruct its readers on how to live a more sustainable lifestyle or enact change. Therefore, the aesthetic value of such texts is often disregarded; hence, I will explore recurring aesthetic and stylistic elements within these multiple solarpunk narratives which trigger affective and cognitive responses.

² For example, Susanne Leikam and Julia Leyda (2017) edited an extended forum of Amerikastudien/American Studies Journal concerned with Cli-fi and American Studies. Various topics are discussed within this form, such as Cli-Fi Drama by Nassim Balestrini and Petrofiction by Hannes Berghaller.
³ Julie Jacquet et al. (2019) approach climate change communication in terms of emotions and cognition mechanisms which can be used to improve the receivability of climate change information or messages.
⁴ Alexa Weik von Mossner (“Science Fiction”, “Vulnerable Lives”) uses a cognitive approach to discuss reader or viewers responses to cli-fi texts. She uses concepts such as narrative empathy, embodied simulation and cognitive estrangement to discuss cli-fi’s possible transformative potential.
Solarpunk’s beginnings started in an online community on Tumblr\(^5\), though now, this new and evolving genre has several collections and anthologies to its name. Solarpunk art by artists such as Luc Schuiten (see Figure 1) or Vincent Callebaut (see Figure 2) is also gaining traction within the field of climate change and environmental studies. These images illustrate the eco-aesthetics present in many solarpunk narratives, though the imaginative capacities of solarpunk are ever-evolving. In order to explore solarpunk, I have chosen short stories from two recent solarpunk collections, *Glass and Gardens: Solarpunk Summers* (2018) and *Sunvault: Stories of Solarpunk and Eco-Speculation* (2017). The reasons for choosing short story collections are rather simple: firstly, these are among the first and few publications marketed as solarpunk collections, and secondly, novels labelled as solarpunk such as Kim Stanley Robinson’s *New York 2140* (2018) have either been discussed at length or are non-existent (Cassauwers). In the following chapters, I will discuss short stories which fulfil the following criteria, firstly, the works must have an optimistic or utopian tone regarding climate change and Earth’s future. Secondly, the texts must engage with science and/or technology related to climate change and sustainability. And finally, they must either implicitly or explicitly deal with contemporary climate change issues, such as environmental justice, extreme weather changes, uninhabitable environments, sustainability, and more. My choice to narrow down the criteria for the corpus does not indicate the lack of intertextuality to other stories, but rather allows for a more concise comparison and highlighting of patterns.

\(^5\) For example, Miss Olivia Louise’s Tumblr post “Land of Masks and Jewels” (2014) includes images and descriptions of solarpunk.
Within the scope of this thesis, I will explore questions concerning the intersections between science, art and climate change communication. These questions include: How are science and technology contextualized within these narratives? How is climate change framed (also in contrast to apocalyptic stories)? How does solarpunk distinguish itself from other genres (utopian fiction, cli-fi, and sf)? How do certain elements of these narratives indicate a didactic or practical function? And how do these recurring elements trigger certain modes of engagements (enchantment, recognition, knowledge)? Additionally, I will discuss where solarpunk is placed within the field of climate change communication and the significance of solarpunk within this conversation. Throughout this discussion, I will draw on various theoretical texts including those from sf studies, utopian studies and climate change communication studies to answer these questions. As solarpunk is often branded as simply didactic literature I will also apply Rita Felski’s neophenomenological approach, in which she affirms that the use of a text and its aesthetic value are inseparable. I will discuss the recurring elements visible in the chosen short stories in the following three main chapters, while each chapter will conclude with a discussion of how Felski’s categories of textual engagement (recognition, enchantment, knowledge, and shock) help understand the texts from a reader’s perspective. The aim of this thesis is to argue that although these texts are utilitarian to a certain extent, they are also texts which deserve to be analysed or viewed as literary works. In other words, these solarpunk narratives undermine the ostensible dichotomy between pragmatic and artistic discourses on climate change. In the following chapter, I will explore Felski’s approach in further detail to highlight how her perspective can assist in arguing for a multifaceted view of solarpunk’s engagements.

1. Theoretical Background and Methodology

1.1. Undermining the Dichotomy of Practical Use and Aesthetic Value

For this discussion, I will invoke the work of Rita Felski, a prominent scholar in literary theory, feminist theory, and gender studies. Rita Felski’s *The Uses of Literature* (2008) attempts to bridge the gap between the general reader and the scholarly reader (*Uses* 13). She argues that “theoretical reflection is powered by, and indebted to, many of the same motives and structures that shape everyday thinking, so that any disavowal of such thinking must reek of bad faith” (Felski, *Uses* 13). She uses a neophenomenological approach, meaning “it declines to quarantine personhood from the pressures of context to bracket the historical and cultural factors that shape
interpretation” (Felski, *After Suspicion* 31). This neophenomenological approach focuses on a first-person perspective drawing on formal devices that shape aesthetic experience or textual engagement (Felski, “After Suspicion” 31). Felski disagrees with the hermeneutics of suspicion, which has become common practice amongst literary scholars (Felski, *Uses* 1-3). Indeed, she favours “meaning rather than truth or the demystification of truth, [and] . . . examining the intricate play of perception, interpretation, and affective orientation that constitutes aesthetic response” (Felski, “After Suspicion” 31). She affirms that the use and aesthetic value of a text are inseparable, not working as a dichotomy but rather in harmony to allow for reader engagement (Felski, *Uses* 7-8). By focusing on a text’s formal devices from this perspective I will be able to explore ways in which these solarpunk narratives trigger certain practical responses, yet also emotional or cognitive responses. She explains it as follows:

‘Use’ is not always strategic or purposeful, manipulative or grasping; it does not have to involve the sway of instrumental rationality or a willful blindness to complex form. I venture that aesthetic value is inseparable from use, but also that our engagements with texts are extraordinarily varied, complex, and often unpredictable in kind. (Felski, *Uses* 7-8)

In her discussion of the uses of literature, each chapter focuses on a different mode of textual engagement. She states that her approach has “clear affinities with the burgeoning interest in affect” (Felski, “After Suspicion” 31) opening up the discussion once more to responses such as “trance-like states of immersion or absorption in literature's virtual worlds; surges of sympathy or mistrust, affinity or alienation, triggered by particular formal devices” (Felski, “After Suspicion” 31; emphasis added). Furthermore, engaging with “ordinary motives for reading – such as the desire for knowledge or the longing for escape” (Felski, *Uses* 14) is often overlooked in scholarly work. As solarpunk texts undoubtedly communicate certain aspects of climate change to the reader, examining how these texts engage with the reader is significant. Therefore, I have examined these texts through Felski’s lens to uncover ordinary motives for reading, yet possibly impactful motives with regards to climate change communication.

In this thesis, the notion of the implied reader will allow for a discussion of certain aesthetic elements, which trigger certain modes of engagement, though these modes of engagement are not necessarily didactic. ‘Implied Reader’ is a term used to describe “the image of the recipient that the author had while writing, or more accurately, the author’s image of the
recipient that is fixed and objectified in the text by specific indexical signs” (Schmid). Wolf Schmid defines the implied reader as “a function of the work, even though it is not represented in the work” (Schmid) meaning the beforementioned indexical signs create the implied reader. Wolfgang Iser (1972, 1976) used a phenomenological approach to explore “the act of reading and the contributions of both text and reader to textual meaning” (Prince). Iser “distinguished between the text, its concretization by the reader, and the work of art resulting from their convergence” (Prince) arguing “that the text pre-structures and guides the production of meaning by gradually supplying skeletal aspects or schematized views of what will become the work of art, while leaving between them areas of indeterminacy or gaps to be filled by the reader completing the artwork” (Prince).

Reader-response theory proposed by scholars such as Iser embraces the transaction between the reader and the text, dealing with how meaning is created through the process of reading. Although Felski has commented on the phenomenological approach in reader-response theory, she has not found it entirely useful in her neophenomological approach. She comments on reader-response theories’ useful insights into the “interactive nature of reading”; however, she does not appreciate the “highly formalist model of aesthetic response” (Felski, Uses 15-16) used when discussing reader’s engagement or response to literary works. She describes their approach as stripping “all passions . . . [and] ethical or political commitments” (Uses 16) from the reader, conforming to a “notably one-sided ideal of the academic or professional reader” (Felski, Uses 16). I will build upon Iser’s traditional theoretical perspective of the implied reader by using Felski’s non-formalist method to highlight possible engagements created through the act of reading.

Felski introduces four modes of textual engagement, namely, recognition, enchantment, knowledge, and shock. She describes them as “neither intrinsic literary properties nor independent psychological states, but denote multi-leveled interactions between texts and readers that are irreducible to their separate parts” (Felski, Uses 14). Three of Felski’s four modes, which I will discuss in further detail in my thesis, will help me in discussing “how formal devices encourage or attenuate” (Felski “After Suspicion” 32) affective or cognitive responses within the short stories I have chosen.

Recognition, the first mode of engagement Felski describes as “a flash of connection leap[ing] across the gap between text and reader; an affinity or an attunement is brought to light” (Felski Uses 23). She explains that “[n]ovels yield up manifold descriptions of such moments of
readjustment as fictional readers are wrenched out of their circumstances by the force of written words” (Felski, *Uses* 23). Recognition “refers to a cognitive insight, a moment of knowing or knowing again” (Felski, *Uses* 29) in other words, knowing oneself better after reading a book, revolving “around a moment of personal illumination and heightened self-understanding;” (Felski, *Uses* 30). As climate change is an abstract and as previously mentioned, invisible violence, such cli-fi texts are able to reframe climate change as relating to individuals rather than climate change as a setting or future-oriented problem. For this reason, I will examine how formal devices within the text such as internal focalisation trigger recognition and which possible effects this may have.

Furthermore, Felski argues that scholarly and popular reading can both create an intense involvement and a sense of immersion (“After Suspicion” 33). She describes enchantment as an experience of powerlessness (Felski, *Uses* 51), but also as blissful and pleasurable, “characterized by a state of intense involvement, a sense of being so entirely caught up in an aesthetic object that nothing else seems to matter” (Felski, *Uses* 54). Felski adds that in modernity the novel is “most frequently accused of casting a spell on its readers” (Felski, *Uses* 52), however, I argue that solarpunk short stories also aesthetically engage with the reader. A further reason for examining these stories from this perspective is that “one reason that people turn to works of art is to be taken out of themselves, to be pulled into an altered state of consciousness” (Felski, *Uses* 76). If and how solarpunk can cause readers to feel immersed in a story that contextualizes climate change in a productive manner, it may also have other positive real-life effects in terms of climate change communication.

The third mode of engagement Felski describes is knowledge; she explains that this mode focuses

on literature as a form of social knowledge . . . The worldly insights we glean from literary texts are not *derivative or tautological*, not stale, second-hand scraps of history or anthropology, but depend on a distinctive repertoire of techniques, conventions, and aesthetic possibilities. Through their rendering of the *subtleties of social interaction, their mimicry of linguistic idioms and cultural grammars, their unblinking attention to the materiality of things*, texts draw us into imagined yet referentially salient worlds. They do not just represent, but make newly present, *significant shapes of social meaning* . . .
crystallize . . . interwovenness of our being in the world (Felski Uses 104; emphasis added)

In her discussion of knowledge, she describes three mimetic devices, which may trigger this mode of engagement, specifically, deep intersubjectivity, ventriloquism, and the linguistic still life (Felski, Uses 85). Felski discusses ventriloquism in terms of “[recreating] a way of life less by probing how people feel than by immersing us in how they talk” (Uses 98). While the linguistic still life which she refers to as the knowledge “things – objects, inhabitations, accessories – amid which people live” (Felski, Uses 98-99) can create. In the context of solarpunk I will further discuss the term deep intersubjectivity as described by Felski here:

Deep intersubjectivity gives us representations of persons neither as solipsistic Enlightenment monads nor empty linguistic signifiers but as embedded and embodied agents, mediated yet particular, formed in the flux of semiotic interchange. We are drawn into a world in which gazes meet or avoid other gazes, verbal tones and inflections weave subterranean dialogues, and bodies encircle and encounter each other in space. (Uses 91; emphasis added)

The term ‘deep intersubjectivity’ will allow me to explore elements of these fictional worlds that show the “intricate maze of perceptions, the changing patterns of opacities and transparencies, through which persons perceive and are perceived by others” (Felski, Uses 91). Examining how elements of these stories transmit knowledge to the reader will firstly allow me to highlight the aesthetic and stylistic features of solarpunk, but also highlight solarpunk’s ability to communicate knowledge about ecotopian worlds or impulses.

Shock, Felski’s fourth mode of engagement, will not be discussed within the scope of this thesis as it describes the power to disturb or in other words “aesthetic estrangement” (Felski, Uses 105). Enchantment, the antithesis of shock, describes a blissful and pleasurable experience, elements which shock “can wreak havoc on our usual ways of ordering and understanding of the world” (Felski, Uses 113) and show us suffering up close (Felski, Uses 114). It expresses how literature can rip away “standard supports and consolations of everyday life” (Felski, Uses 107). While this mode of engagement can be associated more with dystopian or apocalyptic texts, shock is seldom evoked in solarpunk as it undermines this expectation (Weik von Mossner,
“Science Fiction” 212). Instead, solarpunk’s aesthetic and stylistic choices create optimistic and more pleasurable environment, rather than thematizing desolate and frightening ones (Uses 113).

To conclude, Felski states that “[o]ne advantage of splicing up the spectrum of literary response is that it underscores not only the different ways that different people read but also the different ways in which the same individuals read, the dramatic fluctuations in modes and motives of aesthetic engagement” (Uses 134). These elements and modes of engagement do not exist separately, as they exist “in states of interdependence and symbiosis” (Felski, Uses 134). Similarly, I will discuss these modes of engagement separately to highlight how elements of solarpunk trigger certain reactions; however, I will comment on the relationships between the various modes throughout my thesis as they are intertwined and dependent on one another.

1.2. The Complexities of Climate Change Communication

As cli-fi and sf are genres commonly associated with didactic or activist functions, solarpunk as an extension or combination of certain elements of these genres necessarily deals with similar aspects such as the communication of climate change. The lack of knowledge or education on climate change unavoidably influences the public’s inaction or apathy towards the issue. Additionally, factors such as “cultural, and perceptual filters . . . [and] lack of direct immersion in natural environments among people in industrialized countries” (Moser and Wolf 561) play a large role in this matter. Walter Leal Filho describes that to completely comprehend climate change an understanding of the following aspects are needed: (3)

1. Scientific data and connected trends
2. The connection to economics, politics, ethics, and other areas
3. The consequences of economic growth and development
4. Impacts in rural and urban contexts
5. Climate change is linked to floods and other extreme weather events, but also human health.

This complexity is not the sole issue, Filho also describes other challenges seen in climate change communication such as uncertainty, the lack of specialised reporting, and competing themes (4). He clarifies that very few media reporters have training in communicating such issues, furthermore, other topics are highlighted in the media to such an extent that they may overshadow such dire issues (Filho 4).
Moreover, Susanne Moser and Johanna Wolf describe in detail how climate change is perceived and what this perception is influenced by, including factors such as “the views and interpretations of the climate issue based on beliefs, experiences, and understanding . . . [moreover, one’s] positionality in society (as indicated by gender, age, socioeconomic status, and other social variables) . . . equity, development, and economic power . . . lenses of pre-existing cultural worldviews” (562). However, the extent to which such variables affect one’s perception is yet to be empirically proven (Moser and Wolf 562).

Additionally, scholars such as Martin Bauer explain the lack of climate change knowledge or action with the term “Knowledge-ignorance paradox” (Ungar 298). This paradox “capture[s] how the growth of specialized knowledge implies a simultaneous increase in ignorance” (Ungar 298). Moreover, with the rapid growth and complexity of information, such information is replaced by new information instantaneously, Ungar calls this concept “instant antiquity” (Ungar 298). The source of information also plays a role, as anti-intellectualism has reasserted itself . . . [which means] public resentment has increased as power and wealth have been accrued to a relatively small elite with highly specialized and valuable knowledges . . . When this resentment is coupled with a growing distrust of politicians, the media, public institutions, and many experts, scientists included, for their perceived distortions and duplicities, it further diminishes the social value of the ‘truth’ and the obligation of being knowledgeable. As digital technology undermines the distinction between the real and the unreal, one can invoke claims of deception or conspiracy to warrant a lack of interest in many things. (Ungar 301)

Other factors such as emotional numbing and apathy also play a role as “individuals enact climate-relevant behavior without or with an incomplete and sometimes misguided understanding of climate change, while others understand the problem full well and do or do not act to reduce their emissions” (Moser and Wolf 561). However, Moser and Wolf do offer a suggestion as to how perceptions can change:

[p]erception of climate change is also shaped by the framing used in climate change communications, particularly the imagery and stories employed, which can help increase knowledge and concern if the embedded emotions do not overly emphasize (i.e., manipulate) negative feelings such as fear, guilt or hopelessness. (562; emphasis added)
In contrast to more hopeful and optimistic narratives, “[n]egative affective appeals seem largely counterproductive, especially when unaccompanied by messages that build listeners’ sense of efficacy, hope, and optimism about the future” (Moser and Wolf 562; emphasis added). Furthermore, due to the nature of climate change “the communication of [certain] phenomena . . . can never be directly experienced because of the particular scale at which humans have evolved to perceive reality (Dahlstrom 5). In other words, the comprehension of such information is difficult for the individual as it remains rather abstract (Dahlstrom 5). Attempts are made to create metaphors or comparisons in order to link certain abstract or scientific ideas to something more approachable (Dahlstrom 5). However, climate change is still perceived as “something distant, that’s happening somewhere else and affecting someone else—like the polar bears in the ubiquitous photo—and is not a local and immediate threat” (Munger 123).

Additionally, evidence has shown that experiencing climate change first-hand does not necessarily affect one’s concern nor does it inspire action (Moser and Wolf 562). Scholars are looking at literature and art more and more to communicate climate change as “[n]arratives represent mental simulation of some aspect of reality from a particular human point of view” (Dahlstrom 5). These explanations of the lack of concern or action with regards to climate change point to the necessity of other mediums or ways of communicating the issue of climate change.

1.3. Solarpunk, a Stylistic/Formal Innovation in Climate Fiction?

As solarpunk is still an emerging genre, there has been a lack of narratological discussion on the topic. Most discussions or commentary on solarpunk have been focused on thematical discussions and juxtapose the genre to sf and cli-fi. Literary techniques discussed in terms of cli-fi and sf are applicable to solarpunk as similar elements such as the novum⁶, cognitive estrangement⁷, extrapolation, and dealing with climate change not just as a setting, are visible in these narratives (Johns-Putra and Trexler 187). Adam Flynn, one of the first scholars to write about solarpunk, discusses it in terms of a literary genre but also a movement. In his article “Solarpunk: Notes toward a manifesto” from 2014 he describes solarpunk as follows:

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⁶ “Novum” is a term coined by Darko Suvin (2016) to describe a changed world due to innovation (“a new thing”) which also highlights the difference between the fictional world and the real world while simultaneously relying on cognitive logic.

⁷ Cognitive Estrangement is “an enlightening triangulation between an individual reader’s limited perspective, the estranged re-vision of the alternative world on the pages of a given text, and the actually existing society” (Moylan xvii).
Solarpunk is about finding ways to make life more wonderful for us right now, and more importantly for the generations that follow us – . . . Our future must involve repurposing and creating new things from what we already have (instead of 20th century “destroy it all and build something completely different” modernism). Our futurism is not nihilistic like cyberpunk and it avoids steampunk’s potentially quasi-reactionary tendencies: it is about *ingenuity, generativity, independence, and community*. (Flynn; emphasis added)

He explains the term’s inclusion of the suffix -punk stating that there is an “oppositional quality to solarpunk but it’s an opposition that begins with *infrastructure as a form of resistance*” (Flynn). Furthermore, the -punk suffix also relates to the cyberpunk, steampunk, and dieselpunk literary genres. In contrast to looking at “outdated technologies, like steam power, Solarpunk makes uses of the best technologies available today” (Flynn). While technology and science are present to some extent in these stories, usually conveyed through techno-optimist solutions or infrastructure (see Figure 1), these speculative futures differ from sf. They are post-petrocultures which “[centre] around technologies that help create green utopias, the most important part of the movement is dealing with the real human challenges of living together on this planet” (Valentine) and ending or attempting to end the slow violence Nixon describes. Ben Valentine reiterates this thought and states that “if climate change is a slow violence on the Global South, then Solarpunk represents peace” (Valentine).

In addition, discussions focus on how the genre is contrasted with the many dystopian or apocalyptic stories in the media and in literature such as Margaret Atwood’s trilogy *Oryx and the Crake* (2003), *The Year of the Flood* (2009) and *MaddAddam* (2013). In these cli-fi stories, climate change finally leads to an apocalypse and therefore, a dystopian future. Valentine also highlights this distinction, asserting that “instead of imagining dystopian futures of networked crime and surveillance, Solarpunk taps into an extant community” (Valentine). Others who have written about solarpunk, albeit not many have, have said that writers “have an obligation to imagine positive futures where plausible technologies give us practical green solutions” (Heer).
Many scholars such as Alexa Weik von Mossner and Ursula Heise have commented on climate fiction’s focus on dystopian or apocalyptic narratives, whereas solarpunk can be “positioned in contrast to the darkness of exceedingly popular apocalyptic science fiction” (Valentine) and cli-fi (Weik von Mossner, “Science Fiction” 205). Heise in *Sense of Place and Sense of Planet* (2008) also criticizes conventional narrative strategies and simplistic storylines, calling for a stylistic and formal innovation (Weik von Mossner, “Science Fiction” 205). Perhaps solarpunk can partly answer Heise and other’s calls while recreating “anthropos [into] . . . a new, more environmentally ethical epoch” (Adamson 171) in a post-petroculture.

Kathryn Janda et al. describe a “narrative turn” in social sciences, focusing more on “narratives, stories, and storytelling” (1) as they “have become more common in energy and climate change research and policy” (1). Furthermore, social scientists agree that

> [s]tories are used to communicate with, influence, and engage audiences; they serve as artefacts to be investigated in terms of content, actors, relationships, power, and structure; they can be used to gather information, provide insight, and reframe evidence in ways that more science-ordered formats miss. But they are not benign or neutral, nor a type of data or approach that researchers and practitioners in these fields have much experience with,
and there is (understandably) no single identifiable corpus of theories, research approaches, or examples to help order their treatment. (Janda et al. 1-2)

The many problems associated with climate change communication have shaped varied discussions on how best to communicate the urgency of the matter to the public and inspire action. As climate fiction and solarpunk are written and/or marketed with a utilitarian approach in mind, using fiction to bring readers closer to the topic of climate change, the dilemmas of climate change communication could be counteracted by solarpunk’s hopeful messaging, providing insight and reframing science and technology in a more approachable medium and format, namely fiction.

Thus, I will examine prevalent thematic patterns of these texts such as the contextualization of science, climate change issues and ecotopia with an implied readership in mind. I argue that these solarpunk texts are directed at a seemingly homogeneous or somehow definable readership. This combination allows me to examine these texts as literary texts, which do not necessarily want to speak to people who are highly educated in reading literature but can enjoy the immersive nature of these worlds or engage with the texts in various ways. Although these works may not be viewed as highly esteemed literary texts and branded as overly didactic, utilitarian, and/or activist genre, highlighting other modes of engagement such as enchantment and knowledge is necessary in order to undermine the ostensible dichotomy between the use and aesthetic value of a text (Smyth).

2. Science and Technology as an Extension of the Self

Solangpunk is an evolving genre that is connected to what writers and readers think of the future and the fate of the universe while also focusing on developments in the natural world, therefore, it necessarily engages with science. As one of solarpunk’s primary characteristics is its thematicization of technological innovations as solutions to climate change, I will also examine intersections between scientific concerns and art as a device of communication. In this chapter, I will uncover how science and technology are contextualized within these solarpunk narratives with an implied readership in mind. I argue that thematically, science is conveyed as an extension of the self while also undermining the dichotomy between nature and culture.

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8 Johns-Putra and Trexler discuss genre and literary fiction regarding sf and cli-fi, stating that genre fiction is often neglected, while the focus is put on ‘literary’ authors (187-188).
The lack of action in accordance with scientist’s findings and proposed solutions to climate change such as the reduction of greenhouse gases has multiple explanations from multiple fields of research. These explanations are not exclusive to each other; however, they range from the field of Psychology, Journalism, Cultural Studies, Communication Studies, Social Sciences, and more, many of which I have discussed previously. Some scholars would argue that the mobilization for climate change relies not only on scientific reports but rather on understanding climate change as a social issue. Philip Smith and Nicholas Howe in their book *Climate Change as Social Drama (Global Warming in the Public Sphere)* (2015) state that climate change is not only a question of scientists or politicians (or whoever is communicating knowledge about the natural world to people who are destroying the world), but something about how people interact with each other on a basic level (4-7); even if the scientific data is not understood or received, a reader or viewer can understand what impact climate change can have socially (Howe and Smith 4-7). I agree with this notion and will discuss how solarpunk allows for such messaging (see Chapter 3), however, examining how art engages with science will allow me to demonstrate how art can bring the scientific realm closer to the reader, which may have further practical uses in communicating climate change.

People’s understanding and confidence in the scientific realm are essential in the discussion of climate change in relation to the human exploitation of the environment and the cognitive dissonance relating to climate change. Firstly, the public’s science literacy is concerning, research has shown that “the public lacks basic knowledge of many key areas of science” (Weigold 320), furthermore, certain advice can help scientists and journalists can “more accurately gauge what people do and can understand about science” (Weigold 320). Secondly, how people acquire scientific knowledge is another issue of inquiry (Weigold 320). Narratives do not offer an alternative to actual scientific data and trends; however, such forms of art can bridge the gap between the two realms. Michael F. Weigold highlights the importance of training science writers, meaning those who discuss scientific findings and knowledge to the public, those who are at the “critical intersection of the practice of science and the public understanding of science” (320). In an age when scientific reports such as the IPCC report fall on deaf ears due to reasons discussed above, the study of effective communication of science and technology in all

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9 For example, Festinger’s (1957) Cognitive Dissonance Theory states that people faced with contradicting opinions, ideologies or cognitions may experience psychological discomfort or aversive emotional states.
mediums including fiction is necessary as it may aid in increasing the public’s trust or willingness to listen.

Not only cli-fi writers but also that science fiction writers have dealt with environmental issues whilst building these alternative worlds. In doing so, they have created worlds of science and technology which bring the scientific realm closer to the reader (Weik von Mossner, “Science Fiction” 204). Just as in sf, the means in which science and technology are represented vary in solarpunk narratives. For example, some sf writers have “a decidedly technophilic attitude toward crisis aversion, space exploration, and human development, but many contemporary sf writers, particularly women, take a different approach, emphasizing biology, biochemistry, ecology, genetics, and psychology, with frequent attention to ethics” (Murphy 378). In her article “Science Studies” Sherryl Vint states that “[t]he interdependence between developments in science and technology and the wider culture is material as well as ideological” (420). Furthermore, technological innovations can cause positive and negative developments in society. Solarpunk narratives choose a positive and optimistic route regarding technology/science’s influence; however, they vary in the specific manner in which they choose to portray this. Some stories focus on genetics (“Solar Child”), while others deal with alternate food sources and space travel (“The Spider and the Stars”).

Additionally, sf’s relationship with science can be discussed from two perspectives. Firstly, Hugo Gernsback argues “for a predictive and practical link between science and sf, emphasizing that his ideal story would be read by inventors and scientists, and suggesting that such stories could inspire the material creation of the marvels they depicted” (Vint 413). This perspective has been coined “scientification” marked by the “long history” of the Copernican revolution (Vint 413). Secondly, John W. Campbell “saw the relationship as more oppositional, contending that sf writers ‘did what scientists were not capable of doing’” (Westfahl 194 qtd. in Vint 413). These solarpunk authors may willingly or unwillingly employ both of these techniques, however, the modes of engagement which will be triggered do not rely on whether these inventions stem from actual scientific research or not. The impossibility of such inventions and innovations occurring does not negate the overall tone of these stories; a tone that is hopeful and productive by portraying technology as an extension of the self and of one’s ambitions.

Marshall McLuhan in his Understanding Media (2001 [1966]) argues that the medium (i.e. technology) is an extension of the self or of the human organism. He states that
after more than a century of electric technology, we have extended our central nervous system itself in a global embrace, abolishing both space and time as far as our planet is concerned. Rapidly, we approach the final phase of the extensions of man - the technological simulation of consciousness, when the creative process will be collectively and corporately extended to the whole of human society, much as we have already extended our senses and our nerves by the various media. (McLuhan 19 qtd. in Brey 2)

McLuhan’s theoretical perspective is often used “to provide a better understanding of the evolution of technology . . . [and] can be useful in evaluative analyses of the role of technology in society” (Brey 1). This concept explains that technology is an extension of humanity and, the self or in other words of the body and of cognitive functions, “in its most basic form, . . . technical objects extend the human organism by replicating or amplifying bodily and mental abilities” (Brey 1). This perspective does not alienate technology, but depicts technology as a part of the solution, as it accelerates one’s ambitions or behaviours. I apply this perspective to solarpunk narratives to highlight the “amplification or acceleration of existing human faculties or behaviors” (Brey 2) through various technologies, but also to highlight the rejection of the nature and culture dualism. The dichotomy between nature and culture “has had real consequences . . . [for example,] Americans confronted with a natural landscape have either exploited it or designated it a wilderness area” (Turner 45). Culture and as an extension technology is often represented or discussed as being “an euphoric escape from nature; at its worst, a diabolical destruction of it” (Turner 45). Rather than this dichotomy, solarpunk argues for an inclusive notion of technology and science, nature and man. In the following chapter, I will uncover how these narratives undermine this dichotomy.

2.1. Contextualizing Science and Technology as a Personal Experience

The solarpunk stories I will examine in this thesis all employ an internal focaliser, in these cases the story is told from a protagonist’s point of view, giving the reader insight into their feelings, experiences, and innermost thoughts. In chapters 3 and 4 I will further explore how through internal focalisation these stories contextualize climate change and ecotopia.

In the context of climate change communication, it is noteworthy that these characters’ main interests or ambitions all remain within the scientific realm. While Jamie in “Solar Child” works on a research station studying genetically modified photosynthetic symbionts, Luyn in
“The Desert, Blooming” is starting her career in planting genetically modifying trees in the desert in hopes of ending climate change and in “The Spider and the Stars” the main character Del innovates technologies inspired by arachnids and insects. These narratives give an impression of the minds of these scientists, researchers, or innovators and by doing so bring the scientific realm closer to the reader. “The Spider and the Stars” written by D.K. Mok tells the story of the protagonist Del whose childhood, adolescence, and adult life surround her parents’ achievements in creating sustainable food made from insects. The reader accompanies her throughout her career as she creates innovative technologies inspired by spiders and insects. The idea of science and technology as being something engrained in the protagonist’s life is introduced in the first lines of the story:

Del’s childhood, like many others, was woven from enchanted tales . . . There were never stories of dragons and fairies, mermaids and centaurs. No, these were stories of fierce young women with flocks of tree-planting drones, firing seeds into the barren sands and rolling back the desert. (Mok 10)

This juxtaposition of technology to more traditional fairy tales about fairies and mermaids shows how technology can actually be quite enchanting. Later in Del’s life at an exhibition “[s]ome people seemed interested in Del’s collection of giant phasmids and burrowing cockroaches. Less so in her infographics, research papers and posters of ‘fun facts”’ (Mok 21). Del’s seeming unpopularity and hardships which are then overturned by her later success rejects the initial disinterest in her research. The reference to the disinterest of the exhibition attendees not only depicts the difficulties attached to innovative ideas but also on a metalevel draws the reader’s attention to what the public’s attitude towards climate change information is (i.e. their lack of interest).

In “The Desert, Blooming” written by Lev Mirov, Luyn joins a team in attempting to plant trees in the Green Belt, to make Earth habitable once again. On their mission Luyn experiences wearing protective gear and acidic rain for the first time:

The transport ship came down in wet sand with a crunch. As the crew drove the diggers and other equipment out into the sand, I checked my suit one last time. The first rain falling on me felt almost as strange as the sand underfoot; the readings on air quality flooded the visual interface of my helmet at once. The air was breathable, just hot, and
like the rain, full of contaminants I had only a few hours to take in without damaging myself. The water hit me. Heavy, strange pellets of sensation rolled off my suit and made an erratic tapping noise against my helmet. I engaged the heaviest weight of my boots and dragged myself through the sand towards the windbreak Ibra had made some journey ago. Water was pooling there, waiting for us to come and plant. (Mirov 109)

The manner in which Luyn describes the protective gear such as the suit, the weighted boots, and the visual interface allows the reader to experience the technology in an experiential rather than a descriptive manner. Furthermore, the reader is given a concise depiction of her interaction with technology such as engaging the weighted boots to move through the sand. Furthermore, the work Luyn and her colleagues are doing is only completed with the help of technology such as transport ships or protective gear. The domes, ships, and technological gear are portrayed as an extension of her work. It contextualizes science/technology around personal ambitions and experiences while also extending these ideas to the sense of community. To conclude, technology and science is depicted as an essential part of these stories and the protagonists’ lives while conveying a first-hand and experiential perspective of technology. In the following chapter, I will explore how the infrastructure and aesthetics of these worlds mirror this notion.

2.2. Eco-Technophilic Imagery

Julia K. Patt’s “Caught Root” is a love story about two people from two quite different communities, the protagonist Ewan visits New-Ur in order to create a knowledge exchange between the two communities. Similarities and differences of the following two communities are described, for example, “[w]here Hillside’s shining towers reach for the blue sky, New-Ur seems born from the very rock, all adobe and stucco and low-sitting buildings. Here and there . . . green relieves the brown, and this is the only similarity between the two” (Patt 3). The juxtaposition of high and low tech in these two communities Hillside and New-Ur opens up a dialogue concerning different types of approaches to technology and does not employ more importance to one nor the other. While Hillside relies heavily on automation, New-Ur favours low-tech and does not insist on using modern or shiny architecture: “This room, like the rest of the complex, smells like water and fresh-turned earth. It’s designed to cool passively, and entering it is like walking into a cave: the air chill, damp. Shade plants—ferns, hostas, bleeding hearts—line the walls. Skylights drop sunbeams throughout” (Patt 3). This space, which is described, still hints at a man-made
architectural design, while not being about high tech. It combines thoughtful environmental design with low tech and a nature-inspired aesthetic. This solarpunk aesthetic merges “the practical with the beautiful, the well designed with the green and wild, the bright and colorful with the earthy and solid” (Springett qtd. in Sparks 229). Consequently, the common theme throughout these stories is their eco-technophilia and is mirrored in the infrastructure and also the actions of the inhabitants.

In the exploration of nature-oriented sf and cli-fi narratives, typically post-apocalyptic imagery and narratives are prominent (Murphy 376). Such narratives describe “a tremendous reduction of the human population, they are often not useful for readers who want to think their way through looming environmental crises” (Murphy 376). They are most often than not characterized by being “anti-technological…[promoting] a neo-primitive way of life” (Murphy 376). Patrick D. Murphy adds that these nature-oriented novels use these post-apocalyptic narratives “to argue for a return to nature” (376). Solarpunk narratives have an entirely different stance on technology, seeing as solarpunk narratives are largely techno-optimist and promote an inclusive perspective of science and technology. Technology and science are portrayed as vital parts of these speculative futures while also being represented as solutions to certain climate change issues (extreme weather conditions, sustainability, extinction of species, and more).

“Solar Child” written by Camille Meyers is a story about a protagonist called Jamie who is a scientist in the field of genetic modification. This type of genetic modification attempts to adapt to the climate-changed Earth by integrating photosynthetic symbionts into the genetic components of large animals and ultimately humans as such animals or humans would obtain energy from the sun. The bulk of the plot takes place at a research station in the middle of the ocean. The story surrounds Jamie the protagonist and a genetically modified girl Ella who she cares for and ultimately adopts. In “Solar Child” the genetic modification of animals and humans is conveyed as a necessity “to cope with the altered Earth” (Meyers 186). Although, the story is dialogic in nature as Revelationers oppose such genetic modification and as the reader learns have attacked the research station, the overall message is that of inclusion of science within human’s lives. The portrayal of science/technology and nature undermine the dichotomy of nature and science/culture:

As you can see, we are a small mobile operation. We are almost entirely self-sufficient, growing our own food in biodomes and running entirely on solar power . . . The small
group enters a large clear dome filled with fruit trees, a small fish pond, and a variety of edible crops ranging from the tender shoots of seedlings to tall tangles of pole beans. (Meyers 188)

The description of such settings merge eco-aesthetics such as blooming trees and plants, farming, and the ocean (as the research station is in the middle of the ocean) with technology and science (solar power, domes, research operation), rejecting an opposition of the two. This rejection undermines the dichotomy between nature and culture while also highlighting the harmonious combination of the two.

Ella the first photosapien, “a small dark-skinned girl . . . [with] large brown eyes stare out from an earth tone face freckled with bits of forest green” (189) once more exemplifies this harmony as she is a genetically modified human with nature-related aesthetics. Jamie explains that “[t]he host animal, photosapiens or solarsaurs, for example, provide shelter, transportation, and protection, for their photosynthesizing partner. In return, the little green cells gift a bit of glucose, food essentially, straight into the bloodstream of their host” (Meyers 189). Not only are these solarsaurs and photosapiens proposed solutions to climate change, but they also convey a sense of agreement and harmony between nature and technology and in turn culture through the merging of imagery and language from both fields. Similar aesthetics are used to describe Solaria Grande in “The Spider and the Stars,” for example, as having “her brown skin dusted with holographic flecks, her frohawk teased with grey and threaded with light-emitting filaments. Cybernetic contacts made her irises a sigil of golden circuitry, and she looked every inch the ecological goddess who’d forced the desert into retreat” (Mok 23). The employment of such imagery not only gives the sense of a novum (including solutions or ways to adapt to climate change) but also brings the world of science closer to nature and closer to the reader. Moreover, by depicting science as an extension of the self and as an extension of society, an essential characteristic of climate change communication namely that it stems from the scientific realm is thematized. I do not argue that such thematization can solve the problem of the public’s science literacy, however, solarpunk attempts to bridge this gap and in doing so opens up the conversation while doing it in a more optimistic and approachable manner. The manner in which eco-technophilic imagery is employed points to a clearly didactic use of solarpunk, however, in the following chapter I want to highlight once more the aesthetic uses of such elements as the texts trigger certain affective responses.
2.3. Enchantment

Analysing these stylistic and formal devices has exposed how these texts depict science/technology as an extension of the self. The eco-technophilic imagery and use of internal focalisation undermine the dualism of nature and culture and in doing so, bring the scientific realm closer to the reader. On the one hand, such thematization conveys that science/technology has an essential role to play in the future of this earth and in fighting climate change (as in solar energy, the research of sustainable food sources). On the other hand, it may play a role in the reader’s science literacy as climate change information is innately scientific. These stylistic and formal devices also trigger certain modes of engagements, one of these I will discuss in this chapter. Emphasizing such modes of reading, which have been explored by Felski and are commonly viewed as more popular types of reading, allow me to highlight how art can be valuable in terms of its practicality and aesthetics simultaneously, as they do not exclude one another.

In discussing these examples naturally, the utilitarian aspects are foregrounded. As climate change information is indebted to scientific information, the fact that technology is depicted in such a way is a practical use of solarpunk. Moreover, as cognitive estrangement is a possible outcome of reading such texts, readers may reflect on science and technology’s essential role in climate-change activism, information and understanding even more. In such stories, techniques such as extrapolation and transformation are used “to evoke plausibility for the scientifically knowledgeable” (Samuelson 495) while transformation “[works] from theories that stretch or even transcend existing paradigms, transformation may be no less scientific, but less likely to be proven” (Samuelson 495). The novums of these narratives are either created by “(1) the introjection of an unknown phenomenon, or (2) the emergence of new things through evolutionary mutations and leaps from the familiar world” (Csicsery-Ronay 60). Such novums such as that of “Solar Child” thematize new discoveries or inventions, in this case, photosynthetic symbionts extrapolated from real scientific findings as “[m]arine animals acquire photosynthetically-fixed carbon by forming symbioses with algae and cyanobacteria” (Douglas et al.). Importantly, even ‘nonhuman’ characters like Ella the photosapien are “built on rational grounds related to context and evolution” (Samuelson 495). According to Suvin, a novum’s “primary purpose is to make critical recognition of the ideological mythology of one’s own time

10 In “Caught Root” “the night-blooming lilies...[and] bioluminescent lanterns at Hillside” (Patt 8) evoke the image of solar powered lights used in more and more households today.
possible . . . The true novum thus fuses aesthetic effect with ethical and historical relevance” (Csicsery-Ronay 51). While recognizable features are present in these solarpunk stories either with regards to technology, society, or culture the creation of such speculative futures “provide[s] readers with visions that are close enough to their own worlds to be recognisable and strange enough to encourage critical reflection” (Weik von Mossner, “Vulnerable Lives” 555). To conclude, cognitive estrangement allows readers of solarpunk “to see their actual world in a new light” (Weik von Mossner “Science Fiction” 212), which can be insightful and perhaps lead to action.

However, the aesthetic value of such texts is intertwined with the practical aspects and ignoring them is doing a disservice as the aesthetic value of solarpunk plays an essential role in how climate change is framed to the reader. This type of engagement (i.e. cognitive estrangement, reflection) does not exclude others such as “intensely charged experience[s] of absorption and self-loss” (Felski, *Uses* 67). Felski describes novels as “[giving] us the magic, as well as the mundanity, of the everyday; they infuse things with wonder, enliven the inanimate world, invite ordinary and often overlooked phenomena to shimmer forth as bearers of aesthetic, affective, even metaphysical meanings” (*Uses* 70).

The dominant imagery used in these stories, as discussed in the previous chapter, highlights the harmonious depiction of technology and nature. Furthermore, these new inventions such as solarsaurs, photosapiens, spaceships, terrarium cities, or dome cities are described in such a manner that create a sense of enchantment for readers. For example, in the following passage from “The Spider and the Stars” the reader learns about Terrarium City through the protagonist’s observations:

[T]he changing landscape outside kept tugging at Del’s attention: there were towns, just like hers, speckled with solar arrays and water tanks . . . There were forests of typhoon turbines ready to capture the rage of mighty storms, and enormous greenhouses in the desert, flanked by desalination plants powered by the sun . . . As the terrain outside grew more arid . . . A gigantic dome of glass—a garden city in a bell jar, infused with greenery and flecked with iridescent butterflies and scarlet macaws. Terrarium City. (Mok 19)

These novums are grounded in reality to give the reader enough information in order to avoid complete alienation from the text. Marie-Laure Ryan adds that “[t]he immersive quality of the representation of space depends [on] . . . the salience of the highlighted features and on the ability
of descriptive passages to project a map of the landscape” (124). Psychologist Richard Gerrig calls this process *transportation*, describing it as the “partial or near-complete shifting of attention away from our present environment and toward events that play out within the virtual environment” (Weik von Mossner, *Affective Ecologies* 19). This type of visual imagery invites the reader to imagine a world in which nature and technology work in harmony towards a better future. The structures are often large and powerful, yet plants or animals are never far. In these solarpunk stories, these highlighted features tend to be fictive neologies, new words or things for the readers to discover, “indicat[ing] worlds changed from their own” (Csicsery-Ronay 5).

Moreover, they “engage audiences to use them as clues and triggers to construct the logic of science-fictional worlds” (Csicsery-Ronay 5). Csicsery-Ronay also describes how “the pleasure of reading them lies in inferring surprising, and often humorous, pseudo-evolutionary connections between the familiar and the imaginary new meanings” (19).

Additionally, even when detailed descriptions are sparse, a reader may feel immersed or transported into a fictional world through techniques such as internal focalisation (Ryan 126). For example, in the previous passage from “The Spider and the Stars” Del describes the view during her travels, she sees “solar arrays and water tanks . . . typhoon turbines . . . and enormous greenhouses in the desert” (Mok 19). The circumstances under which such structures came to be, for example, descriptions of which political laws or regulations allowed for such changes in the society are not depicted. Nevertheless, through devices such as internal focalisation and such vivid imagery, the reader is given a sense of this world or society and the reader feels transported into the world.

This type of narration allows for “greater intimacy with the mental life of fictional characters than with the thoughts or emotions of real-life individuals” (Ryan 149). Dynamic narration or “narrativized descriptions” describe how “the problem of segmentation is minimized, and the experience of space blends with the forward movement of time” (Ryan 127). Fiction employs a linear and gradual approach “the text sends its readers on a narrative trail through the textual world, guiding them from viewpoint to viewpoint and letting them discover one by one the salient features of the landscape” (Ryan 123-124). For instance, in “Caught Root” the reader is given a gradual description of New-Ur allowing them to become more and more immersed and

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11 Enchantment and immersion are also triggered by beginning a story in media in res (“Solar Child”), using time jumps to create momentum (“The Spider and the Stars”), or uncovering secrets gradually for suspense (“Last Chance”).
enacted by this world. The protagonist describes various aspects and areas of the community, for example:

They use the same conical structures for multi-layered planting that we do, but their base materials are reclaimed and reused metals, whereas ours are recycled, unblemished, new-looking. They live in the same circular configuration we do: *concentric rings interspersed with lush gardens and communal spaces, each section self-sustaining and yet part of the greater whole.* (Patt 5)

This strong sensual and visual imagery, such as the concentric circles and lush gardens, allows the reader to become immersed in these eco-technophilic communities. Naturally, other elements of these texts may trigger enchantment such as plot or narrative devices which Ryan discussed at length in his book *Narrative as Virtual Reality* (2001). Felski claims that “[t]he experience of enchantment is richer and more multi-faceted than literary theory has allowed” (*Uses* 76). Although various elements may allow readers to feel enchanted, the evocations of living nature and vivid imagery of eco-technophilia allowing readers to feel immersed and transported into these fictional worlds display one of solarpunk’s many modes of engagement. These texts do not simply reference scientific knowledge, but they weave scientific findings or innovations into these fictionalized narratives. They go beyond claims science makes, extrapolating and transforming, causing the reader to feel enchanted by these inventions but also creating the environment for comparison and reflection between the two worlds.

The manner in which these various stylistic and formal devices trigger this mode of engagement, reveals how even such seemingly didactic or activist texts can transport a reader and simply be a pleasurable experience. They are not instructing a reader on how to act, but creating a world to be fully immersed in and what the reader learns from this experience is subjective. In the next chapter, I will discuss how additional recurring elements within my corpus differentiate themselves from cli-fi and sf as they promote progressive and productive messaging of climate change, while also engaging with the reader in such a way they might feel a connection to a character, empathize with the protagonist, or even learn about themselves while reading.

**3. Progressive Notions of Climate Change**

Exploring how climate change is contextualized within literature, more specifically, in these solarpunk narratives, will allow me to examine how these texts “communicate with, influence,
and engage audiences” (Janda et al. 1). Such texts demonstrate the “political, imaginative, and strategic role of environmental writer-activists” (Nixon 15) in communicating the complexities of climate change. Nixon in his book Slow Violence (2013) explores how writer-activists “help us apprehend threats imaginatively that remain imperceptible to the senses, either because they are geographically remote, too vast or too minute in scale, or are played out across a time span that exceeds the instance of observation or even the physiological life of the human observer” (Nixon 15; emphasis added). Therefore, in this chapter, I want to highlight solarpunk’s progressive notions on how to weaken the complexities of climate change, and how it differentiates itself from apocalyptic narratives.

The way in which this slow violence is communicated varies and is being highly debated, especially since cli-fi is becoming a more prominent genre (Johns-Putra and Trexler; Munger). While scientists must relay information to the public in a scientific, objective, and accurate manner, while also conveying the direness of the situation, storytellers have the flexibility of embedding the direness of the situation in any way they please (Munger 116). Though in reading blog posts and discussions on solarpunk, the consensus seems to be, and I agree, that readers are fatigued by the dystopian or apocalyptic imagery in many depictions of our climate-changed future (Flynn; Heer; Cassauwers).

To clarify, climate change communication, especially about extreme events and catastrophes, is “susceptible to reinforcing unhelpful narratives” (Munger 117). Psychological effects such as emotional numbing, apathy or denial are terms used to describe the effects of such communication (Munger 119). Scholars researching such communication have stated that “narratives about extreme events that emphasize apocalyptic themes, whether intentionally or unwittingly, may easily trigger shutdown and disengagement from climate change problems, feelings of powerlessness and futility, and ‘psychological denial’ of the reality of climate change” (Munger 116). Optimism as an emotional state should therefore not be underestimated, as it has many positive influences, for example, “[a]n optimist person generates much more enthusiasm, is globally happier and more friendly. It enables people to be resilient when facing difficult situations or challenging goals . . . A lack in optimistic bias is key symptom to the depression” (Trolliet et al. 60). Many climate change communicators are not careful enough when creating narratives lacking hopeful undertones as it can cause the aforementioned effects (Munger 117). Reframing climate change discourse in fiction to generate such emotional states can counteract
such feelings of despair and seems to be the more effective type of messaging, as is being increasingly proven (Munger 117).

Understanding climate change data and trends requires analytical processing, however, climate change is a uniquely difficult concept that must also be understood emotionally to understand the gravity of the situation. When viewing climate change not solely as a scientific problem, as Howe and Smith state, but as a “social drama” one must also change one’s approach (4–7). Considering that “[t]he human brain is characterized by two different systems of processing stimuli: experiential processing, which is linked to emotions and survival instincts; and analytical processing, which controls rational evaluation of information” (Munger 119) highlights once more how aesthetic and literary devices play a critical role in communicating this inherently analytical topic. Also, observing that scientific information is processed by the analytic processing systems emphasizes the need for experiential processing in order to motivate action (Munger 119). Rejecting a binary way of thinking about climate change will allow for a more approachable way of communicating climate change as “good reasoning and decision making involve both emotions and reason” (Trolliet et al. 57). The imagery used in such stories may be able to appeal to the emotional part of the brain, and in combination with other more scientific information can communicate climate change in an effective manner, encouraging action (Trolliet et al. 57). Therefore, I will examine prominent aesthetic and stylistic choices of these solarpunk texts including anti-dystopian imagery, internal focalisation and the use of temporal devices which trigger pleasurable yet insightful modes of engagement, one of which, I will discuss in the concluding part of this chapter.

3.1. Anti-apocalyptic Imagery

Climate change imagery such as images of mass extinction, extreme weather events, or deforestation are thematized within each of these solarpunk narratives. In “The Desert, Blooming” “poisonous particulates in the rain, and the threat of the sun vapors” (Mirov 103) loom over the world’s inhabitants, while in “Solar Child” the inhabitants worry about “spreading desertification, coastal flooding, and rising infertility and birth defects” (Meyers 186). These stories “make the unapparent appear” (Nixon 15), in other words, “making . . . [climate change] accessible and tangible by humanizing drawn-out threats inaccessible to the immediate senses” (Nixon 15).
However, the stories within my corpus do not thematize the consequences of climate change in the same manner as apocalyptic narratives where desolate landscapes dominate. The descriptions of such images are rather lacking, instead, solutions to climate change-related problems are emphasized. In “Solar Child” such pessimistic imagery is immediately undermined by introducing a solution to these issues, namely genetic modification (Meyers 186). Similarly, in “The Desert, Blooming” this apocalyptic imagery is counteracted by introducing the imagery of a place “where the Desert had become grassland full of trees and oases built over hundreds of years so the trees slowed the endless wind and the rain formed pools and the air was cleansed” (Mirov 103). Apocalyptic themes that are otherwise communicated in fearful and negative terms, in solarpunk are connected to more hopeful aspects, such as community and creativity, communicating solutions and success instead of failure and despair. The frightening imagery in these stories does not have space to make an impact as solutions to the issues and/or anti-apocalyptic imagery are introduced immediately and then thematized further throughout the remaining narrative.

The introduction of hopeful solutions is echoed by the anti-dystopia imagery throughout the narratives. While imagery in dystopian cli-fi narratives attempts to motivate readers to take action by echoing deep cultural fears and anxieties about climate change (Chiang et al. 29), solarpunk visualizes our hopes and ambitions. The “solar” in solarpunk, as Valentine explains, “is both a description and metaphor for the movement's commitment to a utopia that is accessible to every human on earth, as well as to all of our planet's lifeforms” (Valentine). However, solar energy is not the sole focus in these stories but rather the underlying theme of eco-friendly solutions and an eco-technophilic ideology (see Chapter 2). This previously mentioned eco-technophilic aesthetic highlights this exact contrast between dystopian and ecotopian aesthetics. The natural environment is described in a vivid manner, whereas in many apocalyptic works nature has overtaken society (e.g. overgrown man-made structures), growing in an arguably beautiful but wild manner. This can be seen, for example, in “The Spider and the Stars” with the existence of difficult weather conditions such as dry seasons and alternate food sources:

Ziad beamed. ‘It’s kangaroo grass sable with lemon myrtle ice cream, quandong tart and a sweet potato twill.’ / Just as meat had become a luxury in an increasingly arid world, so

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12 Other climate change related themes visible in these stories are automation, gardening, water management, sustainability, energy or power sources. For example, in “Caught Root” recycling and reusing materials or in “Solar Child” solutions such as solar powered transportation and other sustainable energy sources are dealt with.
too, thirsty crops like rice and wheat were beginning to attract concern. Those with foresight were turning to plants like kangaroo grass and saltbush, which required no irrigation, no synthetic fertilisers and no pesticides. Unfortunately, the palate of the masses was yet to be convinced. (Mok 14)

Again a problem is introduced and a solution is proposed simultaneously. Choosing such sustainable food sources like insects or quandong (Mok 14) instead of less sustainable kinds is thematized throughout the story. These types of structures are repeated throughout these stories, as the following example demonstrates once more. Del explains that “[t]o make a single beef patty, it takes two thousand litres of water. To make the same amount of cricket flour, you need a moist towelette and a tolerance for swarms” (Mok 11). Passages such as these not only highlight environmental issues and eco-friendly solutions but also introduce an exciting and creative aspect, in this case, relating to food. These dishes made from rather unfamiliar or less popular foods give the reader pleasure in discovering new creations such as the quandong tart.

Furthermore, I want to emphasize that these stories do not stray away from difficult topics. Overcoming pain and struggle is one of the key themes of these optimistic and productive ecotopias. Solarpunk stories range in their depiction of struggle; some are rooted in ideological differences, and most are climate-related or related to personal trauma. However, the manner in which these troubles are framed and contextualized within these narratives encourage other interpretations. In “The Desert, Blooming” the reoccurring use of the painful imagery of burnt hands depicts the reoccurring nature of struggle. This story deals with a climate-changed environment and a group of scientists and archaeologists attempting to grow and plant genetically modified trees. The reader is given insight into this mission as the characters enter a very dangerous environment. The first-person narrator, Luyn, describes a scene from their past:

When I was still a small child, a pilot lost control of the ship in the wind. . . Only Ibra reappeared on the far edge of the Burned Dome when the ship finally launched. Only Ibra had suited up early and worn a helmet during the crash, and still, the suit had not protected Ibra’s hand from permanent damage after exposure to the elements. (Mirov 104-105)

The closing scene of this short story echoes the image of burnt or wounded hands as the protagonist imagines: “[h]ow strange it would have been for the desert to burn the hands of both
architects of the Green Belt . . . Our contaminated-glove fingers met, but I felt the familiar tight squeeze through the glove just the same as it had been since childhood, the fingers that were not quite like everyone else’s” (Mirov 114). This scene once more reminds the reader of struggle as their contaminated-glove fingers meet, but it also emphasizes progress and hope as they complete their mission of planting trees in the Green Belt (Mirov 106). Through the use of technology and science, and the inclusion of hopeful imagery and themes, the outlook is not apocalyptic in the conventional sense.

The tone and the contextualization of these frightening events or consequences are not used to scare or shock the reader; instead, the overall tone of the story is optimistic. These hopeful and optimistic narratives, while not completely void of conflict or troubles, are able to frame climate change in such a way that the reader is not alienated or disheartened. Proposing solutions to such a complex topic and creating environmentally-friendly spaces will “build listeners’ sense of efficacy, hope, and optimism about the future” (Moser and Wolf 562). Whilst contextualizing climate change in such a way can promote forward-thinking, uncovering climate change’s complexity will allow for a multi-faceted understanding of how and whom climate change effects. In the subsequent chapter, I will explore how recurring elements within my corpus allow readers to engage with climate change-related fears and hopes in an experiential manner, which in turn expose climate change complexities such as temporal discrepancies.

3.2. Exposing Slow Violence

At the beginning of “The Spider and the Stars,” Del is depicted as a child enthralled by enchanted tales about “fierce young women with flocks of tree-planting drones, firing seeds into the barren sands and rolling back to the desert” (Mok 10). The imagery of fierce young women with tree-planting drones, although at this moment still a fantasy to Del, creates the sense of a novum to the reader. The reader instantly realizes this world is different, the tales she is told are very different from children’s experiences in the reader’s world. While the tree-planting drones are still not realized, “Ten Years Later” (Mok 12) the technology is advancing, and more and more information is revealed about the protagonist’s society:

Her work done, she slipped quietly into an adjoining paddock and down a wide stone stairwell that descended into the earth. The wall console blinked as it recognised her wrist-chip, and she passed through the airlock, entering a sprawling underground chamber
... Dim red guide-strips marked the floor, and overhead, the ceiling was studded with thousands of pinprick lights. (Mok 12)

By the end of the story, the enchanted tales she was told as a child have become a reality and she finds herself on the Terrarium Space Station (Mok 27). The reader accompanies Del on her journey to success, but also on her journey to an eco-friendlier way of living, such as choosing a plant-based diet. All of these experiences shape Del and involve the reader in climate change-related solutions or ideas in an experiential manner. Most journalistic or scientific climate change reporting is problematic as it remains analytical rather than experiential (Munger 120). While apocalyptic narratives are experiential, they may cause the aforementioned emotional numbing or psychological denial, being too “psychologically unbearable” (Munger 119). Munger states that climate change is

a problem that is uniquely inaccessible to how the human mind typically responds to threats and decides upon action. Climate change lacks salience, meaning that it does not rise to the level of threat necessary to trigger humans’ fight-or-flight responses; dealing with it requires immediate trade-offs of people’s standards of living to ameliorate potential future harms that are perceived as distant and speculative; and climate change seems, to many people, to be contested and uncertain. (118; emphasis added)

Then, the use of internal focalisation will allow for a more emotional and personal experience of climate change rather than an abstract and distant notion. Scholars such as Alexa Weik von Mossner highlight “[t]he fact . . . that we can feel empathy with and sympathy for fictional characters, has prompted psychologists to examine whether literary texts can in any way affect people’s attitudes toward specific issues” (Weik von Mossner, “Vulnerable Lives” 559). Empirical studies show “that reading fiction can increase people's empathy scores and mind-reading abilities” (Weik von Mossner, “Vulnerable Lives” 559). Embedding scientific information into narratives while at the same time employing experiential modes of storytelling reframes climate change within the context of an individual’s life. In solarpunk’s case, the imaginative depiction of a character’s journey allows readers to view climate change as an accessible and tangible concept, rather than an abstract or distant one.

Moreover, Antonia Mehnert in her chapter “Reimagining Time in Climate Change Fiction” underlines the importance of discussing climate change and related issues in terms of
time and not solely place due to the slow-paced and future implications of climate change (95). In “Last Chance” by Tyler Young the protagonist Grace visits the surface of their world with her students to show them how dangerous and barren the surface of their world is. Slowly, the truth surrounding the underground world is revealed. These children live and learn underground while the rest of the population lives in safe and quasi-utopian parts of the world. The children are kept there to shock them into caring about the planet. The protagonist reveals, this is the only way to save this planet, as humans have already destroyed two others. Throughout the story, Grace speaks to her colleague,

‘I know our method is hard, Tanya. It has to be. Remember we’re doing this for the kids’ own good. I would love it—believe me—if we could teach this lesson the same way we teach math. But, as you know, that’s been tried before. This is the only way; the children need to suffer’ . . . The softhearted ones quit after a few years. Grace had seen in a thousand times. They would say they couldn’t handle the weak light, the recycled air, the food rationing, the crowding, the cruelty. (Young 94)

Shortly following this passage with the vivid description of their circumstances in this underground base, Grace exposes the truth to her students:

‘Millennia ago, humanity fled the smoking ruin of Earth. Your ancestors were among those select few lucky enough to find a place on those seventeen colonial ships.’ . . . ‘Earth’s survivors recognized the new planet they found for what it was and named it Salvation . . . And in the span of four hundred years they destroyed the second Eden. It can never happen again, students . . . That’s why our forefathers named this planet, your home, Last Chance’ . . . A new image filled the screen: a green and blue planet handing in space . . . Unblemished natural landscapes rolled by: craggy mountains, grassy yellow plains, sapphire blue lakes, and endless rows of towering trees. (Young 95-96)

The reader can empathize with Grace who must deceive the children, but also with the children who undergo this deception. The use of internal focalisation and this type of retrospection or description of climate changed worlds bring this slow violence closer to the reader in an experiential manner and as consequences of climate change are brought to the foreground. When global warming or climate change is contextualized as a future-oriented problem, the direness of the situation is lost to many, partly due to the inability to “comprehend the scientific logic
underlying extreme weather impacts” (Ungar 307). Avoiding solely focusing on extreme weather events these stories allow the reader to envision the past, present, and future of climate change while also opening up the conversation as to how to deal with it. The use of internal focalisation depicts an alternative perspective on the direness of climate change and the mindset attached to this. Instead of focusing on details such as by how much the Earth’s temperature will rise, these stories focus on the consequences to the individual and how individuals take part in solutions. After highlighting these devices which seem practical within the scope of climate change communication, I will now explore how these devices trigger affective responses, namely recognition.

3.3. Recognition

The characters in these stories such as Grace (“Last Chance”), Del (“The Spider and the Stars”), or Luyn (“The Desert, Blooming) although “compactly” described due to the nature of the medium, all have recognizable bodies/ faces, idiolects, personalities, and manners of conduct (Smith 111). This “ability to distinguish humans from other objects and agents” (Smith 111) and distinguish characters from each other provides the foundation for recognition to occur. The outcome of such three dimensional and vivid characters may be that

[s]uddenly and without warning, a flash of connection leaps across the gap between text and reader; an affinity or an attunement is brought to light. I may be looking for such a moment, or I may stumble on it haphazardly, startled by the prescience of a certain combination of words. In either case, I feel myself addressed, summoned, called to account: I cannot help seeing traces of myself in the pages I am reading. Indisputably, something has changed; my perspective has shifted; I see something that I did not see before. (Felski, Uses 23)

Such recognition may be triggered by a multitude of elements within these stories, such as characters experiencing trauma or loss (e.g. a child’s terminal illness and miscarriage in “Last Chance”) or a love story (e.g. in “Caught Root”). However, here I would like to highlight moments of recognition which are specific to solarpunk.

Firstly, recognition may be “triggered by a perception of direct similarity or likeness, as we encounter something thing that slots into a clearly identifiable scheme of things” (Felski, Uses 38). A reader may recognize elements of themselves in these fictional characters such as in the
character Jamie who experienced a traumatic attack on the research station, or Luyn who wants to prove to her parents she can join the team in planting trees in the Green Belt, or even Grace who has suffered a miscarriage. Elements of a character's story but also their manners of conduct, or decisions they make may trigger a perception of similarity. A reader may “become aware of . . . accumulated experiences as distinctive yet far from unique” (Felski, *Uses* 39). This type of engagement also “advances an ethical and political claim for acknowledgment” (Felski, *Uses* 36) as those feeling unacknowledged find positive representations of themselves in solarpunk. Felski explains that more and more disenfranchised groups who have been “deprived of other forms of public acknowledgement” (Felski, *Uses* 43) have found positive representations of themselves in literature in contrary to the many “malicious or salacious representations” (Felski, *Uses* 48). Although, climate change activists or believers are not marginalized or disenfranchised, being represented in elements of these characters also allows for a feeling of (public) acknowledgment (Felski, *Uses* 43). In turn, this feeling of acknowledgment can further heighten feelings of optimism as the reader recognizes familiar elements in a character. Recognizing certain optimistic traits of characters will allow readers to feel “those differences [to real people in their lives] seen as desirable and worthy” (Felski, *Uses* 47). However, it is important to note that these representations are not idealistic, as these characters are dialogic in nature (Felski, *Uses* 47). These productive and progressive images still allow for the complexity and agency of persons, contrary to what some critics may believe (Felski, *Uses* 47-48). This multifacetedness of characters is created through the three-dimensional characterisations of characters and the dialogic nature of the narratives.

Secondly, finding “echoes of ourselves in the world around us” (*Uses* 43) as Felski calls it can also stem from self-extension, “of coming to see aspects of oneself in what seems distant or strange” (Felski, *Uses* 39). This can refer to a character who looks different, has a different cultural or ethnic background, or has other ideologies. Though, even when the reader perceives a character as unfamiliar, the reader can gain insight about themselves, for example, when bringing the reader closer to the realm of science through internal focalisation. Therefore, once more the solarpunk undermines the dichotomy of aesthetic and practical uses of literature, as the joy of learning about oneself when reading does not exclude how such recognition can aid in communicating climate change.

These stories are an attempt to circumvent anti-intellectualism, apathy and emotional numbing as “climate change risks are perceived as nonpersonal, concerning the future, other
places and people, and other species (plants and animals)” (Wolf, Moser 548). Accompanying a character on his or her journey as fiction gives such an intimate perspective on a character’s life can also trigger the reader to reflect on their own life and decisions. Recognition, while pleasurable and insightful on a personal level, can also have large impacts with regards to climate change. The progressive notions of climate change communication such as the anti-dystopian imagery and the exposure to slow violence allow readers to firstly, remain hopeful and optimistic but also understand the complexities of the issue. The knowledge gained about an individual can be valuable, however, in the concluding chapter of my thesis, I will explore how knowledge about these inhabitant’s societies is also transmitted to the reader. This mode engagement will once more demonstrate how the dichotomy between the practical and aesthetic uses of solarpunk is undermined.

4. Ecotopia as a Process

In the preceding chapters, I have shown how through the use of imagery and internal focalisation climate change and technology are contextualized in a productive and optimistic manner. However, in this chapter, I will further define the optimistic tone of these ecotopias and explore how I apply this term to solarpunk. Solarpunk narratives are typically associated with the terms “speculative futures”, “utopia” and “ecotopia” (Flynn; Heer; and Valentine). Naturally, these terms suit the genre as solarpunk narratives typically feature a possible future world in combination with some sort of technological advancement, societal changes, and/or a climate-changed world. Moreover, these novums tend to depict these worlds as more harmonious or safe futures. Claudie Arsenault states that

[un]like post-apocalyptic and dystopian [narratives], it believes humanity can and will overcome its current struggle to build a better world. One where capitalism lays in shambles, and community and solidarity finally prevail over productivity . . . One thing that falls naturally from solarpunk’s premise is diversity.

Speculative modes of narration, commonly discussed in terms of the sf or cli-fi genres, imagine possible worlds, usually described as either utopian or dystopian (Weik von Mossner, “Science Fiction” 204). Solarpunk clearly belongs to the former; however, the scholarly debate on the literary utopia is manifold and complex. Initially, for my discussion of utopia in the case of solarpunk, I have employed Darko Suvin’s definition of utopia, namely:
Utopia is 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; this construction being based on 

*estrangement* arising out of an *alternative historical hypothesis*. (*Metamorphoses* 49; emphasis added)

Suvin’s definition points to two characteristics of utopia I will elaborate on further: firstly, utopia is better than the author’s community but still imperfect; and secondly, utopia allows for cognitive estrangement as it is an alternative to the present world.

The potential of sf and eco-/utopian worldbuilding is “to re-envision the world in ways that generate pleasurable, probing, and potentially subversive responses in its readers” (Moylan 4 qtd. in Weik von Mossner, “Science Fiction” 204). Yet, anti-utopians, as Lyman Tower Sargent and Thomas Moylan name them, criticize utopianism as to them “perfection…[is] a dangerously debilitating goal that must be exposed and condemned” (Moylan 75). I agree with scholars such as Sargent who in his article “The Three Faces of Utopianism Revisited” (1994) rejects the idea of “perfection” anti-utopians have advocated (Moylan 75). Sargent argues that “the utopian impulse is a matter of process . . . the implicit statis or perfection simply cannot be a property of Utopia” (Moylan 75) as it would “condemn any radical movement for social transformation as escapist and irrealistic” (Moylan 75). Depicting utopia in such a way does not alienate readers from reflecting on their own circumstances and on their own hopes and ambitions. When utopia is framed as a dynamic and ever-evolving concept, it becomes attainable rather than the traditional idealized and unattainable utopia of decades past.

Many claim that utopian literature “died when idealism perished, a victim to twentieth-century pessimism and cynicism” (James 219, often referring to the classic example of utopian literature, *Utopia* (1516) by Thomas More. However, Edward James argues in his chapter “Utopia and Anti-Utopians” that utopia has not vanished but has rather changed (219). As previously mentioned, the various scholars or bloggers who have commented on solarpunk, such as Heer in his article “The New Utopians” (2015) freely use utopia or ecotopia to describe solarpunk works. However, these narratives do not depict utopia as a static and fixed society, having solved all types of societal and climate-related problems. On the contrary, these utopias or ecotopias are presented as dynamic and nebulous, ever-evolving and ever-problem-solving.
In these narratives, humans either work towards solving the climate crisis and/or have learnt to live in a climate-changed environment. Some stories such as “Caught Root” depict a society focused on sustainability and one that has seemingly halted further catastrophes from happening through various innovative ideas or societal changes. Though, there are exceptions to this rule as some of these futures, such as “The Desert, Blooming”, depict apocalyptic themes or motifs such as toxic rain or dangerously high temperatures. However, the overall tone of these narratives is optimistic and hopeful as I have explored in the preceding chapter. In the following discussion, I will debate how such nebulous and dynamic utopias and ecotopias are depicted whilst discussing the literary strategies used to construct such notions. Moreover, I will conclude by highlighting how these elements create a space for the reader to feel immersed or enchanted, undermining the dichotomy between the aesthetic and practical value of a text.

4.1. Ecotopian Roadmaps instead of Unapproachable Blueprints

Commonly, utopian narratives are known for gaps in time “between what we have and what we’d like to have; between what we would like to have and what someone else would prefer; between our apprehension of possibilities and the words we find to construct them” (Jones and Goodwin Preface ix). Yet, when discussing utopia as a process, where process is defined as “a series of actions or operations conducing to an end” (Merriam Webster), examining temporal aspects of these narratives is essential as these actions and steps must be executed over an abstract amount of time.

“Backcasting” is a term I use with regard to solarpunk, not to define the entire genre, but to highlight how some stories structure their narratives. Backcasting “works through envisioning and analysing sustainable futures and subsequently by developing agendas, strategies and pathways on how to get there” (Quist and Vergragt 2011 qtd. in Zaidi 40). Leah Zaidi explains that backcasting delivers “a roadmap of how to reach a sustainable future with directions, signposts, opportunities, and obstacles outlined along the way” (40). Zaidi has also commented on the inclination towards static images of the future, often as dystopian or utopian narratives (41). She adds that both of these types of narratives tend to “begin or end on the precipice of change rather than show us how our world might evolve into those states” (Zaidi 41) and claims that backcasting is not present in sf narratives, because they lack these types of transitions that occur between our present and the fictional futures (Zaidi 80).
The first section of “Solar Child” indicated by section sign “§”, ends with the last parts of a dialogue between Jamie and her colleague Floyd. They both uncomfortably speak about past events, “‘Be careful Jamie. After the last Revelationers attack we can’t afford . . . I don’t want to lose . . .’ Floyd’s voice cracks as he fumbles for words. ‘Anyone else’” (Meyers 186). The next section describes Jamie arriving at the research station, “compartmentalizing the memories of the last Revelationer’s attack . . . Saltwater flooded into Biodome III, killing the plants and rendering the soil useless” (Meyers 186-187). Additionally, Jamie describes the development of the solarsaur project including the loss of Dr. Melissa Laird who headed the research (Meyers 188). Moreover, the events from their past are logically connected to events that take place in this short story, such as the search for donors as money is needed for the renovation and reconstruction of the station. Retrospectively mentioning such traumatic events and hardships, while connecting it to their present, and future (as in future research through their work on the station), bridges the gap often suggested to be created by utopias and uses backcasting as a technique to highlight actions taken and hardships experienced in this process of creating a more utopian society or trying to create solutions.

In “The Spider and the Stars” time leaps are used to depict the progression of time and to highlight the dynamic aspects of utopianism. The sections of the short story, apart from the first, begin with the following temporal descriptions “Ten Years Later” (12) “Another Ten Years Later” (16), and “Another Thirty Years Later” (27). These time jumps depict the protagonist’s progression in her career as an innovator and technological advancements made by others. Elements of the narrative create excitement for future possibilities as for example, in this passage, Del imagines future innovations and technological developments, which towards the end of the story become somewhat of a reality:

While Del’s mother spent much of her time researching the nutritional value of insects, Del had become fascinated by the engineering marvel of termite mounds and the dazzling aerodynamics of dragonflies’ wings. Her mind sprouted with possibilities, imagining how this knowledge might transform her own world. She envisioned gigantic skyscrapers with convection ventilation systems, requiring no artificial heating or cooling, and agile drones flying through dense jungles in urgent search-and-rescue missions. (Mok 14)

Forty years later Del’s shuttle docks into the Terrarium Space Station (Mok 27) and the reader discovers her innovations and ambitions have come to fruition, while many others have also
joined her cause. The technological advancements such as Terrarium City (Mok 17) and then the Terrarium Space Station (Mok 27) and societal changes highlight the progression of time and through the depiction of more complex technologies, the processes involved in innovation or research are exposed to an extent. The timespan of over fifty years allows readers to engage with a society over a longer period and readers are given an impression of societal ideas and attitudes which in this case result in such advancement and utopian notions. This reflects the notion of backcasting once more as it hints at strategies or pathways on how to get to a certain future.

I do not mean to argue that simple retrospection can cause readers to reflect on climate change and come to the realization that climate change is an issue of our present, influenced by our past and influencing our present, I do, however, want to underline the importance of dynamic utopianism, a future which is not influenced by millenarianism but highlights the progression of time, and the necessity of work overtime for the development and evolution of a society. The use of these temporal aspects is one element in depicting ecotopia as a process, however, solarpunk narratives employ further devices to strengthen this depiction.

4.2. Ecotopian Worldbuilding

Sf, fantasy, and cli-fi lend themselves very well to the technique of creating “sophisticated imaginary worlds” (McDowell and Stackelberg 26). Worldbuilding is a term used to describe “the process of constructing an imaginary world . . . [encompassing] all the contextual details the characters of a story operate within” (Zaidi 15) while simultaneously seeming complete and plausible (Zaidi 15). These worlds that are different to our own reality, are “vast, three-dimensional landscapes” in comparison to “a story [which is] an experience that occupies a sliver of that world” (Zaidi 15). Worldbuilding needs to be convincing, logical and “enough information to create the impression of a fully realised world” (McHugh). Moreover, as Alex McDowell and Peter von Stackelberg highlight, coherence in geography, social, and cultural aspects in such imaginary worlds are necessary (32). Furthermore, “[r]ich storyworlds – the ‘universes’ within which stories are set – provide detailed contextual rulesets that develop a larger reality that extends beyond a single story, while potentially providing a deeper understanding of the underlying systems that drive these worlds” (McDowell and Stackelberg 25-26).

SOLARPUNK has the ability to “re-create the empirical present of its author and implied readers as an ‘elsewhere,’ an alternative spacetime that is the empirical moment but not that
moment as it is ideologically produced by way of everyday common sense” (Moylan 5). Moylan adds that “[t]o avoid the cumbersome and boring task of first explaining that world . . . the author must deliver its substance in sequential bits, appearing as the narrative unfolds, as the pages turn” (6). Moreover, instead of utopia situated on an undiscovered island or unknown part of the world, sf and cli-fi writers have used altered temporal or spatial settings to create such utopias. The length to which various solarpunk writers go when describing their worlds is not what I want to discuss; rather, I want to highlight their incompleteness and the focus on utopian impulses rather than idealized or complete depictions of such utopias. Incomplete in this context signifies a lack of detailed description of setting, infrastructure, and society.

As we are dealing with short stories, the length to which the authors can build and describe the utopian world is limited and therefore, rather condensed, simply focusing on aspects such as describing elements of the environment or world, would leave the other essential components of an engaging story lacking. Often short stories are excluded from discussions regarding worldbuilding. However, even though, they create a “small[er] window than a novel holding the reader and suspending their disbelief for a shorter time” (McHugh) they can still be effective tools for climate change communication and engaging mediums.

Worldbuilding not only comprised descriptions of setting but also includes dialogue and action, explicit and implicit renderings of a novum or world. In these solarpunk stories, the descriptions are gradually added; while some use the first few lines as exposition to their world, others use dialogue or first-person monologues to expose the inner workings of a world. The reader “learns the strange new world not by way of a condensed reality briefing but rather by absorbing and reflecting upon pieces of information that titrate into a comprehensible pattern” (Moylan 6). In “Last Chance” the gradual and incomplete worldbuilding is also used to create suspense and perhaps shock, the gradual and incomplete descriptions of this ecotopia also create the sense of a nebulous utopia. This story does not describe specific details of this world, for example, socio-political or economic aspects, nor does the reader understand what led to their ability to live on other planets, however, the main ideology is slowly described and revealed through the description of the excursion to the surface, and finally, the revealing that the younger generation has been tricked into appreciating the ecotopia they will live in.

Moreover, the short stories from these solarpunk collections for the majority employ a first- or third-person speaker. Whether the character is a visitor or resident of the utopic community, the use of an internal focalizer, which is used to give insight into a character’s
thoughts and feelings, in comparison to an authorial omniscient narrator does not allow for a complete detailed bird’s-eye-view description. These various techniques employed are not new or innovative; however, they do not allow for a perfectly detailed description of this new and arguably better place. What such techniques can do is convey the sense of an incomplete, ever-evolving world where readers do not hesitate to fill the gaps or feel overwhelmed, one could even say apathetic, to imagine how this world could relate to their own. The worlds of these stories are conveyed with the use of internal focalisation, as for example here in “Caught Root”:

We spend the week in lively conversation, debating the merits of hydro-electrics in this climate, the natural airflow of the buildings in Hillside vs. New-Ur, the cultivation of interbred varietals as opposed to the preservation of heirlooms…After dinner on my last Friday in New-Ur, we walk under the stars, Khadir shows me the night-blooming lilies; their color reminds me of the bioluminescent lanterns at Hillside, which I try to describe to him and fail. Midway through, he leans down and kisses me, once and then twice more.

(Patt 8)

The manner in which New-Ur is described, namely, through the use of a “visitor” character allows the reader to learn as the protagonist does. Through the internal focaliser, readers discover utopian ideas such as the non-rigid structure in education (Patt 5), communal dinners (Patt 5), and the idea that “everyone takes part in everything . . . no one is too important for any work” (Patt 8). The settlement is described through the perspective of the protagonist while also through dialogue with Dr. Khadir and other members of the settlement. This technique recalls the traditional traveller-guide narrative used in utopian literature, such as the classic work, Utopia (1516). However, “Caught Root” subverts the traditional traveller-guide narrative described here:

In the numerous versions of the classic utopia in the centuries succeeding Thomas More’s Utopia (1516), we have a traveller, perhaps with a small number of companions, who lands on a remote island or undiscovered continent; in more recent versions this is another planet or the future. He (it is almost invariably ‘he’ is welcomed by the locals, who are usually eager to show off their society to him. Very soon he meets an older man, who will spend much of the rest of the book lecturing to him about the delights of this society. Sometimes the visitor will respond by pointing out the contrasts between the institutions
of this ideal society and those of his own home; in most cases, however, readers will be left to pick these out themselves. (James 219-220)

In “Caught Root” the protagonist visits the New-Ur settlement to create a knowledge exchange to learn from New-Ur while offering a “consort” to go back to Hillside. Dr. Khadir shows him the features of the settlement, such as the water purifiers, gardens, and chicken coops (Patt 7) though the protagonist also experiences certain tasks himself, such as working in the kitchen and in the gardens. However, the traditional technique is subverted as the society is not portrayed as better or worse than the protagonist’s, but different. The conclusion is not to change the protagonist’s world but to exchange knowledge for the betterment of both with a common goal in mind, namely, sustainability and eco-friendly solutions.

Neither the two communities in “Caught Root” nor the biodome research station in “Solar Child” need to be practically possible; . . . [these eco-/utopias] merely need[] to be believed to be so to mobilise people to political action” (Levitas 191 qtd. in Moylan 87). Moreover, Moylan adds

even, or perhaps especially, within a political movement, the utopian process must always insist (with Theodor Adorno and Bloch) that ‘something’s missing,’ It must hold that what is already being done is never enough, that what needs to be done must always keep the fullness of human experience on the agenda as an asymptotic reality that constantly pulls the political struggle forward (before, during, and after whatever counts as a revolutionary moment). (88; emphasis added)

As solarpunk reflects the direness of climate change, the incomplete and ever-evolving utopias also contextualize the issue as needing consistent action; there is no perfect and idealized society where we, the citizens of this society, can idly stand by. To conclude, gradually giving the reader further descriptions of this novum also allows the reader to become immersed with the text learning more and more about this world. Furthermore, the gradual and incomplete worldbuilding in this narrative undermines the notion of utopianism as a static and ultimate solution to an imperfect society. In the following chapter, I will reveal a further element of these solarpunk stories which underlines ecotopia as dynamic.
4.3. Creating Room for Reflection

When reading texts which deal with alternative worlds or speculative futures, the representation of ideology is often at the forefront, especially, when these novums are conveyed in novels or short stories. Mikhail Bakhtin (1981) argues that “[m]eaningful literary texts, like all meaningful cultural interactions, function polyphonically” (Coats 316); characters that are created are multifaceted and have multiple voices (Coats 316). For example, Jean-François Vallée describes various techniques in which dialogism is present in Thomas More’s *Utopia*, for instance, various pro and contra debates, flashbacks, and after the fact dialogue (474-475).

In “Solar Child” the dialogic nature of the world is conveyed through the conflict between the Revelationers and the researchers, those for and those against genetic modification. The following passage exemplifies how such dialogism is depicted:

‘But, seriously, any suspicious ships?’ / ‘Nothing but a steam fisher a little ways back.’ / To fill the pause, she adds, ‘You know, back in my college days, I used to debate with demonstrating Revelationers . . . ‘That was before they were militarized . . . They would spew their doctrine about how the spreading desertification, coastal flooding, and rising infertility and birth defects was retribution for trespassing in God’s territory of the genome. Luckily, my friends pulled me away before the flying spit turned into swinging first.’ (Meyers 186)

Similar content occurs again in the remaining narrative: “‘As if she is safe here! The Revelationers posted a video of their last attack. The bombs, the smoke’” (Meyer 192). The explicit and implicit instances of dialogism in these narratives allow for an underlying multifaceted debate on possible ways of dealing with climate change or related issues while they are not always excluding other options.

In “Caught Root” the first-person speaker arrives in the New-Ur settlement in the hopes of learning some of their ways of eco-friendly living. As the protagonist enters the village, he describes the visible differences to his own community, Hillside:

It is so different from my home in Hillside, somecau three hundred miles away. Where Hillside’s shining towers reach for the blue sky, New-Ur seems born from the very rock,
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all adobe and stucco and low-sitting buildings. Here and there, I can see where green relieves the brown, and this is the only similarity between the two. (Patt 3)

This passage conveys the aesthetic differences between the two societies but also points to different ideologies or worldviews. The New-Ur settlement focuses on “low tech” rather than “high tech”. Through the comparison of these two settlements, through the eyes of the first-person speaker, the dialogic nature of this narrative is exposed.

They use the same conical structures for multi-layered planting that we do, but their base materials are reclaimed and reused metals, whereas ours are recycled, unblemished, new-looking. They live in the same circular configuration we do: concentric rings interspersed with lush gardens and communal spaces, each section self-sustaining and yet part of the greater whole. (Patt 5)

Dystopian or apocalyptic imagery is absent, while green solutions and ecotopian aesthetics exemplified in the passage above are in the foreground. The ideologies of one settlement or society are not forced onto the other and, therefore, the exchange of knowledge is foregrounded: “We have the same goal as New-Ur: to re-imagine civilization. Surely we can help one another? Exchange ideas freely?” (Patt 4). Although this utopia does not describe one society in harmony, it does depict two different settlements readjusting and learning from one another, maybe even forming bonds and relationships.

The ideas introduced in these stories are dialogic as no clear solutions, in other words, a blueprint, are produced. Chiang et al. also make this conclusion about cli-fi, stating that the texts outline the complexities of anticipating or living with climate change. They articulate the inconsistencies embedded in our hopes and desires, they make visible the complexities behind the broader circulation of scientific knowledge in society, and they portray the contradictions in expectations about technological solutions. Acknowledging the complexities of this super wicked problem is an important first step. (34)

The use of the term utopia in connection to solarpunk raises discussions on utopia as a perfect place, as I have mentioned, with regard to the temporal devices and worldbuilding utopia in these stories is presented as a process, as a dynamic, even transtopian place. Underlining the dialogic
nature of these stories adds to this depiction, showing how even utopia as a process is not perfect, it is not idealistic.

4.4. Social Knowledge

The utilitarian aspect of speculative fiction or utopian fiction is described as the “critical and transformative potential . . . in its ability to provide readers with visions that are close enough to their own worlds to be recognisable and strange enough to encourage critical reflection” (Weik von Mossner, “Vulnerable Lives” 555). This didactic nature of utopias and sf has been thoroughly discussed, most often in terms of cognitive estrangement. Simply defining or pigeonholing solarpunk as activist or literature encouraging reflection would minimize other motives of reading such texts. While knowledge gained about a fictionalized society can allow for cognitive estrangement and perhaps reflection, these motives for reading rely on a simplified and reductive classification of cli-fi or sf texts and in this case solarpunk texts.

As critics of cli-fi texts disparage these texts as overly political or vilifying climate change deniers and ignorers, one must note that such solarpunk texts are not attempting to give real-life detailed and convincing arguments against certain climate endangering habits. Moreover, Felski explains that

[v]iewing literary texts as potential sources of insight does not mean that they cannot also mislead or mystify: as worldly objects, their mechanisms of sense-making remain fallible, not flawless. The salient point is that literature, by dint of its generic status as imaginative or fictional writing, cannot be automatically precluded from taking part in practices of knowing. (Uses 103-104)

These texts, as Felski says, can “mislead or mystify” (Uses 103), however, these texts’ “fictional and aesthetic dimensions, far from testifying to a failure of knowing, should be hailed as the source of their cognitive strength” (Uses 104). These texts employ various techniques in order to create an environment where the reader is drawn “into imagined yet referentially salient worlds” (Felski, Uses 104), while simultaneously, allowing for the reader to gain knowledge about the world as it is. Felski explains that “one motive for reading is the hope of gaining a deeper sense of everyday experiences and the shape of social life. Literature's relationship to worldly knowledge is not only negative or adversarial; it can also expand, enlarge, or reorder our sense of how things are” (Felski, Uses 83). These novums allow the reader to gain insight into such
societies, the ways they are constructed (including how technology and science are contextualized) and how these society’s inhabitants interact with it.

These short stories, although short and concise, have the power to convey knowledge about a fully realised world. Due to their brevity, they must achieve “succinct and believable world-building, which often requires the rendering and display of an entire realistic universe as backdrop” (Sparks 141). Moreover, short stories and climate change are arguably compatible as “[s]hort stories, by their nature, focus on the microcosm: single incident with a single plot and setting, a limited number of characters, covering a short period of time . . . dramatic missions and abrupt beginnings, throwing the reader immediately into the middle of the action” (Sparks 142). These characteristics can work well with a topic such as climate change due to its complexities of conveying “the impacts of big events on disregarded places and individual lives, piecemeal and personal in the face of changes sometimes slow and insidious, other times rapid and cataclysmic” (Sparks 142).

Moreover, as these stories underline continuity and progress, the connectedness of past, present, and future, the use of these temporal devices allows the reader to gain insight into the processes and habits of a society. The structured nature of these texts, such as using time jumps to indicate progress or productive imagery, sets up a pattern of continuity and utopia as dynamic. It highlights the ability of society and humanity to continue and incites the knowledge of hope, not fear. While scientific articles may introduce solutions, or other similar formats may discuss climate change, the manner in which these solarpunk narratives shape their solutions and ambitions decline longwinded explanations or overly complicated and complex processes. As novels or short stories depict “a rendering of the qualities of a life-world, that is formally distinct from either non-fiction or theoretical argument” (Felski, Uses 89). As Janda et al. explain

[stories] are obviously different than more quantititative, quantifiable, and generalisable forms of data, and (less obviously and more entangled with definitional questions) provide a different emphasis, a different lens, than interviews, participant-observation, and other social scientific forms of data collection normally do. They are immediately oriented to relationships, in particular between people and things, the present and the past, actions and consequences, etc. And they often have emotional, psychological, symbolic, and cultural content absent or sublimated in more purified ‘objective’ data. (7)
Moylan describes this type of worldbuilding as “one that works by way of a readerly delight in the thoughtful and thought-provoking activity of imagining the elsewhere of a given text, of filling in, co-creating, the imagined for what Marc Angenot calls the ‘absent’ paradigm of a society that does not exist but that nevertheless supplies a cognitive map of what does exist” (5; emphasis added). The narrative world or novums of these stories are immediately distinguished from the reader’s present world. For example, in the following passage, the first few lines are used as exposition to this novum as the protagonist Jamie in “Solar Child” is depicted flying over the ocean on a living, solar-powered transportation device/animal called Bio, who “obediently tilts his wings and banks south” (Meyers 185). The first lines instantly let the reader know that this is a different world to their own, without explaining setting, time, characters or any objects in detail:

Below, sunlight glints off the peaks of a shifting ocean dyed blue-black with depth. The sharp wind carries salt and stings Jamie’s cheeks with velocity as she soars above, cradled in the Kevlar pouch of her flying gear. Jamie pulls a strap and shifts her weight to the right. Bio obediently tilts his wings and banks south. (Meyers 185)

While being transported and learning about a novum is exciting and thought-provoking, learning about a speculative society occurs in multiple ways, such as through deep intersubjectivity. For instance, in “Solar Child” the use of a third-person narration allows for what Felski describes as “attending to the salience of what is said and what is left unsaid, by reading looks and gestures, attending to half-voiced thoughts and inchoate sensations” (Felski, Uses 92) as for example in the dialogue between Jamie and her colleague Floyd: “Be careful Jamie. After the last Revelationers attack we can’t afford . . . I don’t want to lose . . .” Floyd’s voice cracks as he fumbles for words. ‘Anyone else’” (Meyers 186). Jamie and Floyd’s dialogue and omissions give the reader an impression of their relationship, while also conveying emotions such as fear or despair to the reader. Felski describes this as one of the techniques of giving the reader “a view of particular societies ‘from the inside’” (Uses 92), a way of gaining social knowledge about a group of people and the world in which they live in. The chain of events, descriptions, feelings such as worry or excitement, conversations, or friends, the exhibition, and more are all “revelatory episodes” (Felski, Uses 90) in this text and these various elements all create a sense of deep intersubjectivity.
In the short story “Last Chance” the protagonist Grace speaks with various people such as her colleague, the students, or her partner. Throughout these dialogues, but also the descriptions or thoughts of Grace, the reader learns how difficult the deception is for not only the students but also Grace. The first lines give the reader an understanding of the character, conveying her anxiety about the trip, “The trip is always harder on you than it is on the children, Grace reminded herself . . . But taking the children on their first above-ground visit never got any easier, even after you’d done it a hundred times” (Young 91). When speaking to her colleague she reassures her by saying “I know our method is hard, Tanya . . . I would love it—believe me—if we could teach this lesson the same way we teach math. But, as you know, that’s been tried before. This is the only way, the children need to suffer” (Young 93). Once the group of students reacts as the deception is revealed the reader learns how outraged they are: “For a long moment, the room was dead silent—the students weren’t even breathing. Grace waited. And then all of the students began to shout at once. She let them howl for a full minute and then blew an earsplitting note on a whistle” (Young 96). Felski also describes deep intersubjectivity as “learning by habituation and acquaintance rather than by instruction . . . convey[ing] a uniquely multi-layered sense of how things are” (Uses 93). Becoming acquainted with how a society is constructed is a pleasurable experience, for example, in “Last Chance” uncovering how a society is based on a discrepancy of knowledge between adults and children, or how in “Solar Child” the creation of photosapiens is introduced with all its controversies. The transportation into such fictional societies and the intimate perspectives readers obtain allow them to reflect on these societies while enjoying the encounter.

These intimate perspectives and the dialogic nature of these texts also play an important role in the representation of deep intersubjectivity. As discussed in the previous chapter, internal focalisation allows readers to gain knowledge about a character, inviting the reader to recognize elements of themselves within these characters and learn from the experience. Yet through the focaliser’s perspective on the fictional world, the reader will also receive an intimate view into the inner workings of this society. Felski in her discussion of knowledge discusses how historical texts differ from novels, stating that especially “[t]hird person fiction allows the narrator an epistemological privilege that accrues neither to real-life nor to the writing of history: unrestricted access to the inner life of other persons” (Uses 89). Similarly, scientific articles and these solarpunk stories differ as internal focalisation allows for an experiential and intimate perspective of these eco- or utopias. For example, in the short story “The Spider and the Stars” the
protagonist’s intimate dreams and ambitions are described, while also uncovering details about this fictional world:

While Del’s mother spent much of her time researching the nutritional value of insects, Del had become fascinated by the engineering marvel of termite mounds and the dazzling aerodynamics of dragonflies’ wings. Her mind sprouted with possibilities, imagining how this knowledge might transform her own world. She envisioned gigantic skyscrapers with convection ventilation systems, requiring no artificial heating or cooling, and agile drones flying through dense jungles in urgent search-and-rescue missions. (Mok 14)

The reader gains access to these personal feelings or thoughts but also to a subjective perspective on societal issues or ambitions. In this sense, internal focalizers allow for “the imaginative distance between the position of narration and addressee and the time and place of the narrated events . . . is reduced to near zero” (Ryan 130) so readers become immersed and furthermore, are able to absorb information differently, as “stories invite a different intellectual and emotional framework, beyond the (fictional) logical brain” (Janda et al. 7).

These stories reveal their “geography detail by detail, bringing it slowly into the reader’s mind” (Ryan 122). The focalizers narrate and describe features of the world using a linear approach where “the text sends its readers on a narrative trail through the textual world, guiding them from viewpoint to viewpoint and letting them discover one by one the salient features of the landscape” (Ryan 123-124). The beforementioned slow exposure to novums does not overwhelm readers with overly detailed, complex, or scientific information on climate change or related matters.

Furthermore, the dialogic nature of these texts and the implicit rendering of it allows for further “revelatory episodes” (Felski, Uses 90). The entire story of “Caught Root” deals with two different communities, their different perspectives, and manners of conduct, however, many of these are implicitly shown through dialogue, perceptions, and emotions between and of the characters. The society is depicted through “through the steady accumulation of everyday events, fleeting observations, and microscopic judgments” (Felski, Uses 88). These dialogic narratives allow readers to take part “in the making of meaning and encouraging them to situate themselves within the themes under consideration” (Coats 316).
Reading a story such as “Last Chance” highlighting the destruction of their fictionalized Earth and the idea of a dynamic utopia allows readers to reflect on their present situation. Cognitive estrangement is intertwined with the motive for reading that is knowledge, as

[s]uch world-building is both the deepest pleasure of reading sf [and as an extension solarpunk] and the source of its most powerful subversive potential, for if a reader can manage to see the world differently . . . she or he might just, especially in concert with friends or comrades and allies, do something to alter it—perhaps on a large scale or ever so slightly perhaps in a singular deluge or maybe through steady drops of water on apparently stable and solid rock—so as to make that world a more just and congenial place for all who live in it. (Moylan 5; emphasis added)

The ability of these novums in influencing our perception of our own worlds lies in how they “offer ‘new theories’ to transform our social imaginaries and revise expectations” (Chiang et al. 34). As the depiction of utopia as a process is a political or ideological theme, the power of solarpunk texts is to create joy and pleasure in being transported to and learning about other strange worlds while also allowing space for reflection and perhaps even action.

**Conclusion**

In this thesis, I have explored various recurring aesthetic stylistic features of selected solarpunk narratives and in doing so I have also uncovered various ways readers can engage with such texts; some seemingly more practical, while others are more in line with “popular” pleasures of reading. Reading these texts as aesthetic and literary texts has allowed me to undermine the concept of a solely didactic purpose of climate change fiction. However, in exploring these aspects I have found that practical and aesthetic uses of these solarpunk narratives are for the most part largely intertwined with one another. I have shown that our experiences or “engagements with texts are extraordinarily varied, complex, and often unpredictable in kind” (Felski, Uses 8). These modes of engagement are neither fixed nor prescriptive as these texts allow for a multiplicity of engagements. Such literature is multifaceted and polyvocal, rather than simply telling a story and giving an unequivocal interpretation within the story.

Separating these modes of engagements (into the corresponding chapters) has allowed me to emphasize the literary or aesthetic value of these texts. When exploring the literariness of climate fiction we are able to create a discourse on possible modes of communicating climate
change in other formats and mediums as well. Ultimately, non-fiction writers should be open to framing their analytic or scientific information with aesthetic and stylistic features. As the practical and aesthetic characteristics of texts work in harmony they allow readers to have an enjoyable reading experience yet also create an environment for immersion, gaining information, for retrospection or reflection.

More specifically, these texts widely appreciate technology and science in a way that brings the reader closer to this realm, they also create an environment of wonder and pleasure. The reader may discover new worlds with new and strange beings or objects, or even realize that these strange worlds are not that different from beings or inventions in their own world. These discoveries, moments of joy and feelings of enchantment are intrinsic to these solarpunk stories and allow for readers to become immersed in these storyworlds.

While feeling transported into these other-worlds readers learn about their residents and with that, they learn about their ways of being, their ambitions, their dreams, and their pasts. The anti-dystopian imagery, which is prevalent, allows readers to see futures which are not desolate and destroyed places, but full of hopeful and optimistic speculative futures.

Moreover, as these stories are structured and/or manipulate time, they are able to focus on the slow violence of climate change, one of climate change communications' most complex characteristics. These temporal aspects not only expose slow violence, but also highlight how these ecotopias are not static and idealistic, but dynamic and nebulous. These ecotopias, containing eco-technophilic and anti-dystopian imagery, deliver a new type of utopia, namely ecotopia as a process, or as Moylan expresses “the imaginative means to help move toward this historical possibility through political struggle” (89). Through this dialogic and deeply intersubjective worldbuilding, these societies convey a sense of community, progress, and creativity. Such short stories are able to in a concise yet fully fledged way, depict these ecotopias and in doing so slowly allow readers to gain knowledge about the world.

Exposing the dichotomy of use and aesthetic value and highlighting their inseparability has allowed me to emphasize solarpunk’s significance within the climate change communication debate. The concept of cognitive estrangement explains how readers’ “virtual experience of imaginary future worlds can indeed lead to a changed understanding of actual environmental risks in the present worlds” (Weik von Mossner, “Vulnerable Lives” 559). Here, again these modes of textual engagement such as enchantment play an immense role, as “those who feel more transported, and thus more immersed in the story, are more likely to end up with changed
attitudes as a result of the reading experience” (Weik von Mossner, “Vulnerable Lives” 559). Intersections between cognitive studies and climate change are proving to be very helpful in arguing for such texts’ persuasiveness or effectiveness.

As is the nature of climate change, the effective communication of science is an important part of the puzzle in effectively communicating to audiences. Vint argues that “[s]cholars should better identify components of scientific literacy and determine the relationships between literacy, appreciation, and political support for science” (Weigold 320). Moreover, the more scientific modes of engagement used in the scientific realm are limited, therefore, the shortcomings of climate change communication may be remedied by looking at such genres and which modes of engagement they encourage. The various complexities of climate change messaging show that there is no one solution that fits all. Efficient and productive climate change communication depends on so many aspects and solarpunk is an attempt to highlight several of them (science, fear, creativity, imagination, politics, . . .).

Also, empirical data has shown that emotion and cognition are needed in order to inspire action underlining the importance of literature as it appeals to both processes (Trolliet et al. 61). For example, more and more scholars such as Moser and Wolf are arguing that “negative emotions such as fear—unmitigated by communication on how to translate worry and concern into effective remedial action—are more likely to disengage individuals, while positive emotions help inspire and motivate people” (562). The engagement with such purely dystopian texts may encourage apathy, emotional numbing, and “an active disconnect between recognizing causes and assigning responsibility for action” (Moser and Wolf 562).

Without attempting to empirically prove how hope and optimism can inspire action, I have shown how certain narratives may trigger certain reactions. In doing so, literature’s potential as a guide to self-understanding and reflection, being totally immersed in an ecotopian society and gaining an understanding of said society, has been emphasized. Vital research is still being conducted using empirical methods that allow for further suggestions on how to communicate climate change. Furthermore, researching these emotional states such as hope, and optimism may result in suggestions for more productive and effective messaging and will allow, for example, scientists and journalists to employ such tactics.14

14 In Addressing the Challenges in Communicating Climate Change Across Various Audiences (2019) many articles discuss such tactics already. For example, in “Climate Change Engagement: A Different Narrative” Henry McGhie gives suggestions as to how museums can inform and inspire their visitors relating to climate change.
As solarpunk has tendencies from multiple genres such as cli-fi and sf, its techniques can be quite varied. The various perspectives and concepts from sf (e.g. cognitive estrangement, the novum), cli-fi (climate change, speculative fiction), and utopian studies have allowed me to highlight the major recurring elements within these stories. Using these perspectives has also helped in highlighting how solarpunk also differs from cli-fi or sf. Being able to discern solarpunk from cli-fi allows us to view alternative routes of communicating and framing climate change.

While in my corpus I have found many thematic and narrative elements in common, examining other stories would bring forth a more diversified view of solarpunk as a genre. As solarpunk is still undiscovered by many, I hope that my research on solarpunk as a genre or subgenre of cli-fi will lead to further exploration of solarpunk in terms of more productive climate change communication. There are many more short story collections[15] to explore entailing many more thematical and narrative elements. For example, “The Boston Hearth Project” written by T.K. Watson is a prime example of why this subgenre uses the suffix -punk. The protagonist Kay deals with the issue of homelessness while the upper-class use technology to their benefit, for example, in creating smart buildings with their own ecosystems. Activists including Kay then seize a smart building, in this case, a hotel, in order for homeless people to live there.

Observing how marginalized and disenfranchised groups are depicted in these stories was not possible in the scope of this thesis. However, exploring how such groups are depicted also uncovers another important layer to the discussion as climate change disproportionately affects those who are less privileged. The complexity of climate change as it relates to economy, politics, geography, and other areas must slowly be unravelled and one way of doing this is through fiction. I have shown how certain aspects such as temporal and retrospective elements can expose the slow violence being inflicted, yet other elements must also be explored further.

Furthermore, solarpunk is a truly transmedial genre and there are many examples from film, TV series, or video games which have solarpunk tendencies, for example, Star Trek, The Next Generation and the new addition to the franchise Star Trek Discovery, or video games such as “City Skylines” or “Anno 2070” where for example the player can pick between ecological policies and infrastructures or the industrial route. Exploring such representations of the genre

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and/or the movement as other audiences are reached, are extremely important, as analysing them may introduce other optimistic and inspiring stories which in turn may inspire action.

In conclusion, my research has rejected the traditional hermeneutics of suspicion prominent in literary studies by looking at modes of engagement which are not traditionally highly esteemed forms of analysis. As climate change is an issue that is communicated to all types of people, looking at how certain modes, useful and aesthetic, are triggered can highlight productive types of addressing such a highly complex issue. Within the fields of cognitive studies, science studies, communication studies, and psychology examining fiction and non-fiction in such a manner will assist in highlighting productive and approachable themes and elements, which can then further be explored and tested. The direness of climate change is gaining traction around the world, as we are seeing high numbers of people attending protests and marches and urging politicians to make changes, however, a more hopeful and optimistic form of messaging may also appeal to the vehement climate change deniers and ignorers.
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I hereby confirm that the Master's thesis entitled:

Exploring Ecotopian Futures: Solarpunk Narratives and their Multifaceted Modes of Engagement

is the result of my own independent academic work. All sources (books, articles, essays, dissertations, the internet, etc.) are cited correctly in this paper; quotations and paraphrases are acknowledged. No material other than that listed has been used.

I also certify that this paper or parts thereof have not been used previously as examination material (by myself or anyone else) in another course at this or any other university. I understand that any violation of this declaration will result in legal consequences possibly leading to my expulsion from the University of Graz.

Tatjana Razaghi

Graz, 06.10.2019