

Western Norway University of Applied Sciences

MASTER'S THESIS

Investigating the societies and environments of the solarpunk genre. Ei undersøking av samfunna og miljøa til sjangeren solarpunk. Kristian Lund Stokka

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Forord:

Takk til Zoltan, for god rettleiing undervegs i skriveprosessen.

Takk til Marie, verdas beste kone, for at du har hjelpt meg, støtta meg og motivert meg heile vegen.

Takk til Knut som stilte opp og las seg gjennom heile oppgåva.

Takk til alle i klassen for hyggeleg lag gjennom tida på lesesal og klasserom.

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Takk til alle andre, som har bidratt til godt humør og god stemning på lesesalen.

Til slutt, takk til deg som les denne oppgåva, kos deg!

Samandrag

Denne masteroppgåva ser på kva som kjenneteiknar samfunna og miljøa som vert skildra i den litterære sjangeren *solarpunk*. Klima- og miljøkrisene er to store kriser i verda i dag, som det finnes ulike løysningar på frå ulike folk, om korleis den skal løysast. Sjangeren solarpunk har eit spesielt fokus på desse krisene og sjølv om forteljingane ikkje alltid spesifikt nemner klima- og miljøproblem, er miljøet og klimaet viktig i dei aller fleste forteljingane. Difor er det interessant å setje søkjelyset på ein sjanger som prøvar å gje sine svar på korleis ein skal løyse eller leve med miljøet, og klima- og miljøproblema.

For å fokusere på dette, ynskte eg i denne oppgåva å svara på den overordna problemstillinga: *Kva slags samfunn presenterer den litterære sjangeren solarpunk, og korleis relaterer desse samfunna seg til klima og miljøet, og til ulike klima- og miljøutfordringar?*. Dette spørsmålet, i tillegg til fleire relevante forskingsspørsmål for kvart av dei teoretiske perspektiva djupøkologi, sosial teori med fokus på sosial økologi og posthumanisme, har hjelpt meg å belyse temaa eg ynskte å undersøke. For å svare på dette spørsmålet har eg delt ni ulike noveller, frå tre antologiar, inn i dei tre teoretiske perspektiv nemnd ovanfor. Perspektiva fungerte som linser til korleis eg analyserte og diskuterte dei ulike novellene. Novellene vart òg analysert ved hjelp av metoden nærlesing, ved dei narrative elementa plot, karakter og setting.

Funna frå analysane og diskusjonane viser at relasjonen mellom den enkelte karakteren og det fellesskapet den karakteren er ein del av, er særs viktig. Nesten alle novellene viser at den enkelte sine handlingar kan ha stor betydning for samfunnet. Eit anna sentralt funn er at settingen, altså stad, har stor betydning innanfor sjangeren. Det ser ein blant anna gjennom at i mange av novellene, så vert karakterane påverka av staden dei lever, der dei ofte slit med tørke eller andre miljø- og klimaproblem. Det siste funnet eg her ynskjer å trekkje fram er dei ulike måtane solarpunk søkjer å løyse både dei sosiale og dei miljø- og klimamessige problema sine. Det gjev seg blant anna uttrykk gjennom posthumanistiske trekk, individuell kreativitet og kanskje viktigast av alt, gjennom samarbeid.

Abstract

This thesis investigates what characterises the societies and the environments that are portrayed within the literary genre *solarpunk*. The environmental crisis is a large crisis in the world today, with many different ideas from various people, on how to deal with it. The genre solarpunk has a special focus on this crisis and though the stories do not always portray environmental issues, the environment is important in almost all stories. Therefore, I found it interesting to look closer at a genre that tries to give its answers on how one should solve or live with the environment and the environmental issues.

To enlighten this genre, I sought in this thesis to answer the following overarching question: *What type of societies does the literary genre of solarpunk present and how do these societies relate to the environment and environmental issues?* This question, in addition to other relevant research questions for each of the theoretical approaches' deep ecology, social theory with an emphasis on ecology, and posthumanism, have helped enlighten the topics I wanted to investigate. To answer the overarching question, I have divided nine different short stories, from three anthologies, into the three theoretical approaches mentioned above. The approaches functioned as my lenses to how I analysed and discussed the different novels. The short stories were also analysed through the method of close reading, by the narrative elements of plot, character, and setting.

The findings from the analyses and discussions showed that the relationship between the character and community, of which that character is part, is very important. Almost all the short stories show that the actions of one person can be of great importance to society. Another central finding is that the setting, that is place, is very important in the genre. This is for example seen through, that in many short stories, the characters are affected by the place they live, where they often may struggle with drought or other environmental issues. The last finding, I want to highlight here, is the different ways that solarpunk seeks to solve the social- and environmental issues they have. This is among others expressed through posthumanistic traits, individual creativity and maybe most important of all, through collaboration.

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1. Introduction

This thesis explores the characteristics of the literary subgenre *solarpunk*. Solarpunk can be said to have evolved from another subgenre called *cyberpunk*, and is part of the larger genre science fiction, according to editors of some solarpunk anthologies (Lodi-Ribeiro, 2018). Based on my preliminary readings of short stories from three solarpunk anthologies, I found that environmental and social problems, as well as solutions to these, is the focus of many of these narratives. What is characteristic of solarpunk, among other things, is that it claims to be a rather positive and hopeful genre, both regarding environmental and social problems (Arsenault & Pierson, 2015). The stories raise ethical concerns and present distinctive value systems with some differences between the short stories of what is in focus. In some stories, it is also a goal to share wealth with as many as possible, even if that wealth belonged to someone else in the first place. Militant religious groups oppose human progress aggressively and are portrayed negatively in some stories. Other stories involve a lot less conflict and focus on positive aspects of for example gene modification. In other words, there are specific types of societies with specific sets of values which in turn affect the characters of these stories. I will investigate these societies within the stories and see whether certain patterns emerge that are characteristic of the solarpunk genre.

1.1 Thesis topic and research questions

I found that some topics are especially interesting and recurring in different ways, such as environmental issues, posthumanism and social issues. Therefore, I have decided to explore these further, and these topics formed the basis for selecting the short stories analysed in this thesis. I then associated the topics with the following three approaches, which will inform my project: *deep ecology, posthumanism* and *social theory* with an emphasis on *social ecology*. All these three perspectives are central to many of the short stories within the three anthologies. Also, I believe that looking into these three perspectives will enlighten and clarify both the genre, the societies within the genre, and the environment or/and environmental problems in the stories. Further, these three elements are interesting to explore, because they highlight some of the key concerns that solarpunk seem to be occupied with. Also, they are often interconnected, e.g., posthumanism can easily be related to parts of ecology, and ecology has, in turn, social dimensions. To introduce these perspectives, I will first address them separately in three subchapters within the theory chapter, and then in the subsequent analysis and discussion chapter. In the analysis and discussion phase, I will discuss the material separately in each perspective, by the guidance of the overarching question of this project as well as the research questions. I believe this will allow the reader to get a thorough, tidy, and critical view of the genre of solarpunk. I have formulated the following overarching question, which will be at the centre of my investigations:

What type of societies does the literary genre of solarpunk present and how do these societies relate to the environment and environmental issues?

The overarching question of this thesis came to life because of seeing how important nature and people's relationship to nature are in the stories of solarpunk, and how these elements shape the places and characters within the stories. In many of the stories, as in many areas of the world, drought, extreme weather, loss of species, deforestation, waste in nature and/or other environmental problems are a great concern. Among others, the United Nations has a special focus on these concerns (UNEP, 2020). Also, it is part of the core values in the Norwegian curriculum, which states: "School shall help the pupils to develop an appreciation of nature so they can enjoy and respect nature and develop climate and environmental awareness" (Kunnskapsdepartementet, 2020). The same can be said about many stories within the genre of science fiction. Science fiction has among other things a special focus on new and/or alternative solutions to different issues in an imagined world, featuring e.g., star-ships or cyborgs. Solarpunk, as a part of science fiction, has among other things a special focus on dealing with a tough climate and presents technology, or loss of such, as solutions to deal with it. (These claims are based on preliminary readings).

There has not been much scholarly engagement with the genre, but findings from a master's thesis, by William Kees Schuller (2019), has informed my project and helped me delimit its scope. Schuller's thesis is titled "'Evolution Takes Love: Tracing Some Themes of the Solarpunk Genre" and sets out to characterize what solarpunk is about. His findings are gathered from the same three anthologies as mine, in addition to a fourth anthology called *Solarpunk: Ecological and Fantastical Stories in a Sustainable World* with the editor Lodi-

Ribeiro (2018). From this material, he found that the most important topics of solarpunk seem to be "progress, community, posthumanism and consumption" (Schuller, 2019, p. ii). Also, he discusses solarpunk's close relationship to cyberpunk and tries to map out what distinguishes the former from the latter. From his findings, and the theories he presents, he argues that solarpunk is environmentalist and that it has a socio-political motive; It is thus written for a purpose. Further, he claims that cooperation and unity appear as important values to the genre and that, in contrast to cyberpunk, solarpunk is optimistic when it comes to the use of technology.

Schuller's findings have been useful for my thesis as they have led me to be aware of how solarpunk contrasts with cyberpunk as well as showing some central themes. Also, he has shown that solarpunk seems to be inspired by the theory of social ecology, which is an interesting aspect that I have brought with me to one of the three perspectives I have chosen. Further, Schuller's thesis confirmed some of the findings from my preliminary readings, such as the fact that some solarpunk stories deal with posthumanism, and that the genre seems to look at it with a specific value system. As such, his thesis has inspired some of my perspectives, though I do not explicitly build upon his ideas. Rather I have decided to try to approach the genre with a broader perspective, but with a special focus on the societies and the environments of solarpunk.

As the focus of the overarching question may be too wide, I have formulated three pairs of research questions to help guide me in my investigation of solarpunk. I believe these will help me investigate my overall question and together will show relevant perspectives on the genre of solarpunk. I have decided to investigate two questions within each topic:

Deep Ecology:

a) How is the world affected by the environment and/or environmental problems?

b) What impact does the environment have on the protagonist(s)?

Posthumanism:

c) How is posthumanism portrayed within solarpunk?

d) Why are there posthumanistic traits in the stories and what consequences do they have?

Social theory:

e) What kind of social issues are presented in the stories?

f) What kind of social value systems emerge from the stories?

To answer these questions, I will analyse nine short stories from three solarpunk anthologies. I will do this through the method of close reading, with a focus on plot, character, and setting, carried out through the critical lenses of deep ecology, posthumanism and social theory.

I have arrived at the final design of my thesis based on preliminary readings where I have identified what kind of perspectives would be interesting to explore, and from there constructed the overarching question. This, in turn, led me to find that it would be interesting to explore this question from three perspectives, hence the categories deep ecology, posthumanism and social theory. After this, I chose short stories based on certain criteria, which I will describe in the paragraph below, and placed them within the different categories. Some stories may fit into more than one category, but I placed them within the category of the given story's main focus. By this, I have e.g., placed stories that have posthuman elements in them within the posthuman category, stories with a societal focus have been placed within the social category, and stories with an environmental or ecological focus has been placed within the deep ecology category. Then, to obtain representative material, I decided to choose one short story from each anthology to each perspective and leave out the rest. This has left me with three short stories from three different anthologies within each category. In this way, I have made steps so that my material may be more representative of the genre than if I had relied upon fewer anthologies. Also, I believe it benefits my thesis that I draw material from the wide variety of stories, from three anthologies, as the stories are carefully chosen by editors while at the same time offering a broad representation of the solarpunk genre. However, this also means that I have left out a lot of material, a cut that was necessary to allow for a thorough analysis of the material included.

I have selected stories relevant for children and Young Adults, not what publishers and sellers have defined as children's or young adult literature. My focus has been to find short

stories that are crossover fiction, which can be read by most ages. I want to argue that while there is a lot of literature aimed at young adults and children, there is also a lot of literature aimed at adults that appeal to and is widely read by youth and children. One popular example of this is the contemporary "Diary of a Wimpy Kid" by Jeff Kinney. Another work, which was written for children and youth, but also appealed to adults, is J.K. Rowling's "Harry Potter". In other words, literature that is meant for one audience may appeal to another or a broader audience than the one intended. The same argumentation may be used for many of the short stories within the solarpunk anthologies, as they can be said to be crossover fiction and appeal to both adults, youth, and children.

Some of the stories I have chosen, I believe, could easily be read by children. However, I believe most of them are more applicable to youth and adults as there are some technologies and descriptions here that require a certain level of understanding and knowledge. Also, there are a couple of stories with some aspects of sexual character or violence that can be unsuitable for children and thus more fitting for an older reader. As the present thesis is written within the field of Children's and Young Adult literature, I did not include such stories in my selection. All these stories touch upon the theme of the environment and sustainability, which, as shown earlier, is important in the Norwegian curricula as well as in the UN. Further, Greta Thunberg, along with many other kids and youth, has shown that the environmental crisis is something which kids and youth are highly occupied with, leaving this a genre that they might find interesting. Lastly, many of the stories have elements in them that may appeal to all ages, such as coming of age, character development, identity, struggle, connectedness with nature, romance, dystopia and utopia, emotions, and more.

The stories can thus be used to great length, some for kids, some for youth and some for all. I have chosen stories that may be great for all ages. Introducing these stories to e.g., youth, may enhance their understanding of sustainability and sustainable solutions for now and for the future. This is also an important reason why exploring this genre is important, as it opens for new ideas and new solutions of how one may deal with the future, or of how ideas may play out.

1.2 Description of material

My material consists of three short stories for each theme I am investigating, which gives me a total of nine short stories as material. Collected from three different anthologies within the literary genre of solarpunk, I have chosen one short story from each anthology for each theoretical perspective to answer my research questions. In this subchapter, I will introduce these three anthologies. The short stories that are selected from them will be presented through the analyses of chapter 3.

The anthologies are 1) *Sunvault – Stories of Solarpunk and Eco-Speculation* (Wagner. & Wieland, 2017) 2) *Glass and Gardens – Solarpunk Summers* (Ulibarri, 2018) and 3) *Wings of Renewal - A solarpunk Dragon Anthology* (Arsenault & Pierson, 2015).

1) *Sunvault – Stories of Solarpunk and Eco-Speculation* (Wagner. & Wieland., 2017) is edited by Phoebe Wagner & Brontë Christopher Wieland, published in 2017 and consists of 18 short stories, 10 poems and seven images.

This anthology has a different approach than the rest, with not only short stories, but poems and images as well. Since I am only looking at the short stories, I will only focus on those here. In describing solarpunk, the editors' note:

Solarpunk emphasizes innovative interaction with both our communities and our environment; socioenvironmental thought and creation, rather than merely survival in a decaying world, inspire the solarpunk attitude. (p. 9)

The editors here give the reader of the anthology a description of what solarpunk, according to them, is and what it is not. They bring forth the connection between the communities and the environment as important attributes of solarpunk. Also, they contrast it with the post-apocalyptic stories where everything is about surviving the dying world and the challenges that follow. The stories within this anthology are for example about humans living in symbiosis with other organisms, about a carbon footprint tax, a robin hood story with a hostile takeover of an advanced building to make it a home for the homeless, and many more.

2) *Glass and Gardens– Solarpunk Summers* (Ulibarri, 2018) is edited by Sarena Ulibarri, published in 2018 and consists of 17 short stories

In the introduction to this anthology, the editor; Sarena Ulibarri (2018), writes:

A lot of the tropes and requirements of solarpunk are still being negotiated, among both the writers and artists producing solarpunk works and the bloggers and critics discussing it. Does it have to explicitly deal with energy technology? Does it have to be anti- or post- capitalist? Does it have to be utopian? Does it even have to be science fiction? When I was reading through submissions, I settled on a couple of requirements: stories had to touch on environmental issues and/or climate change, and they had to have an overall optimistic tone. But beyond that, these worlds each look quite different. The stories in this anthology present a number of different possibilities for what the label 'solarpunk' could mean. (p. 5-6)

Ulibarri here shortly presents the discussion around the label *solarpunk*. Her rhetorical questions and her requirements for the submissions show that solarpunk is a new genre and that the sets of requirements to belong within that genre is not yet finalised and an ongoing discussion. Instead of going with specific requirements, as exemplified by the rhetoric questions, Ulibarri (2018) chooses to accept stories by two general requirements: environmental issues/climate change and optimism. Thus, instead of stating that these stories are solarpunk, she makes the careful suggestion that these stories show different expressions of what solarpunk may look like in the literary world.

The questions she asks are questions that are relevant to some of the perspectives that I explore in this thesis. For example, some of the short stories analysed and discussed in this thesis touch upon energy technology, capitalism, and utopia. While most of these short stories are science fiction, some are more similar to the genre of fantasy. My theoretical perspectives also touch upon some of the topics mentioned by Ulibarri (2018), as will be seen in the analysis and discussion later.

There are stories about gene-modified spiders in space, of a town forgotten by the rest of the country, about power-making nanites injected into people's skin with the side effect of your body glowing, and many more.

3) Wings of Renewal – A solarpunk Dragon Anthology (Arsenault & Pierson, 2015) is edited by Claudie Arseneault and Brenda J. Pierson, published in 2015 and consists of 19 short stories.

In the presentation of this anthology, the editors explicitly write out what, in their opinion, solarpunk is about:

Solarpunk stories are about banding together, dismantling oppressive structures, and leaving no one behind. They are about worlds where we've succeeded: climate change no longer threatens the planet, most of today's inequalities have been flattened, and people have learned to share and support each other. (Arsenault & Pierson, 2015, foreword)

Through this short excerpt of the foreword, one sees that according to these two editors, solarpunk has a clear social and ecological dimension. For one, they claim solarpunk to be about collaboration, equality, and solidarity. Secondly, they say that the solarpunk stories are optimistic concerning the environment, by saying that climate change is no longer a threat.

This anthology mixes fantasy and science fiction by introducing dragons into the solarpunk world. Some stories are about "real" biological dragons which behave in different ways, others are more technological dragons with similarities to robots, and some are a mixture of both. There are stories here about a dragon helping extinguish a fire, a dragon bringing rain to a dry city, humans aboard a living Dragonship and many more.

1.3 Structure of the thesis

In the following, I will shortly describe how this thesis is structured. In chapter 1 I have introduced the topic of this thesis along with the overarching question and the research questions that will guide my thesis. Lastly, I have introduced the three anthologies from which I have gathered short stories. In chapter 2 I will present the theoretical and methodological framework of which I will use to analyse and discuss. This chapter first presents an overall perspective of ecocriticism, before it presents the three theoretical approaches deep ecology, posthumanism and social theory with an emphasis on social

ecology. At last, I present the methodology by presenting how I understand close reading and the three narrative elements plot, character, and setting. Then, in chapter 3, which consists of three large subchapters, I present all the nine short stories through an analysis of plot, character and setting within its relevant theoretical perspective. Also, I provide nine separate discussions of each short story regarding the relevant research questions. At last, I summarize the findings from each of the three discussions within their relevant approach. In the end, in chapter 4, I will summarize and conclude my thesis based on the findings from chapter 3.

2. Theoretical perspectives and methodology

This chapter introduces the theoretical perspectives and analytical tools used in the thesis. I will start by investigating ecocriticism, using it as an umbrella term for the theories of deep ecology, material ecology and social ecology, which I will then describe in more detail. I will give a thorough overview of the theories of ecology and ecocriticism, as I believe their theoretical perspectives provide insight into the world of solarpunk. I have divided the three theories into three subchapters: 2.1 Deep ecology, 2.2 Posthumanism and 2.3 Social theory. In 2.4 I present the method of close reading, as well as a presentation of the narrative elements plot, character, and setting, which will inform my readings of the short stories.

In 2.1 I will present the theory of deep ecology based on Arne Næss's understanding of it. In this subchapter, and later in my ecocritical analysis, I will focus primarily on the relationship between humans and the environment. This will allow me to open the short stories with regards to what kind of environment exists and what relationship humans have with it. Note that this does not mean that deep ecology is not interested in societal aspects. It is a choice I have made so that I may investigate solarpunk from different perspectives and themes. In 2.2 I will first present an overview of some post-humanistic perspectives before I investigate certain perspectives further. I will look at Klaus Schwab's perspectives on humanity's future in 2.2.1, and in 2.2.2 I will look at Donna Haraway's perspectives on material ecology as well as Yosef Harari's perspectives on what the human is and what the human may become. These perspectives will allow me to show and unfold the posthuman traits of the solarpunk short stories. 2.3 mainly deals with social ecology with a societal focus and lastly, the notions of utopia and dystopia. This subchapter will therefore inform my analysis on what kind of societies are being portrayed in the stories, and how the stories in themselves can be described either as utopia, dystopia or neither.

In the last part of this chapter, 2.4, I will introduce close reading, which will be the method that shapes my analysis to explore the elements of plot, character and setting in the light of the theoretical concepts outlined in this chapter.

2.1 Ecocriticism: a general overview of the theories of ecology

Ecocriticism is a term that includes a wide variety of ecocritical perspectives, which in turn affects how ecocriticism is used. In this chapter, I have therefore chosen to present both an overarching perspective of ecocriticism, as well as three different ecological perspectives. I have chosen these ecological perspectives to highlight certain characteristics of solarpunk. Solarpunk is namely, like ecocriticism, interested in place, the environment, and society. Deep ecology, social ecology and material ecology are three different directions with different emphases, each relevant to solarpunk.

In defining ecocriticism, Cheryll Glotfelty (1996) emphasises that ecocriticism is a literary term:

Simply put, ecocriticism is the study of the relationship between literature and the physical environment. Just as feminist criticism examines language and literature from a gender-conscious perspective, and Marxist criticism brings an awareness of modes of production and economic class to its reading of texts, ecocriticism takes an earth-centered approach to literary studies. (1996, p. xviii)

This is a broad definition that serves as an introduction to ecocriticism. As seen from this definition, ecocriticism looks at the earth and the physical environment and how they are related to different entities. In further explaining what ecocriticism is about, Glotfelty (1996) writes:

[A]II ecological criticism shares the fundamental premise that human culture is connected to the physical world, affecting it and affected by it. Ecocriticism takes as its subject the interconnections between nature and culture, specifically the cultural artifacts of language and literature. As a critical stance, it has one foot in literature and the other on land; as a theoretical discourse, it negotiates between the human and the nonhuman. (Glotfelty, 1996, p. xix)

The relationship between nature and culture, and between the human and the nonhuman, is central to ecocriticism. Literature is investigated by asking what role nature, environment, and place have. When using an ecocritical perspective to analyse literature, questions about how different entities relate to the physical environment thus become important. Other questions may revolve around how stories with a specific ecological focus are being told. Furthermore, one may move away from the theme of the environment to look at what the human is or what the human should be in an ecocritical light. Many questions may derive from the field of ecocriticism, and they may be rooted in different theories within the wider umbrella of ecocriticism. Each question represents different foci, but they also share certain qualities, such as protecting the environment from human destruction. In the following, I will present three types of foci, within the frame of ecocriticism.

The compound ecocriticism consists of the two words *ecology* and *criticism*. The word *criticism* can, within the context of literature, be defined as «the art of estimating the qualities and character of literary or artistic work; the function or work of a critic» (criticism, n.d.). In other words, criticism is about analysing, describing, and investigating the qualities and characteristics of literature. *Ecology* is listed with four different meanings in the Oxford English dictionary. The most general definition is the one listed as 1c: "In extended use: the interrelationship between any system and its environment; the product of this." (ecology, n.d.). The other three stem from different theoretical backgrounds where one is a biological definition, one a sociological definition, and the last a definition of human activity's effect on the environment. All the four definitions give a slightly different understanding of what ecology is, but what they all have in common is that they are concerned with how a system, species or/and people relate to the environment. The three specific types of ecology from the dictionary, (1a, 1b and 2), can be described as follows:

The biological definition (1a) focuses on the relationship between living organisms and their environment, the sociological (1b) focuses on the relationship between people, social groups or systems, and the environment, while the last (2.) seeks to investigate human's relationship to and impact on the environment (ecology, n.d.). These different definitions reflect different approaches to ecology, some of which I will explore in this thesis. I will look at deep ecology, which corresponds with the focus of the last (2.) definition. Further, I will look at social ecology, of which the 1b definition provides a wide introduction, and lastly, I will look at material ecology and the posthuman which is most relatable to the biological definition (1a).

A useful tool to investigate all these different perspectives and questions is *"the nature in culture matrix"* by the NaChiLit group, which is based on a broad basis of ecocritical literary

theory (Goga et al., 2018). The model looks at ecocriticism in two ways: 1) how stories are either leaning towards *anthropocentrism* or *ecocentrism*, and 2) if a work is *celebrating* or *problematizing* nature. Surrounding these axes is the concept of *Techne*, which functions as a reminder that everything is portrayed through human activity or thought, through the cultures of which the writer and the reader are brought up.

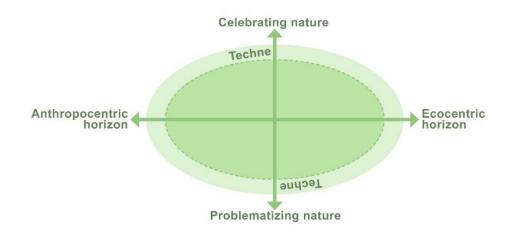


Figure 1, The Nature in Culture Matrix

(Goga et al., 2018, p. 12)

The model is divided into three aspects, as mentioned above. The vertical axis shows whether nature is celebrated, based on Jean-Jacques Rousseau's romantic idea of the "child of nature". This implies that one sees the beauty and resourcefulness of nature and views a relationship with nature as harmonious. On the other side, the idea of problematizing nature is found. This can either be that humans' relationship to nature is problematized or that the focus is on nature and its destructive powers. The environmental problems, deforestation, over-use, storms, etc. are topics that serve as examples of how nature and humans' relationship to nature are problematized. The horizontal axis considers how, and from where, one understands and views different living species. The anthropocentric standpoint is a position from where everything in the world is viewed from a human-centred perspective. This contrasts with the ecocentric standpoint, which sees all living species as a whole, and views humans as part of that ecosystem, putting the ecosystem at the centre.

Lastly, the model consists of the concept of techne. As seen from the illustration of the model, techne surrounds the two axes, which means that the model must be understood with reference to techne. "The concept of *techne* is taken from rhetorical theory and is here

understood as the art of shaping and manufacturing: 'an intentional crafting of self, world, and society' (Boellstorff, 2015, p.55 referred to in Goga et al., 2018, p. 13). This dimension is in the model to signal that all texts and cultures are constructed depictions of nature, including this model. In literature, this means that when nature is presented in a text, it is always a designed or invented representation of nature. It must always be viewed with regards to culture, as there is always a cultural bias that must be considered. Also, the element of techne is included to enlighten themes such as the posthuman and biotechnology, where nature is constantly being changed by culture and manipulated by humans. To summarize: "the nature in culture matrix" is an ecocritical model for looking at how humans in literature or real life respond to nature and ecology (Goga et al., 2018, pp. 12-13).

2.2 Deep ecology

In describing and categorising deep ecology, the Norwegian eco-philosopher Arne Næss (2005) compares *deep ecology* to what he calls *shallow ecology*:

The shallow ecology movement is concerned with fighting pollution and resource depletion. Its central objective is the health and affluence of people in the developed countries. The deep ecology movement has deeper concerns, which touch upon principles of diversity, complexity, autonomy, decentralization, symbiosis, egalitarianism, and classlessness (Næss, 2005, p. 2263).

In this comparison he critiques the views of what he calls the shallow movement of ecocriticism: to fight pollution and take care of the earth for the sake of humans, not considering other species. The first sentence of the quote also critiques how affluent peoples and states are the ones who are prioritised to achieve that goal. Deep ecology is thus a stance that is not only focused on nature but also society and people. In general, deep ecology views and measures life, not according to material or economic standards, but to the quality of life, according to Næss. To be one with nature and to have a playfulness with nature are two more generalisations that are important for Næss's deep ecology. He explains deep ecology as a complete philosophy, as a way of life, not just an interest (Næss, 2005).

Næss (2005, pp. 2263-2267) lists seven principles for what deep ecology is and should be concerned with. In the following I will briefly present these seven principles, to provide a comprehensive picture of Næss' ideas.

The first principle he introduces is that humans are part of the physical environment, not separate entities. This means that e.g., human and nature are one, not two entities; we are part of nature and nature is part of us. Second, deep ecology believes that all species should be considered to have equal value and that we should live in what he calls a *biospherical egalitarianism*. However, Næss has gone back on the term *biospherical egalitarianism* in his later works. In a later article (Næss, 1984), he states that all living beings have intrinsic value. Yet, he says that "to proclaim the existence of that value does not logically nor otherwise necessitate a norm of equal behaviour towards all living beings" (p. 202). E.g., he brings forth an example where he cannot avoid but to step on a certain plant up in the mountains (p. 202). In other words what he implies is that one should respect the value of all species and not exploit others, but that one sometimes needs to do actions that may harm these species.

Third, it is important to have a diversity of species, to improve the chances of survival and to live in symbiosis with other species to achieve that goal. According to Næss (2005, p. 2264), the slogan "Live and let live" is a much more powerful ecological principle than "Either you or I". The fourth principle continues with the same type of opinion by claiming that a classless society is the best society, as classes lead to conflict and exploitation. Further, the fifth principle addresses fighting pollution and resource depletion, without letting it happen at the expense of others. For example, he argues that the fight against pollution should not lead to higher costs on necessary goods and thus lead to higher class differences.

The sixth principle considers embracing the complexity of nature to better see "our profound ignorance of biospherical relationships and, therefore, of the effect of disturbances" (p. 2265). Thus, it is a call to see how our actions have consequences for complex ecosystems, and then to change our actions accordingly. For example, a tree in a forest can be part of a complex ecosystem and should therefore not be cut down without consideration, as cutting it down may destroy part of a larger ecosystem. Furthermore, the principle of embracing complexity is to support liberal research of new technology and to use technology to achieve ecological goals. In the economy and labour, it is about not seeing man as a machine, but seeing the complexity and wholeness of a person and dividing labour

accordingly. The seventh and last principle Næss list is that deep ecology supports local autonomy and decentralisation. He argues that this is important because powers of influence from far away can be dangerous to the ecological equilibrium of a species. Also, he argues that the transport of wares and people across borders lead to more pollution and that self-sufficient localities pollute a lot less. Therefore, deep ecology goes against the ideas of capitalism and commercialism and rather tells us to appreciate and work with the resources that we have (Næss, 2005).

The seven principles above give a brief overview of what deep ecology is concerned with and what ideas and values it holds. According to Arne Næss, one must consider all the seven principles together and not pick and choose what one considers important, in order to be a deep ecologist. In other words, it is important for Næss that one aims to see the complete picture and not focus on singularities (Næss, 2005). In this thesis, I will not look at how the short stories relate to all the seven principles, rather I will draw forth the most relevant principles to each story.

To summarize, deep ecology, here presented through the works of the philosopher Arne Næss, is a theory, philosophy and movement which challenges many standard norms in the world. Some of the norms deep ecology represents has become more normal during the last years, especially when it comes to young people eating more vegetarian food. Stories of solarpunk play with or embrace some of the principles and ideas that Næss has presented, which will be shown during the analysis or/and discussion.

2.3 Posthumanism

In his essay "Efter det posthumane", Mikkel Brun Zangenberg (2018, pp. 69-70) describes four ways of looking at posthumanism. The first is called the *Foucalt-possibility*. The posthuman here is when the idea, or knowledge of what is distinctively human, within say biology or anthropology, is completely altered. The second, the *Gray-possibility*, describes posthumanism as post-human, namely that humans in the future, will cause self-extinction and to speak of posthumanism is, therefore, to speak of what happens after humans or most humans have gone extinct. The third possibility is the *Schwab-possibility*. This possibility describes posthumanism as redesigning humans, to make the "perfect" version of it. Biotechnology is a way of doing this, to put on make-up, another simpler way. Zangenberg

calls this a type of capitalistic "hyper-narcissism" (p. 69) and goes far in saying that it is the two industries military and porn where this type of hyper-narcissism has come furthest. While Zangenberg is sceptical to this form of posthumanism, he mentions Klaus Schwab there, because Schwab believes in pragmatic and fruitful capitalism of posthumanism. As such, Zangenberg says, if Schwab is right, drone-soldiers can keep the peace and sex robots will secure happiness. The fourth and last possibility Zangenberg presents is the *Hararipossibility*. In all its simplicity this possibility describes humans and all else as algorithms. As such, there is no more difference between a vending machine and a human, than that a human is a much more advanced algorithm than a vending machine. From this perspective, *artificial intelligence* does not present an existential difference to humans, but merely a more advanced and better version of humans.

Having mapped out these four ways of looking at posthumanism, I will look deeper into two of them. As solarpunk is said to be a positive, hopeful, utopic type of fiction, I will leave out the Gray-possibility, as it will have less relevance for my thesis. Second, the description of the Foucalt-possibility offers itself more directly to my following analyses than the last two possibilities and will therefore not be further discussed here. However, the Schwabpossibility and the Harari-possibility need to be addressed to highlight their relevance for my project. I have chosen these because I believe they will help illuminate what kind of posthuman views solarpunk portrays. I will, however, not describe them as the Schwab- and the Harari-possibility, but rather I will describe my subchapters here as 2.2.1 *Redesigning humanity* and 2.2.2 *Posthuman views on humanity*. Also, I will include the material ecologist Donna Haraway as part of subchapter 2.2.2.

2.3.1 Redesigning humanity

Humans get sick, injured, and die. What if one could change all this so that the body would defeat every disease, grow back lost tissue and regenerate cells so that one may live and maybe never die? Biotechnology may be the answer to do all this and thus hold immense possibilities to do good. An example of this is some of the corona vaccines that have been made, where one has been able to replicate RNA sequences and alter them so that the body only receives the recipe and is ready to defend the Covid-19 virus. It is a revolutionary technology and a fast way of producing a vaccine, which is useful in case of a pandemic. Another amazing feature is how well artificial legs work, that they may even improve how

fast a human can run. As such, unarguably, biotechnology and building artificial legs or hands are amazing tools for improving and helping humans. However, without discussing it in detail, there are major ethical concerns with this. For example, as Zangenberg fears, biotechnology may well lead to a "hyper-narcissism" (Zangenberg, 2018, p. 69).

Zangenberg (2018) draws forth executive chairman of the World Economic Forum Klaus Schwab as an example of what he calls an "optimistic pragmatic". In Schwab's book *The Fourth Industrial Revolution* (2016), Schwab seeks to draw lines between what challenges and opportunities lie ahead in the future, with an emphasis on the relationship between technology and society. He emphasises that it is important to "think about how to harness the technology revolution" (p. 4), instead of speaking of if we should accept or reject the changes. Schwab explains that he has called his book the fourth, and not the third, revolution because of the major changes that will happen in all kinds of fields and the fact that the revolution will be exponential, not linear (p. 3). To narrow it down, I have chosen to focus this subchapter on the biotechnological field.

One of the major changes Schwab draws forth is that of biotechnology and how it can cure diseases, though he also reminds the reader of the ethical issues of improving humans' strength, beauty, cleverness, etc. by gene-manipulation (pp. 21-23). Another "profound ethical issue" Schwab draws forth is the possibility of synthetic biology, i.e., to custom build species by writing DNA (p. 21). This may be something for the future, and science fiction to write about, though according to Schwab it is closer to reality than what one may think. Technology tends to go fast and is most often only held back by "legal, regulatory and ethical" (p. 22) constraints. For instance, gene modification is by now not so hard to do, as exemplified with some of the covid-19 vaccines, and it may for example be used "to modify animals so that they can be raised on a diet that is more economical" (p. 22). If gene modification may be used to make animals more economical in how they eat, maybe it can also make them more eco-friendly. As will be shown in the short story "Solar child" by Camille Meyers (2017), modifying animals and humans is seen as a great way to reduce e.g., the amount of food needed.

Schwab (2016) writes, speaking of the changes of the future:

[I]t is in the biological domain where I see the greatest challenges [...] We are confronted with new questions around what it means to be human, [...], and what rights and responsibilities we have when it comes to changing the very genetic code of future generations. (p. 23)

He brings forth designer babies as an example of one of these challenges (p. 23). Schwab seems to be optimistic, however, and has a strong faith in humankind to make the best out of the situation, in contrast with Zangenberg (2018), who is more sceptical. Schwab believes that humans are strong enough to meet these challenges so that one may live one's life, also in the new environment (p. 106). As will be shown later in the thesis, some of the short stories raise similar issues, which is why I also introduce these issues here.

To summarize, I chose the title "redesigning humanity" for this subchapter because that is an important aspect of posthumanism, and it is one way in which biotechnology can be used. I focused primarily on Schwab here because he puts forth an overview of the developments of where the world is going. As such, he does not represent a specific philosophical direction, as opposed to Donna Haraway and Yosef Harari, as I will show in the next subchapter. Rather he presents an overview of some of the technological advances and what they may imply for the future. He represents a positive voice and strongly believes in collaboration between companies, states, and individuals to meet the biggest challenges humanity has faced. I have chosen not to focus on Artificial Intelligence, computer technology, etc. as the focus then will be too broad, though these are important as well for posthumanistic traits.

2.3.2 Posthumanistic views on humanity

What is a human being? This is a question that holds immense implications to how one should see the different biotechnological options in the subchapter above. For instance, if one sees humans as a creation of God, maybe one would be careful to try to play god by constructing or altering species. Also, if one sees humans as the centre of everything with immeasurable value, it may be threatening and unethical to make e.g., designer babies. However, if one sees a human being from a naturalistic view, these biotechnological options may be simple means to take human evolution one step further. In this subchapter, I will look at the last of the three philosophical worldviews introduced in 2.2 by taking a short look at Donna Haraway's ideas on material ecology and Yosef Harari's views based on his

influential book *Homo Deus* (2017). I believe these perspectives are relevant to my analysis and discussion of the posthumanistic within the solarpunk short stories.

I will start by introducing the theory of material ecology. The notion of this movement is that everything, all matter, tells a story and thus gives agency to both the living and the non-living as matter who/which both can be understood as stories (lovino & Oppermann, 2014, pp. 1-2). Donna Haraway is a feminist and material ecologist, who has introduced some central ideas within the theory of material ecology. She presents the term *figures* which she describes as matter, tied together symbolically to form a union where everything is shaped by one another and creates meaning together (Haraway, 2007, p. 4). Haraway brings forth her own body as an example of such a figure and says: "For me, figures have always been where the biological and literary or artistic come together with all of the force of lived reality" (Haraway, 2007, p. 4). As such, figures can be understood as matter intertwined, telling stories, such as her body which contains many bacteria and other species. This means that if everything tells a story and holds agency, then the human may need to be positioned, not above nature, but "in a larger material-semiotic 'collective'" (lovino & Oppermann, 2014, p. 6). In other words, it would be a fully ecocentric view of what the human is, which implies that humans are part of nature not separated from it.

Haraway does not see humans as one entity but as a compound of many different species. She draws forth that she loves "the fact that human genomes can be found in only about 10 percent of all the cells that occupy the mundane space I call my body" while the rest are filled with other species (p.3). She goes on to say that she grew up with these other cells and that "[t]o be one is always to become with many" (p. 4). In other words, this is a way of thinking of humanity, not simply as one human, but that a human is always in a symbiosis with a dozen other species. Haraway does not think of humans as special, but simply as part of the rest of the world, part of what everything is in its simplest form: matter. She does not say that the human genome is insignificant, but that it is merely 10 % of us, leaving 90 % for other species (Haraway, 2007, pp. 3-4). As such, Haraway's descriptions of what is human, differ from the humanist anthropocentric view which puts the human in the centre of everything. This is an important point that will inform my analysis as it provides a perspective that can be used to describe some posthumanistic traits. Also, her perspectives

may show what values towards society and environment, regarding the posthumanistic, that solarpunk short stories portray.

In his book *Homo Deus*, Yuval Noah Harari (2017) claims that everything and everyone in their simplest forms are algorithms. About humans, he says that they are "algorithms that produce not cups of tea, but copies of themselves (like a vending machine which, if you press the right combination of buttons, produces another vending machine)" (Harari, 2017, p. 85). The only difference between inorganic algorithms, such as the vending machine and humans is what they work through, he says. Where machines' algorithms "work through mechanical gears and electric circuits [...]" humans' algorithms "work through sensations, emotions and thoughts" (p. 85). Or maybe there is more to it than that. Harari does claim that there is a difference between us and machines, made from the vast network of biochemical signals which "creates something far more complex – the stream of consciousness" (p. 109). This allows us to think consciously and to have subjective experiences, which machines do not have. However, robotics companies are working specifically to achieve this, such as Hanson robotics which has the slogan "We bring robots to life" focusing on artificial intelligence, where the goal is to achieve a *consciousness* for the robots (HansonRobotics, 2021).

Harari (2017, p. 106) also stands firm on his belief that the theory of evolution has proven the belief that humans have an eternal soul, wrong. Evolution, he says, equals change and therefore it "is incapable of producing everlasting entities" (p. 106). He says, "From an evolutionary perspective, the closest thing we have to a human essence is our DNA, and the DNA molecule is the vehicle of mutation rather than the seat of eternity" (p. 106). The *stream of consciousness* or to be conscious is not proven on animals he says, but there are strong indications that many animals are conscious as well, and not simply algorithmic beings (pp. 123-124). In other words, Harari goes far in assuming that there are not so much differing humans from other beings, other than the fact that we, as of now, are the most powerful species.

Having presented Harari's descriptions of what the human is, I want to turn to how Harari imagines the future of humanity; to become like gods. By gods, he explains that one should not compare it with God with a capital G, but rather demigods, such as those found in Greek mythology. As such, Harari suggests that humanity's ancestors will not conquer all their

faults and limitations, just as the Greek gods had theirs. "But they could love, hate, create and destroy on a much grander scale than us" (p. 47). He describes three possible ways for humans to evolve into demigods. The first he calls *biological engineering* which implies biotechnology and gene manipulation, changing the DNA of cells or making new cells, improving what is seen as weak. The second is called *cyborg engineering* which implies combining the best of computational technology with humans to create an improved human. E.g., this could mean injecting small pieces of technology into the body to take care of diseases or inject nanochips in the skin for paying in the store, etc. The third is called *engineering of non-organic beings* which implies the field of robotics and artificial intelligence (Harari, 2017, p. 43). All these three routes "[i]n pursuit of health, happiness and power" will gradually lead Homo sapiens to no longer be human, according to Harari (Harari, 2017, p. 49). Rather it may lead to what Harari has titled his book, namely a new species, the *Homo Deus*, or human gods.

These ideas, such as those of consciousness and human engineering, will gain importance in my later discussion of posthumanism and help illuminate how solarpunk portrays post humanistic ideas. Together, both Harari and Haraway provide a theoretical framework that will allow me to better show the posthumanistic traits of solarpunk in the discussion phase.

2.4. Social theory

This subchapter consists of theory with special regards to society and is divided into two subchapters, 2.3.1 Social ecology and 2.3.2 Dystopia and utopia. 2.3.1 Social ecology deals with the relationship between the ecological and the social aspects of the world. I will mainly rely on the work of Murray Bookchin here. Subchapter 2.3.2 Dystopia and utopia is a short subchapter about the two terms dystopia and utopia and what they entail. Together these two subchapters will provide a theoretical framework to investigate the social aspects of solarpunk.

2.4.1 Social ecology

Murray Bookchin is one of the most important spokesmen within the theory of social ecology. He bases his line of thinking on social ecology, on what he calls dialectical naturalism, which "forms the underpinning of social ecology's most fundamental message:

that our basic ecological problems stem from social problems" (Bookchin, 1996, p. 35). In other words, one must focus on social problems, because social problems are the reason for ecological problems. They are interconnected, and according to Bookchin, the social systems of the world must change to be able to wholly address the ecological problems. Bookchin wants drastic changes to how most societies of the world are structured. He criticises materialism, capitalism, polluting industries, as well as the state and other dominant hierarchical structures. Instead of these existing structures, he proposes *eco-communities* where communities live adapted to a greater ecosystem, as well as with *eco-friendly* technologies. He also suggests replacing the state with decentralized social institutions that hold democratic structures. It is a way of structuring the administrative powers, where those in a position of power and domination is constantly on trial and subject to replacement. Further, these social institutions should hold high the values of solidarity and the value of helping each other out (Bookchin, 1980, pp. 284-285).

Bookchin' social ecology problematizes hierarchical societies and claims that this social structure is not natural but to something into which we have been socialised (Bookchin, 1980, p. 60). Instead, he promotes what he calls *ecocommunities*, which he describes as decentralized societies with direct democracy and a circular way of getting rid of waste by returning it to the countryside. Also, in an ecocommunity, there should be a great emphasis on growing local resources, and it should have a reasonable size so that there may be a diversity of cultures and people according to Bookchin. The ecocommunity should also fit, like pieces of a puzzle, "to its natural ecosystem" (p. 110).

Bookchin is deeply occupied with the close relationship between humans and nature. He speaks of two types of nature to explain what he wants this relationship to be: first and second nature. He sees *first nature* as landscapes, views, forests, etc., but emphasises especially biological nature with its evolutionary course as very important to what first nature is. This, he explains, has led to complex life forms and the potential of life forms that are even more complex. (Bookchin, 1996, pp. 29-30). Humanity, he claims, is the most developed species and is so complex that it should be placed above or beyond first nature (p. 30). Therefore, humans have a special role to play in not exploiting nature, but to take care of it.

Second nature, according to Bookchin, is about how humans have developed advanced cultures, communities, techniques, languages, and food sources (p. 119). As such, it may be another way to describe humanity and human life. To look over and steward the earth, Bookchin wants to integrate this first and second nature with each other. He believes that this integration "would yield new ecocommunities, ecotechnologies, and an abiding ecological sensibility that embodies nature's thrust toward self-reflexivity" (p. 132). He believes that human culture and nature must be integrated into each other because it would be unnatural to not do so (p. 132). Human society, he claims, is also part of nature, and therefore he believes that humans should not leave nature alone, but rather that we have a responsibility to look after nature and all the world's life forms (p. 2). Social ecology thus seeks to combine nature and culture, not as opposites, but as a collaborative ecological society where the culture is not to dominate nature but to respect nature while living life to its fullest. As such it seeks to combine the first and second nature, in what Bookchin calls "free nature" where this nature is "rendered self-conscious in a rational and ecological society" (p. xi).

Progress or the potential to progress is also a key element to Bookchin's thinking. He believes that "[a] society that fails to actualize its potentialities for human happiness and progress is "real" enough in the sense that it exists, but it is less than truly social" (p. 21). Therefore, he argues that society must always evolve and work towards human happiness and progress, so that people in that society may live to their potential. He also links this thinking to human's relationship with nature when he claims that humans must actively engage with the environment. (p.90). Bookchin's progress differs from capitalistic progress as he wants to see anticapitalistic societies that are occupied with progress that ensures the quality of life. This brings the first and second nature together as one, for the good of both humans and other species.

Bookchin (1996) also challenged the values of deep ecology, which argues that all species have equal value. In his discussion of what he calls "biocentrism" he warns against what may happen if you follow these movements completely; that it may lead to a harsh logic; that mankind holds no more value than that of an ant (1996, p. 116). He brings up an example of this, by showing what the deep ecologist David Foreman once said in an interview about aid in Ethiopia. In that interview, Foreman proposed that one should "let nature seek its own

balance" so that the people there would starve. Foreman argued like this because he believes that population growth would only cause more suffering and subsequent deaths (quoted in Bookchin, 1996, p.117).

Bookchin criticises deep ecology for this view on humans, as well as for its lack of focus on social problems, which Bookchin sees as an important cause for the ecological problems. He writes that "[b]iocentrism, for all the caveats its supporters' issue to qualify it, strikes me as bluntly misanthropic and less an ecological principle than an argument against the human species itself as a life-form" (Bookchin, 1996, p. 116). He claims this is a flaw with deep ecology, that it degrades Man's right to live to that of "butterflies, ants, whales, apes, and— yes—pathogenic viruses and germs" (p. 116). Bookchin here shows that he puts humanity's value above other species and states himself as a humanist while critiquing deep ecology for not doing the same.

Bookchin's heavy critique of deep ecology has, however, been criticized by other spokesmen who consider themselves part of the social ecology movement. John. P. Clark (2010) is one of these, and in an article about his conversations with the deep ecologist Arne Næss, he makes the claim that Bookchin sometimes criticises his opponents, without first carefully analysing his opponents' views properly (p. 20). He brings up different letters from Næss, which he comments on both to find a common ground and to emphasize differences between himself and Næss, or between social ecology and deep ecology. Among other things, for Næss ecological problems are also social problems (p. 27). In other words, it seems that despite Bookchin's critique of deep ecology, the two approaches share many important characteristics. Clark (2010, pp. 31-32) even states that he and many social ecologists would have no problem in accepting the deep ecology platform. ¹

While the critique towards Bookchin may discredit some of Bookchin's critique of others, this does not necessarily mean that one should scrap his theories; rather it calls for general academic criticism. His ideas and perspectives are very important to the theories of social ecology, which in turn is highly relevant to the genre solarpunk. As mentioned in the introduction, Schuller (2019) points out that solarpunk holds high the social-ecological

¹ I have not presented this platform in this thesis, I have instead presented Næss's seven principles, they do, however, share many of the same ideas.

societies that Bookchin presents. Bookchin's thoughts are also relevant to this thesis as he highlights the social dimension of ecological problems, though I do not go as far as Schuller (2019) to say that solarpunk is indebted to social ecology. That is neither my goal to prove nor disprove. Rather I will use the perspectives from social ecology to unfold the societal aspects of the selected short stories.

2.4.2. Dystopia and utopia

Utopian and dystopian literature can be found across many different genres in a wide variety of stories. Solarpunk claims to be a hopeful and positive genre (Arsenault & Pierson, 2015), almost utopian, but what does that mean? This question is interesting, but for now, I will merely show what *utopia* and dystopia are. I will then return to these topics in the discussion in chapter 3.

As Sypnowich (2018) reminds us, "Sir Thomas More (2008 [1516]) coined the word 'utopia', deriving it from the Greek 'topos' meaning place, and 'ou', a general negative, to depict a society of common property, altruism and fellow feeling" (p. 661). In other words, Sir Thomas More defined a place he would call perfect, while at the same time claiming that this place can never exist, almost like a dream. In other words, what utopia is, what the perfect place is, depends on whom you ask. It is in many cases highly subjective, and one man's utopia may therefore be another man's dystopia, the opposite of utopia. Mumford (1996, p. 10; cited in Sypnowich, 2018, p. 662) suggests that utopia is not a place where humans would thrive as the utopia does not consider the spontaneity and differences of humans. Therefore, describing society as utopian is sometimes used as a negative term in political contexts (Sypnowich, 2018, p. 662). Utopia cannot be described as an objective perfect society but may even sometimes be seen or end up being the opposite, a dystopia.

Dystopia can be described as the worst place you can think of to ever exist. (p. 662) A socalled *living hell* would be a good image to illustrate this. However, dystopian stories are not necessarily told for the sake of describing a terrible place or society to live in. They may also be told to cause the reader to look these terrible places in the eye so that the fictional reality will not happen in real life. Dystopian literature can either "be portrayed for the sake of utopia, in a spirit of hope, or it can be portrayed in an anti-utopian spirit, dismissing utopia as a dangerous illusion" (Sypnowich, 2018, p. 667). Thus, solarpunk stories may be portrayed

in a dystopic world, but in a hopeful, positive manner for the people who live there. To sum it up, while utopia and dystopia are complete opposites, each may be used as means to present the other.

2.5. Analysing literature - Close reading and the narrative elements of plot, character, and setting.

Analysing literature starts with figuring out what type and what genre a text belongs to (Kusch, 2016). As for solarpunk short stories, one may place them under the category of prose and within the genre of the short story. The short stories are fiction, not non-fiction as the stories are based on imagination and have not happened in real life. The short story also differs from the novel in terms of its length. There is a discussion whether the solarpunk stories must be placed within the genre of science fiction, as shown in chapter 1.2. I will, however, not go into this discussion here, but merely mention that this is an ongoing discussion as solarpunk tries to define itself as a distinct genre. Instead of fitting solarpunk into a category, I will look at a range of texts and see what characteristics emerge from them, which will enable me to describe some aspects of the solarpunk label. If a story should be qualified as fantasy or science fiction is therefore not a question that will be addressed in this thesis.

2.5.1 Close reading

In my analysis, I have chosen to focus on the narratological elements of plot, character, and setting. To analyse these elements in the short stories chosen in this thesis, I rely on close reading. I understand close reading as "a technically informed, fine-grained analysis of some piece of writing, usually in connection with some broader question of interest" (Smith, 2016, p. 58). Close reading has multiple ancestors according to Smith (2016, p. 58), I will, however, not present those ancestors here, but rather argue for the choices I have made.

I will use the method of close reading to analyse the selected short stories. My focus within this close reading is plot, character, and setting, carried out through the critical lens of deep ecology, posthumanism, and social theory, as presented in 2.1, 2.2 and 2.3. I do not seek to deconstruct the elements of the short stories to only look at the elements themselves, but rather I want to explore certain elements to show what meaning it has for the larger

question/s of the thesis. Therefore, close reading is in this thesis seen as a tool, rather than a goal. The analyses are based on my main question of this thesis, as introduced in chapter one. This question serves as the broader question of interest. The theoretical perspectives are part of the tools needed to answer the broader question and will therefore also be applied to the elements drawn from the close reading. The "fine-grained analysis" of the text is introduced through the narratological elements of plot, character, and setting.

I have chosen the narratological elements of plot, character, and setting because through these elements I will be able to unfold the narratives to explore the solarpunk genre through these critical lenses. Character analysis shows what drives and motivates the stories as well as what values and ideas the characters are exposed to and what they expose themselves. The plot is again dependent on the character, and it is through the character the story unfolds. The plot is therefore important to highlight what happens, which again motivates and drives the characters' actions. The setting consists of time and place where the action takes place, that is, it shows the reader the world of the characters. The setting thus also sets the mood and invites the reader into the fictional universe. Investigating these three narrative elements through close reading will allow me to unwrap the stories and show some characteristics of the stories. In the following, I will introduce my perspectives on these three elements of fiction, which is based on Jeremy Hawthorn's (2017) understanding of them.

Plot

Hawthorn (2017) explains *plot* as a collective term of several elements. "For narrative theorists, a plot is an ordered, organised presentation of events and actions" (p. 134). He points out that a plot has a certain order, it may move chronologically forward, or it may go back and forth in time, in flashbacks or flashforwards (p. 135). Further, he explains that a plot may include ellipses (gaps, omissions, and absences) which may be either unmarked or marked. By unmarked ellipsis, he means that a character disappears and shows up again, without being discussed or paid attention to explicitly in the story. A marked ellipsis, on the other hand, puts special emphasis on the fact that someone disappears and comes back again, by commenting on it, or it points attention to it in some other way (p. 135-136).

Hawthorn further categorizes a plot in two ways: either "[i]n terms of the dominant human activities which form the motivating principle in them, or which are induced in the reader by them, or in more technical ways" (p. 139). The first may be structured around e.g., conflict, mystery, pursuit, search, journey, or test (p. 139-140). The other would rather be structured around how the story is told and if there is one or more plot, one needs to figure out what the main plot is. As can be seen, the first type of plot focuses on character and characterization, while the second focuses on the telling of the story, such as who is the narrator and what point of view the story is told from. What one focuses on when writing the plot, thus impacts what one may draw from it. For my analysis, I will rely mostly on the first category of the plot, while maintaining a minor focus on the second.

A writer may choose to not write chronologically, and if so the text needs something else to bind it together; it needs coherence. One way this may play out is that the reader can see what has happened, but not why it happened, and may therefore want to read on. Stories that start *in medias res* are an example of this. Also, characters or an event may well be the glue that makes a story coherent (p. 139).

A plot may also be told with different frequency, explained by Hawthorn (2017, p. 137) as described in the following: One event narrated once (singulative frequency), a repeated event narrated the same number of times that It occurs (multiple frequency), one event narrated many times (repetitive frequency), or many events narrated once (iterative frequency). Frequency can be of great help for the author to illustrate a point, as well as draw the reader to specific areas. Especially in short stories, which have limited space for their action, these tools of frequency may be used to draw the reader's attention to a certain area of focus. For example, in "The Spider and the Stars" by D. K. Mok (2018), there is a lot of foreshadowing going on. Insects and space are featured together several times, first in dreams, then in "real life". Another example is "The Boston Hearth Project" by T. X. Watson (2017), where the protagonist's skills for playing computer games become very useful and are applied to the "real world". In this way, they are narrated with repetitive frequency.

Character

Hawthorn defines *character* in his glossary of terms as "an actor in a literary *narrative*" (2017, p. 273). He claims that character for many is closely linked with individualism, that "a

character is unique, not just the property of a person but somehow simultaneously both the person and the sign or token of the person" (p. 126). However, he also emphasises that what character is, varies from culture to culture and may therefore be understood in different ways in different times and places (pp. 126-127). Therefore, a character analysis of Peter Pan in 2021, may be very different from one in 1921. That every author and every reader of a story has a bias is therefore important to be aware of, when analysing a short story.

The characteristics of the literary character can either "represent something" or the character may "present a particular individuality" (p. 129). A character can be seen in three ways; as a person (mimetic), an idea (thematic) or as an artifice construct (synthetic) (Phelan, 1996, p. 29, cited in Hawthorn, 2017, p. 130). This description of character provides one with some of the tools which may be useful in an analysis of character. A complex character would fit into the mimetic category, a good or evil character may fit into the thematic category, while a person who never changes would fit into the synthetic category. However, one may look at any character in each of these ways, though characters would usually fit better into one category than another. In my analysis of character, my focus will be on the protagonist, though the minor characters may be included to shed light on certain aspects, especially if those minor characters are directly involved with the protagonist.

Lastly, an important tool for analysing characters is seeing how they are characterized. According to Hawthorn (2017, pp. 133-134), characters can be described or characterized in four different ways. One is by describing the character's physical characteristics, such as eye colour, hairstyle, or type of voice. Second, by action, such as a character running to save someone or giving away all he/she/zie has. Third, by thought or conversation, such as what a character thinks about someone else or how and what a character speaks about in a conversation. Lastly, a character may be characterized by a symbol or by an image. An example of this may be that the character is being compared to a type of flowers. An author may choose to rely more heavily on one of these ways to characterize, and while they do not necessarily all happen in a story, several of these ways of characterization will most likely occur in a story. Generally, short stories have a lot less time to develop character than a novel.

Setting

The setting is related to time and place. Time expresses the background and what to expect of a story, such as if there is a special historical context or if the story is told in the uncharted future. Place can be divided into two categories: realistic or conventional (p. 144). A conventional setting may have "the function of providing a stylized and familiar setting within which a conventional set of happenings can unfold" (p. 144). The saloon would for example serve such a function in the classic Western stories and help focus on the characters at hand. A realistic setting on the other hand is a literary setting that tries to portray the real world. It could for example be set in a school, a hospital, etc. The setting may also be important to give certain hints and clues about the characters in a story. It may also set the mood (p. 144), such as a moonlit churchyard at midnight does, in horror stories.

The setting is the scene of the story and decides the frame or frames in which a story takes place. In solarpunk, the setting is one of the most important characteristics of the genre. Solarpunk is highly occupied with the environment, environmental changes and how humans interact with their environment. The environment may, however, vary from large cities to small towns or from houses in touch with nature to spaceships and settlements on other planets. Setting is important to solarpunk, as e.g., in "The Boston Hearth Project" (Watson, 2017), where place plays a major role in the story. The environment inflicts both the societies and the worlds in which the characters live.

3. Analysis and Discussion

In this chapter, I will present and provide an analysis and discussion of a selection of nine solarpunk short stories divided into three groups. Each group will be addressed considering one of the three perspectives presented in 2.1, 2.2. and 2.3. As such, this chapter is separated into 3.1 Deep ecological perspective, 3.2 Posthumanistic perspective and 3.3. Social ecological and societal perspective. Each group will be regarded in light of different research questions that are specifically related to that area of focus, as presented in chapter 1.1. The short stories will be presented, analysed, and discussed separately before the main ideas from all of them will be brought up in the summary within each group. I will present the short stories through an analysis of plot, character, and setting, before I discuss the overarching question shortly in the light of the given theoretical perspective, guided by the relevant research questions. My overall goal is to identify some characteristics of the solarpunk genre by discussing the overarching question:

What type of societies does the literary genre of solarpunk present and how do these societies relate to the environment and environmental issues?

3.1 Deep ecological perspective

3.1.1 Introduction

This subchapter deals with how the three short stories "Pop and the CFT" by Brandon Crilly (2017), "The Spider and the Stars" by D. K. Mok (2018) and "Fighting Fire with Fire" by Gemini Pond (2015), address ecological questions. The short stories will be analysed and discussed through the lens of deep ecology presented in chapter 2.1. Research questions a and b, repeated below, will serve as the point of departure for the analysis and discussion.

- a) How is the world affected by the environment and/or environmental problems?
- b) What impact does the environment have on the protagonist(s)?

The three short stories I have selected are different in many ways, yet they have some similarities. Crilly's story deals with a heritage tax based on the carbon footprint the father of a son has left. Mok's story, however, follows the journey of a girl who starts by dreaming and then ends up, as an adult, on a space station with her beloved insects and spiders. Lastly,

Pond's story deals with how people come together to stop a fire that threatens to burn down their orchard and the forest which protects them. All these stories contain elements that deal specifically with the environment, and therefore they have been chosen for this perspective. The perspective of deep ecology will highlight how they deal with the environment and it will be seen what answers the short stories hold in response to the research questions in light of that perspective.

3.1.2 "Pop and the CFT" by Brandon Crilly (2017) from the *Sunvault: Stories of Solarpunk and Eco-Speculation* anthology

Plot

"Pop and the CFT" by Brandon Crilly (2017) is told from a third person's perspective. It is told with insights into the protagonist Gabe Cameron's thoughts and is focused upon a conversation between him and a woman called Ms Flynn. It is set in Gabe's father's house, as Gabe's father (Pop) has recently died, and Gabe has therefore now inherited his father's properties. The woman, Ms Flynn, has come "to assess the impact of [his father's] actions" (p. 156), so that a Carbon Footprint Tax (CFT) may be set on his father's estate. Information about all possessions of Gabe's father and how Gabe's father lived his life is catalogued to develop a tax based on his father's carbon footprint, which his son Gabe must pay. The tax is thus a literal, economic way of showing how actions in our life have consequences beyond our life and may indirectly disturb the ecosystem and directly impair later generations.

Gabe is a former musician and is therefore constantly referring to lyrics and songs, which Ms Flynn does not often recognize. Ms Flynn, on the other hand, always stays on the subject and asks questions about Gabe's father, everything from what he ate and what he wore to how much he drove. Upon finishing her assessment, she shows the tax to Gabe, and when she says, "I know it seems high..." (p. 160), one can only assume that it is quite a large tax. She, therefore, offers a payment plan. But Gabe finds one of his guitars, a "1959 Gibson Les Paul Standard" (p. 161), which he believes will be more than enough to pay this tax. Ms Flynn is surprised at how well he takes the tax before she turns to the last issue: "how [he'll] be handling [his] father's remains" (p. 162). Burying people is costly in this society, but Gabe believes the guitar will pay for this as well. At the very end of the story, as a comment on the whole tax, Gabe leans towards Ms Flynn and says, "Tell me, Ms. Banker—won't you bury my papa for me?" (p. 162). This shows that everything with a footprint, has a cost, even death.

The story is told in chronological order, and throughout the story, Gabe must think back to how his father acted, to answer the questions from Ms Flynn. The questions revolve around what kind of lifestyle Gabe's father had, so that Ms Flynn may fill in what impact Gabe's father had on the environment or what kind of carbon footprint he left. The questions sometimes lead Gabe to reflect upon what his father did and other times he gives a quick reply. Gabe seems to be honest in his answers and does not omit much, though he sometimes jokes and asks: "What's the best answer here?" upon which Ms Flynn answers: "The honest one" (p. 157). The memories of Gabe's father are therefore important to this story as it shows us what kind of relationship Gabe and his father had, as well as showing how his father lived regarding what carbon footprint he left. Thus, these small flashbacks carry meaning and are highly relevant to what happens in the story.

The plot is generally focused on the conversation between the protagonist Gabe and the character Ms Flynn. Gabe is, however, given a special focus, as the narrator has access to his thoughts, and because it is Gabe's father who is the topic of the conversation. What drives this story is Gabe's narration of how his father lived and of how Gabe responds to Ms Flynn's questions, but also how Gabe acts. Therefore, one may state that Gabe is the protagonist and the character who carries meaning to this story. However, though Gabe's father is the topic of the conversation, it is not his character that Ms Flynn is interested in, rather she says that it is her job "to assign a Carbon Footprint Tax to [Gabe's] father's estate—not [his] father" (p. 159). As such, for Ms Flynn, it is only the actions and properties of Gabe's father regarding their environmental impact that counts for or against the Tax on his estate. Gabe must pay this tax, a tax that seems to build upon the classic statement that a child must pay for his father's sins, which in this case is Gabe's father's carbon footprint. The goal of the tax may be to urge the son to try to produce a lesser carbon footprint so that his descendants will not have to pay as much. It is probably in place to protect the environment from humans, who based on this story are seen as a big problem to the environment. As such, the tax may have been a last effort to make people understand the real costs of their actions, by punishing them economically.

Lastly, an important attribute to how the story is told is the number of musical references there are in the story. For instance, Gabe frequently brings up musical references as he talks with Ms Flynn. This, along with what he calls his stage smile, occurs with repetitive frequency and shows that Gabe is deeply occupied with music. For instance, the conversation between the two characters starts with Gabe humming on Rolling Stones' "You can't always get what you want" and is surprised that Ms Flynn does not recognize that song either (p. 156). Similar examples follow throughout the story, and they are important in the way that they comment on the conversation that is going on. The song mentioned above may be a hint towards where this story is going for Gabe. The second song he mentions "Take it easy", without a band name, may be a comment both to himself and to Ms Flynn concerning the taxation. Also, music is often said to be a way to cope with sorrow, so maybe this is a way of distracting himself from what is going on. Several other musical references are also found, some of which will be addressed in the character analysis.

Character

Gabe is characterized as a musician. He constantly brings up old lyrics, and he constantly misses his guitar while talking. The story both starts with and ends with the lyrics of a song. The first line is from Rolling Stones' "You can't always get what you want" which may be a reference to how he feels, having lost his father and before even burying him, he is visited by a woman who will give him a heritage tax. Then the story ends by him referring to Lynyrd Skynyrd with the phrase: "Tell me, Ms. Banker—won't you bury my papa for me?" (p. 162). An interesting thing here is that this last song talks about losing all and ends with giving away the guitar, just as Gabe intends to do to pay for the tax and the burying of his father. This shows that Gabe is willing to give up his most prized item to give his duty and pay the tax. It also adds to the sad situation Gabe finds himself in, but he "Gave up on lettin' things like money get [him] down the second time [he] went bankrupt," (p. 162). This shows that he is characterized both by how he talks about his father, how he always brings in music and by his experiences and life knowledge which allows him to take a little more lightly on the issue of money.

Gabe's father is characterised as a man who followed his son to concerts and supported him in what he did. This is for instance implied by the fact that the living room had a dedicated wall for the memories of Gabe and his musical career. Also, his parents always tried to make it to watch his concerts. Both these descriptions show how proud Gabe's parents were of him. Gabe also remembers his father's cooking skills with the grill, and how he made an excellent steak with a great marinade. However, in the light of his carbon footprint, Ms Flynn brings forth that the fact that he mainly ate beef is terrible for the planet as it both requires a lot of space and water and that it leaves more emissions than a car. Also, the father drove every day after his retirement, lived in a big house and left a lot of things, which all are bad for the environment. He did, however, use energy-saving light bulbs and hang his clothes up to dry, which gives him some points on Ms Flynn's assessment. According to Gabe, his father had done these small things either out of habit or because they were cheaper, not because of the environment.

The descriptions above show how Gabe and his father are characterised. Gabe is portrayed as a former music star, and his dad as a caring dad who supported his son, but when it comes to his carbon footprint, he did not seem to do such a good job. Gabe may be described as a realistic character who deeply cares for his father, and though Gabe himself is not a family man, he sets his family high and wants to fulfil his duty as a son. This does not come without sacrifice, however. But the fact that he has been bankrupt before has left him with a different image of what money means. This leaves him not to set money as the overall goal in life. It is surprising, however, that Gabe, who cares so deeply for his guitar, puts the guitar on the table to sell, as it will pay for both the tax and the burial of his father. This sacrifice shows that he is a mimetic character who does not necessarily take the expected choices and that he cares more for his people than for the sound of his guitar. As such, he may be said to represent the son who must pay for his father's mistakes, though he did not see these as mistakes before Ms Flynn presented them to him and he does not hold it against his father. Yet, he may be interpreted as a representation of the first generation who pays the price for the environmental flaws the ancestors have done.

Gabe's father is both described as a kind and loving father, but also as one who was either not aware of or did not care about how his life impacted the environment. He may represent the generation who holds the ideal of freedom high and who prioritizes his family above all else, with less regard to thinking how each action may have a consequence for the environment. Being a representative of this type of father figure makes him a realistic

character in the story and a character whom the reader may recognize. For instance, most people know someone who eats mostly meat and who prefers not to eat anything green. In contrast with Gabe, I will argue that Gabe's father is a thematic character, representing a "normal" father figure, being an illustration of how a "normal" person may impact the environment.

These two characters give the reader a representation of two persons who have never thought about or not cared about how their actions leave a footprint in nature. It also appears that they both have lived their lives without being affected by a challenging environment. Rather, it is deeply implied by Ms Flynn and the taxation that Gabe's father has lived a life that was negatively affecting the environment. Whether Gabe also affects the environment in such a way, is not known to the reader, except for the fact that as a musician, he used to travel a lot and therefore does not own much property. So maybe, he will come out better than his father regarding his carbon footprint. However, considering the nature in culture matrix one may say that they both see the world from an anthropocentric stand and that they neither celebrate nor problematize nature Ms Flynn and the taxation, on the other hand, seems to see the world from an ecological stand as well as problematizing nature (Goga et al, 2018).

Setting

This story (Crilly, 2017) is set in the close future, some years after the members of AC/DC have died, a band that the protagonist has warmed up for at the start of his musical career. The environment in the story is the house and property of Gabe's father, though there are also descriptions of his father driving and of how Gabe played concerts indifferent locations. The action and conversation occur in the house, though Gabe's thoughts sometimes wander elsewhere. It is a realistic setting, set just after his father's death with the visit of someone who wants his money. It also frames the story so that the personal belongings of Gabe's father help tell the story that is told. Being in this house sets the mood and though Gabe tries to be on the positive side, the setting both provides a sad mood and a good mood in the sense that Gabe remembers his father who has recently died.

Ms Flynn is especially interested in the things Gabe's father has left behind. She concludes that the house is not energy efficient, as it is too big for one man, and as it is a place with too

many collectables that cannot be recycled. What she sees in the house are not memories and collectables as Gabe sees them, but rather she sees them and categorises them as e.g., energy-efficient or energy-demanding, or as recyclable or non-recyclable. In doing so, she describes the house in an ecocritical way, ignoring what sentimental value it may have for Gabe.

Discussion

The analysis of "Pop and the CFT" shows a society that has decided that human actions towards the environment need consequences. It sets the notion that everyone leaves a carbon footprint and puts it into an economic perspective by setting a tax based on how large that footprint is. The tax is thus a literal, economic way of showing how actions in our life have consequences beyond our life and may indirectly disturb other ecosystems. Therefore, this tax may function as a "wake-up call", and the idea behind the tax may be that it shall leave those affected by it to live more ecologically. However, the fact that Ms Flynn also offers payment plans show that this is a tax that seems to hit all, regardless of their situation. As such it is a tax made for the environment alone, with no regards to the social impacts it may have on the people that are affected by it. The tax is, therefore, both from the perspectives of deep ecology and social ecology, seen as a poor solution to the environmental challenges. For instance, it goes against the fifth principle of deep ecology Næss (2005), that one should not fight pollution and resource depletion if it goes at the expense of the poor, and as such increase the social-economic differences. Also, it goes against the whole idea of social ecology (Bookchin, 1996). Considering deep ecology, it may therefore be described as a shallow movement of ecology (Næss, 2005). It does, however, provide a perspective on how humans impact the environment and in turn, how the environment impacts humans.

Though Gabe is not directly affected by the environmental issues that are vaguely suggested in this story, he is, nevertheless, indirectly affected by the environment through the price he must pay for his father's carbon footprint. In a way, the tax is thus a call to see how human actions have consequences for the environment, and a tool so that people may see and embrace the complexity of nature, as in the sixth principle of deep ecology (Næss, 2005). However, to suddenly receive a carbon footprint tax when losing a loved one, will probably add to the misery. Not only because of the timing but because the tax is high. Further, it is

the son who must pay for his father's "mistakes" which may seem unfair. The tax itself seems to do so, though Gabe does not seem to be as affected by it. So, as money does not mean much to him, he is more in line with adopting Næss' (2005) ideas that one should look for the quality of life, rather than economic quantity.

The characteristics of the environment in the analysis show what impact humans have on nature. It shows that in an ecocritical perspective, humans are problematic, as they collect things that, after they pass away, often end up as waste. Ms Flynn and whomever she represents seem to have an ecocritical perspective and contradict Gabe's and his father's anthropocentric views. As such she seems to be in line with the first principle of Deep ecology, that nature and humans are one, not two entities. Gabe and his father, on the other hand, seems to live or have lived their life seeing these as two entities. This story seems to set the notion that what is seen as collectables in one person's eyes, may in nature's eyes be seen as just another addition to the waste pile. Thus, this story seems to critique the high use of energy and material that people use.

3.1.3 "The Spider and the Stars" by D.K. Mok, from *the Glass and Gardens:* Solarpunk Summers anthology

Plot

"The Spider and the stars" by D.K. Mok (2018), is a story about how the character Del imagines a future where her minibeasts play a major part in man's journey to the stars, and how she manages to make this dream become a reality. The reader follows the main character Del from childhood and well into adulthood. The story begins when Del is five years old and lives in a house with her parents. From there, it moves forward with large omissions and stops at different windows when she is fifteen, twenty-five, and at last, it ends when she is about fifty years old. All these ages are approximate, however, as the author uses the phrases: "ten years later" or "thirty years later". Through these glimpses of Del's life, where the largest windows are at fifteen and twenty-five years old, the reader is shown how Del grows up and how her character develops. She grows up with a close connection with her bugs and spiders and sees them not as food, but as friends and as inspiring creatures for making tools. She dreams of going to space with them and therefore partakes in an exhibition where a sponsor finds her and lets her dreams come true. At the age of fiftyfive she is no longer on earth, but on a space station with a whole group of people, and with her dear minibeasts, appreciating what she has accomplished.

The story is told through a third-person perspective and focalised on the protagonist Del. It is told chronologically, but with frequent use of omissions where many years at a time is omitted, allowing the short story to follow Del through different stages of her life. The years of omissions allow the narrator to tell the story more efficiently, highlighting the moments that are most important in shaping the character of Del. Through stopping at the age of five, one sees a little girl dreaming of space as she is told a story about the ogre-faced-spider by her mother. This bedtime story, which also inspires the title, starts Del off on her journey and is the first step of her character development. Ten years later Del has grown protective of her insects and starts to experiment with a CRISPR set which allows her to modify their genes. Further, at twenty-five, she is following in the footsteps of her mom and is participating at an exhibition where she shares her ideas with the world. Then, the story ends when she is fifty-five years old and can see the fruits of what she has done, now being on a space station, having brought with her the insects and spiders and using robots, inspired by e.g., spider design to collect space waste. Without omissions, this character development would be hard to fit within the frame of a short story.

The story follows the character Del who is at the centre of everything in the story. She may therefore be said to be the coherent figure and the character on which the plot is centred around. Further, the story brings up elements that are being narrated several times, with repetitive frequency. For instance, the minibeasts are brought up at various times in the story in one way or another. The minibeasts are first introduced through a bedtime story, then through Del's parents' insect-based diet and then through Del's love for them and experiments on them. Also, at the end of the story, a statue of Artemis, Del's first spider, is put in the space station on which Del operates. There it is, symbolising how its descendants have made it to space, as well as symbolising how proud Del is of her minibeasts. Lastly, the story is wrapped up, with Del and her friend Ziad watching the earth from the space-station: "And somewhere, down there, an ogre-faced spider watched a strange star moving across the midnight sky, and dreamed" (p. 30). As such, the story ends with the same story that helped shape Del's dreams, showing the importance of the spiders and other minibeasts.

Character

At five years old, Del is a curious little girl, who loves a good story so much that, in agreement with her parents, it "[was] a requirement under Article Three" (p. 15) of bedtime. The stories are not traditional fairy tales, but stories of real people spun by her mother. These are stories about heroes battling the growing deserts, about farmers protecting their crops from locusts "by cultivating carnivorous wheat" (p. 15) and of a star gazing ogre-faced spider "with eyes so keen and clever she can see the galaxy Andromeda" (p. 16). These stories and especially the last one, makes Del start dreaming of this connection between the ogre-faced spider and the stars.

By introducing these stories, Del's mother is preparing Del for the world and giving her the tools to get inspired and to dream. These stories may show that this is a family who cares about the society they live in, and who appreciates those before them who have made it possible for humans to live side by side with nature. Del's parents fight environmental problems in their way, by farming insects for human food. They do this because "Gram for gram, insect protein is cheaper, healthier and more sustainable than red meat" (p. 16). From this idea, they make entrepreneurship which becomes a sustainable business after some time.

Del follows in her parents' footsteps and becomes an idealist and a character who celebrates (Goga et al, 2018) the wonders of her minibeasts. When she is fifteen years old, she is given a CRISPR set, which she decides to share with her friend and coming baker, Ziad. The CRISPR set allows her to modify the genes of her minibeasts and for Ziad to do the same with his plants. As the area is dry, Among other things, this makes her spiders bigger, to the size of dogs. They are her friends, but at the same time, they are her research project. Yet, she reflects on this part and stops the gene modification. Her fascination with nature stops her, as the more she tinkered and modified them, "the less inclined she felt to modify them, and the more she longed to understand their strange and alluring worlds" (pp. 20-21). She is intrigued by these species; so much so that she stops her tinkering and rather appreciates the minibeasts for what they are.

By this, she takes steps towards celebrating nature. She starts to see these minibeasts as her friends and turns away from her parents' insect-based diet and becomes a vegetarian.

While her parents want to save the world by providing the world with more sustainable protein, Del wants to save the world by using the tiny minibeasts. She wants to take them with her to space, as she believes humans in space will be dependent on the minibeasts, just as we are on earth. While these are anthropocentric traits, it is still more ecocentric than that of her parents who produce insects for food (Goga et al, 2015).

Del is occupied with sharing what she believes in and is convinced that there comes a time when humans and other species will have to leave earth to continue living. (Mok, 2018) To convince the judges at the exhibition that this is a good idea, she has presented a speech, where she says:

Our ability to colonise other planets hinges upon how well we can recreate functioning ecosystems. How can we do that without the pollinators and the decomposers? Without the complex web of organisms that sustains life on Earth? If we intend to make our home on other worlds, that home will need insects.

(Mok, 2018, p. 25)

As seen from this excerpt, she argues for bringing the insects, not for the sake of the insects, but for the sake of humans. She argues that humans are dependent on the minibeasts and because they are so useful and important to humans, they must be brought to the new worlds.

From creative solutions to environmental problems on earth to have a research station in space, Del has, at the age of fifty-five, achieved what she wanted. The results of her work are shown here, where her minibeasts or the resemblances of them meet space. For example, one of her main ideas, to have spiders in space catch space-waste, is solved by "a coppery octobot [...], trailing a net of captured space debris" (p. 28). The idea of a sterile space station is quickly scraped, because,

back on Earth, past efforts to eliminate germs and bugs from human habitations had led to an explosion in allergies, inflammatory diseases and decimated microbiomes. Successful, long-term space exploration would not—could not—be a sterile venture, and what humanity needed now was a sandpit to experiment in. (p. 28)

These are anthropocentric traits and the minibeasts and germs are not saved because they are praised by humans, but because it becomes a problem for humans if they are not there.

Setting

Del's room has a "glass water-wall" (Mok, 2018, p. 15) which collects and contains the heat of the day, in other words, a clever way for reducing the number of other heating sources. Through the stories that Del is told, one learns of how nature can be problematic and how one can use nature itself to solve those same problems. Tree planting is, for example, one way for humanity to use nature to combat dry soil and deserts from growing. Another is how humans may need to alter the vegetation to cope with diseases, bugs, and other challenges to their food production. The area they live in is dry, so it is hard to grow traditional crops like wheat and rice, which is why Ziad serves a pastry made of kangaroo grass to Del at one point, as it grows easier in an arid land.

The underground, beneath her family's living area, is an important place for Del and her family because this is where all the insects are being bred for eating. Also, this is the place where Del's living minibeasts thrive in their little room, protected by Del's signs: "NOT FOR EATING" (Mok, 2018, p. 18). The room is described as small, where "[t]anks and terrariums and trays and aquariums crammed the small space, brimming with grasses and ferns and multi-legged residents. Giant water bugs paddled lazily, while peacock spiders danced their nervous rhumbas" (p. 18). Describing the minibeasts in this anthropomorphic way shows that the minibeasts are treated with respect and gratitude. Del is intrigued by these species and therefore she is unable to let them end up as "DELICIOUS SUSTAINABLE PROTEIN" (p. 17) as her parents named them for marketing.

Turning 25, Del is up against new adventures in new places. She and her friend Ziad have now come to the point that they are travelling to the famous Solaria Grande Exhibition. This is the place where Del's mother was laughed at when she presented her ideas of eating insects. To get there, they take the train which hovers over the ground. Del and Ziad travel through many areas with different solutions to deal with or live with the current environment:

[T]here were towns, just like hers, speckled with solar arrays and water tanks. But there were also villages floating on inland seas, their bustling markets a crowd of floating tea houses and creaking junks with patchwork sails. 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. (p. 22)

From these short glimpses, one sees that environmental problems are everywhere in Del's world, but people have found a way to cope with them. As seen, the different towns have chosen different solutions to how to take advantage of nature, as well as how to survive nature's roughness. This shows that the societies of this story have not been able to "fix" nature, but rather to cope with it.

Discussion

The analysis of "The Spider and the Stars" has shown a society that is both affected by and occupied with solving environmental issues. The society that Del's grows up in seems to be occupied with ecological entrepreneurship, as is shown by her parents, herself, her friend, and the Solaria Grande Exhibition. As such, the individual's commitment to improving the state of the rest of the community is highlighted. Through the story, one sees a society occupied with bringing humanity forward and rewarding ideas that try to solve social issues, as well as ideas trying to solve environmental issues. As such, one sees a society that highly regards ecological ideas.

The world is heavily affected by environmental problems, as seen through how Ziad must adapt the way he makes food and through how Del finds it natural that humanity must leave earth at some point. The way the environment struggles is also seen through how Del's parents produce insects for food, as it is much more eco-friendly. From this idea, they make entrepreneurship which becomes a sustainable business after some time. Though this goes against the second principle of deep ecology (Næss, 2005), that all species should be considered to have equal value, one may argue that this is ecological thinking and maybe also in line with deep ecology's encouragement of ecological entrepreneurship as it is much more sustainable than meat from animals.

Further, through the window of the train, when going to the exhibition, Del and Ziad see how different towns and cities deal with environmental issues. As described in the analysis, they were all built differently with solutions to how they would handle a challenging nature. As such, the societies seen from the windows of the train are problematizing nature (Goga,

et al, 2018) and are making solutions that first and foremost benefit humans. Further, it shows that this is a world of societies that encourages entrepreneurship and technology towards dealing with environmental issues. These different solutions show decentralized societies with a high focus on this type of entrepreneurship, which deep ecology (Næss, 2005) claims is a good thing for the environment.

The CRISPR set, which modifies Del's minibeasts, is seen as a way of dealing with ecological issues. This concurs with Næss' (2005) idea that technology should be used to achieve ecological goals. However, modifying the genes of the minibeast and the plants in this way means seeing them as not good enough, and by doing so, Del is problematizing nature for not meeting human requirements. However, as seen in the analysis, she stops this tinkering and rather celebrates her minibeasts and their nature (Goga et al, 2018) and takes some small steps towards Næss' (2005) idea of living in ecological equilibrium. In Del's speech to the Solaria Grande Exhibition, one sees further how she relates to the environment by praising her minibeast and their usefulness. This speech shows that she possesses tendencies of both the anthropocentric and the ecocentric horizon, and based on this little speech, one may say that Del celebrates nature. However, she does not explicitly celebrate nature, because leaving earth implies that nature, and humans' relationship with it, - may be problematic (Goga et al, 2018).

3.1.4 "Fighting Fire with Fire" by Gemini Pond from the *Wings of Renewal: A Solarpunk Dragon Anthology*

Plot

"Fighting fire with fire" by Gemini Pond (2015) is a story about a growing desert told through a first-person perspective of the protagonist Eno. It starts with the dragon *Taneen* telling stories "of a time when the earth was dying, when the desert encroached on fertile land, stealing its nutrients, and replacing them with arid sand. [...] He says these stories are lessons, that the desert is always hungry and we must always be diligent" (p. 133). Now, however, the place where they stand is not sand, but a sprawling orchard. Taneen is not a bad dragon, but a dragon who decided to help the people by planting trees along the desert line, and who since has been around to help. One day Taneen flies into the square and talks with the council, telling them that he has spotted a fire. This fire threatens the whole society and the trees they have planted. They need to stop this fire and are divided into different teams, with leaders from the council, to do so. Eno is part of the group that is under command of Taneen and who stands in the frontline and is responsible for actively beating back the fire. In the end, the fire has been beaten back and the community has demonstrated its strength. And in the final scene, when Eno talks with the dragon Taneen, Taneen is embarrassed because he had the hiccups, which started the fire in the first place. This may be an indication that even the hero himself has flaws and makes mistakes.

The plot shows how nature is problematized (Goga et al, 2018) and how the community has come together to protect itself from the challenging fire. (Pond, 2015) They have built an orchard with their own hands, and by the help of nature's wonders, which makes things grow. Seeing the green forest, they planted long ago burn, shows how they celebrate the nature they have helped create (Goga et al, 2018). In the crisis, where a fire is threatening to burn all the trees and the orchard, they come together and fight it, for the sake of the people. (Pond, 2015) The desert represents another part of nature and this part is a problem for them, as the desert will threaten all life. It is a life-or-death situation, where they either must beat the fire, try to run from it or be swallowed by it.

The story is told chronologically through the eyes of the protagonist Eno. It starts with a flashback, where Eno introduces the dragon Taneen. This flashback allows for the transition into the present time in the story of which the dragon Taneen appears as he comes flying in, just when Eno thinks of him. Eno introduces Taneen as one who has helped them once before by beating back the growing desert Sahara, as well as saying that Taneen constantly reminds them to be wary of the desert. This flashback is important, as it establishes Taneen's position in the society and shows how he has been part of this society for generations. Taneen brings news of the fire. The fire is a threat that they must stop, and by an omission of five days, different teams with different roles are ready to attempt quenching the fire. What happens during the five days that are omitted from the story, is not told until later, when one learns that some people have cut down trees to make a wall against the fire. Eno is not part of this during those days and it is uncertain what Eno is doing these days, as it is omitted from this story. He is the narrator of the story. He is telling what he observes, and he is not partaking in any action until people from other villages have gathered and they are ready to send out teams to finish the fire.

This story is told from Eno's perspective and therefore his perspectives are central to the story. He focuses a lot on the dragon Taneen, as well as on how his community contributes to extinguishing the fire. Therefore, one may say that there are three ways this story is bound together, where the most important one is the character of Eno, the second is the character Taneen, and the third is how the community comes together. Several elements may be considered the coherent factor in this story, in addition to the way the story is told chronologically. I will argue that Eno is the character that brings the most coherence to the story, as he is the character in focus and the one the story follows from beginning to end.

The community's struggle and cooperative measures towards a problematic nature are portrayed throughout the story. First, it is told through the way the ancestors beat back the desert, and now in this story, the community comes together to stop the fire from burning down everything the ancestors have built. Also, neighbouring communities come to contribute, and this will, to act in fellowship for one another is something that is emphasised and told with repetitive frequency in this story. For instance, Eno, when fighting the fire, acknowledges that there must be another team finding supplies for him and the others. Also, Taneen takes the characters up in the air to be relieved of the smoke for a while, showing that he too contributes to the community. One may say that this collective action of fixing a problem is an important aspect of this story.

Character

The main characters of this story are Eno and the dragon Taneen. Eno is the one through whom the story is told. Eno looks up to the Saharan dragon Taneen. His reflections start with presenting Taneen, where he calls him a "show off" (p. 133) when he flies into the village. Taneen is the one who inspires and leads his group to extinguish the fire. Eno also deeply admires the community he is part of, stating that "[w]e are communities the rest of the world strives to be like: cooperative, supporting each other, and taking care of ourselves" (p. 136). Both these reflections show that Eno is a character who is focused on those around him and who appreciates everyone, while also being proud to be part of that community. Further Eno volunteers to be part of a fire-extinguisher team and while first being frightened by the fire, he is calmed and encouraged by the council leaders and Taneen's encouraging words. This leads to bravery, comradery and to a fighting spirit of never giving up as he stays on his spot to put out the fire for a whole day and night.

The dragon Taneen is also a central character to this short story and is seen in many ways as a heroic figure. He is the one who warns the community about the fire, and who along with the community fights against the fire. By this, he is acting against his nature as he says: "A Saharan Dragon is not meant to want the desert to stop expanding; yet watching you thrive has brought me more joy than watching my territory spread" (p. 135). Taneen has thus changed his way of living, from being a dragon that people feared to become a dragon that people love and respect. An example of this is how, when Taneen comes flying into the orchard, all the elders gather around him and listen to what he has to say (p. 133). Further, he does not only monitor the forest wall for the community, but he uses his skills for quenching the fire and for giving an overview of the situation, just as he helped the ancestors planting seeds before. Also, after the fire, Taneen shows Eno a tiny tree under the ashes and provides hope that the forest will regrow. Taneen is not perfect, however, as he might have hiccuped a flame, which started the fire in the first place. Taneen may thus be described as a complex character.

Based on the characterizations above one may interpret what kind of characters Eno and Taneen are. Eno seems to represent a proud member of a community, based on how much he focuses on this and how he, out of many people involved, is the one who is narrating the story. He may, however, be seen as a mimetic character because his thoughts and actions show that he is a person who has to make choices and who tries his best to contribute.

The dragon may serve as an important symbol in the story as the little people and the mighty dragon fight together to stop what the dragon might have helped to grow in the first place. The dragon is acting against his destructive nature, which may be a symbol of his "humanity". Another symbol of his "humanity" is that he tries his best but sometimes fails, as with the hiccups. Also, the dragon may symbolise how humans in a way have come to terms with nature, and that nature, symbolized through the dragon, is paying them back in return. As such, the dragon may be described as a thematic character who represents both nature and humanity.

Setting

This story is set in an orchard close to the Saharan desert, some generations after people had planted trees to beat back the greedy desert. It is a setting that involves a dragon, which

means that the setting of this story also has fantastical traits. The orchard is placed with a forest between itself and the desert, and the forest may therefore be said to have the function as a wall. When this "wall" catches fire, it is obvious that it is problematic and at first, it creates uncertainty, before the people are encouraged, and the mood of bravery and hope is brought forth, not by the fire, but by the people wanting to protect their lives by saving the orchard and the forest. The setting may therefore be described as a realistic setting as it describes an environment with a growing desert and people who have planted trees and fertilised the ground to keep it from growing. It is an environment that one may imagine can be found in real life.

This environment is the scene of the story and therefore it also decides the frame within which the characters may act. The desert is a "dead" area where only a few species can thrive, and though it is not spreading at the time this story takes place, it has spread before, and therefore it may serve as the "sleeping monster" in this story. It is, however, situated far from the orchard where the people of this story live, and it, therefore, provides a contrast to the potential danger. This leaves the protagonist and the other people at a safe distance and protected from the great "monster". However, when the forest wall catches fire, and the environment shifts from a protected area to an area threatened by the fire, something changes in the characters. It brings them together and brings out their bravery, as the whole community comes together to protect the forest and the orchard from the fire. Thus, the setting reveals important societal traits in this community, that it acts together and that everyone is important in protecting the environment.

Discussion

The analysis of "Fighting Fire with Fire" shows a society occupied with collaboration towards solving their environmental issues. The plot of this short story shows that the physical environment and the humans are not two, but one entity as in the first principle of Næss (2005). It is evident that without the people planting those trees years ago, the orchard would not exist and would rather be swallowed by the desert. As such, the forest and the people of the orchard are intertwined. Further, one may also find similarities between this society and the sixth principle of deep ecology, which is about embracing the complexity of nature. The community understands that a threat to the forest is a threat to them and must

be stopped. As such the society that is presented in this story are directly affected by the environment and vice versa.

Eno, the main character of the story is, as shown in the character analysis, very proud of being part of the community as they are "cooperative, supporting each other, and taking care of [themselves]" (Pond, 2018, p. 136). These are important values when he and the others are trying to extinguish the fire and while the communities have leaders, they partake in the work, which implies that this is a society with none or small differences between social classes. If so, it is another argument for claiming that this society lives ecologically both following the fourth principle of deep ecology (Næss, 2005) and with the theory of social ecology (Bookchin, 1996).

Being part of this community, Eno gets to participate, as shown earlier, in extinguishing the fire. This causes him to meet the fire directly and shows how the natural forces can be immensely dangerous and problematic in that it eradicates life. However, from the ashes, a little tree regrows, as described earlier, which provides hope and is a way of celebrating what may be seen as a positive strength of nature. This recognition of the forest and the orchard, give implications that this community lives ecologically, as they are close to nature and help each other out in times of crisis. The forest protects the people from the desert; therefore, this environment is essential for people to live there at all. As such, Eno may be said to both problematize and celebrate nature, but from an anthropocentric view (Goga et al, 2018).

The dragon Taneen is also an interesting symbol, as he seems to celebrate both humanity and nature. There is a bond portrayed through the dragon which binds these two entities together and shows how humans and nature are intertwined. Eno shows how important community is to him. The community is described as a small community, which considering the seventh principle of deep ecology is considered a good thing (Næss, 2005). As it then is self-sufficient and pollutes less. Also, the way Taneen is recognized and listened to by the council and the community, shows that this society considers the dragon and the humans to have an equal value, which according to the second principle of deep ecology is important. It may be a symbol of how, in this society, humans and other species are recognized as equals, as they are dependent on one another. This may imply that this is a community that takes care of one another and of the other species that live there.

3.1.5 Summary

The short stories analysed and discussed in this chapter has shown that these solarpunk short stories are highly occupied with the environment. This is seen through both the plot, character and setting analysis of each story, as well as the different discussions. The environment deeply shapes the characters of the stories as seen especially in the last story "Fighting fire with fire" where a fire threatens the whole community and from that, the protagonist's bravery is brought out. The Carbon footprint tax in "Pop and the CFT", also gives the reader implications that the environment struggles, so much so that the protagonist must pay a tax after how his father lived. As such, he is affected economically by the environment, more than by a problematic environment. Nature is also challenging in "The Spider and The Stars", so much so that the protagonist finds it best to explore life outside earth. All three stories see the environment as a challenge or a problem that either need fixing or running away from. The world is hence negatively affected by the environmental issues that are portrayed in these short stories.

The characters are very different in how they view the world, yet they all seem to have an anthropocentric perspective, though some reflect more on the environment than others. Del, for instance, seems to be very aware of the environment on earth, so much so that she leaves it. Eno also is very aware of the environment as the fire threatens to destroy his world. Gabe, however, does not seem to be preoccupied with the environment at all. Despite them having some differences, however, the stories show how each of them is important to each of their communities. Del's ideas bring both humans and minibeasts to space, showing the abilities of how large the effects of one individual may have on the community. Further, Eno illustrates the importance of how members of a community are there for each other in the face of challenges. Lastly, the story of Gabe and his father shows how large an impact on the environment everyone has.

3.2 Posthumanistic perspective

3.2.1 Introduction

This subchapter deals with how the three short stories "Solar child" by Camille Meyers, "Watch out, Red Crusher!" by Shel Graves and "In the Hearts of Dragons" by Stephanie Wagner address posthumanistic questions and will be analysed concerning the ideas of posthumanism. To guide me in my analysis and discussion I have formulated the following research questions:

c) How is posthumanism portrayed within solarpunk?

d) Why are there posthumanistic traits in the stories, and what consequences do they have?

The short stories provide different stories of how a posthuman society or life, may look like. "Solar Child" is about the future of humanity and presents a new human species as a solution to survive in a challenging world. "Watch out, Red Crusher!" is about being accepted in a society affected by the energy-making solar nanites with the side-effect of making people glow. "In the Hearts of Dragons" is a story about the close relationship between humans and dragons and how the environment itself may be alive. These stories will highlight the posthumanistic traits these stories have to show how solarpunk presents posthumanism as means to both how societies may look like and solution to environmental issues.

3.2.2 "Solar child" by Camille Meyers from the *Sunvault: Stories of Solarpunk and Eco-speculation* anthology

Plot

"Solar child" by Camille Meyers (2017) is about a group of scientists who have developed a new human species called *photosapien*, and who are now looking for sponsors for their project. The main character is called Jamie who is a genetic engineer. The reason these scientists need sponsors is that a religiously conservative group called *the Revelationers*, bombed their former site and that it costs to develop new species. Therefore, the lab workers now have to work from a secret location, and when a potential sponsor named Fernanda shows up, well protected in her yacht by a couple of guardships, they have to make sure she is trustworthy and that no one follows her. The Revelationers believe that tampering with human life is wrong, and therefore want the project of the photosapiens to be shut down, be it by words or by force. Luckily for the scientists, Fernanda loves their project and upon seeing Ella, the first photosapien or the "solar child", she decides that she wants her and therefore offers a large sum of money. Jamie finds this difficult, however, as she loves four-year-old Ella. Therefore, the story ends with Fernanda buying/adopting one of Ella's smaller baby "siblings", allowing Jamie to keep Ella as well as receiving money for the project, while Fernanda gets to have a photosapien baby who will be able to survive the challenging conditions of the world. Fernanda has tried to have babies before, but they have all died shortly after being born or before being born at all. Hence this story is problematizing nature and is giving a solution to this problem, not by changing or fixing nature, but by changing and altering humans.

The story starts in medias res and is told chronologically with a few flashbacks. It is told from a third-person's perspective with insight into Jamie, the main character's, thoughts. The story starts with Jamie flying one of her created creatures, a solarsaurs, looking for a sponsor ship and reflecting upon the Revelationers when talking with one of her associates, Floyd. In describing these Revelationers she draws up the contrast between her and her scientist group and the radical religious group the Revelationers, from a time when she was debating them. She argued, "about how humanity need to rely on assisted evolution through genetic modification to cope with the altered Earth" (p. 186). While they would on the other hand argue that "the spreading desertification, coastal flooding, and rising infertility and birth defects was retribution for trespassing in God's territory of the genome" (p. 186). This, in many ways, sets up the story and shows the conflict that lies in the background. The issue at hand is, however, to get sponsors so that Jamie and her team may continue their work with assisted evolution.

The plot revolves around Jamie, and therefore her character is in focus on this story. However, through Jamie, the story is mostly centred upon the meeting between the sponsor, Fernanda, and the research facility. The item that Fernanda wants to buy is Ella, who is a photosapien, that is a homo sapiens that can do photosynthesis through symbiosis with another species. The solar project [creating new or improving photosynthesizing species] is central to the story, which is shown through the descriptions of the facilities and of the species that are made. All these details about the facility, the creations, the Revelationers, are told with a focus on Jamie.

The Revelationers are constantly being brought up as they have contributed to bad memories for Jamie and her colleagues, after blowing up their last facility and endangering them and Ella, the photosapien child of whom Jamie has grown very fond. They are mentioned in the beginning as the enemy of biotechnology, then repeatedly as an aggressive organization from whom Jamie, the scientists, and their new species have to constantly hide and protect themselves. The sponsor, Fernanda, who wants to buy Ella but ends up with one of the other photosapien babies, uses the argument that the baby would be much safer with her instead of at the research station that is constantly hunted by the Revelationers. As such, the Revelationers are brought up with repetitive frequency, adding tension to the story, as well as putting the research station in a good light as the Revelationers are portrayed as aggressive.

Character

That Jamie discussed with the Revelationers when studying, standing up for her beliefs in assisted evolution reveals that she is unafraid in standing for what she believes in and that she has a clear conviction of what she believes is right. She is also a scientist, as seen when she for example asks the question "Learned or instinctual?" (p. 187) upon seeing the solarsaurs foraging. However, she is not a cold scientist who sees the species as only research subjects, as is shown when Fernanda offers to buy Ella: "Ella and any subsequent photosapiens were not property. They were humans" (p. 192). Also, having seen Ella grown to four-and-a-half makes her not want to sell Ella for any price, so eventually, Fernanda gets to buy/adopt one of the months-old babies. This shows that Jamie has a close bond with Ella and that she loves her as she is, not as "a research project", and that she also manages to give up on one of her potential friends for the greater good of the research station.

Further, this story shows that Jamie would give anything for her job. For instance, "She did not think twice when mining her own ovaries for the photosapien project when funds ran low" (p. 192). It might not be a big sacrifice since she does not want children, however, it gives indications of how far she is willing to go for the project that she so deeply believes in:

The human race does not need revolution. We have tried that so many times, and here we are. No, what we need is a new way of living with ourselves. A way to adapt to the world we have created. We need to evolve. And evolution takes love. (p. 191) This statement is from her mentor whom Jamie seems to set high. This statement along with the fact that she has donated her ovaries shows how much this means to her, that humans need to evolve and to adapt to get a better life.

Based on this characterization of Jamie, one may say that she represents a scientist who loves her work and who believes that her work will lead to a breakthrough and is willing to give everything for it. This is for example seen through her words that she believes in assisted evolution as the way to live in the harsh world. She is, however, a mimetic character as she has several attributes to her character, for example when she has to consider whether to put the research station or her affections for Ella first. Further, Jamie may be said to be one of the "drivers" of this story, as she is connected to every aspect of it.

Setting

"Solar Child" is set in the future in an environment close to the ocean, maybe on an island. Most of the action happens within the Photobio research station, however, which Jamie describes as a "small mobile operation" which is close to being self-sufficient (p. 188). Inside this station, there are "narrow labyrinthine corridors" (p. 188), which eventually lead to the place where Ella, the first photosapien seem to spend most of her time. That area is described as "a large clear dome filled with fruit trees, a small fish pond, and a variety of edible crops" (p. 188). As such, the dome is trying to fulfil the role of a healthy environment where Ella and the other photosapiens may start their life in a safe, "natural" and healthy environment.

Before the research station is introduced, the story starts with Jamie flying over the ocean, seeing wild dolphins, which is rare in the world of this story. Also, when Jamie lands, her solarsaurs starts foraging in the waters, which implies that some species may thrive. It is, however, implied that the world is a hard place to live, exemplified by the above sightings and by Fernanda's story of her two-month child whose lungs collapsed. She, therefore, wants "a child who can live in this world" (p. 191). The state of the world thus set the premises for the research station's existence in many ways.

Based on these descriptions of the environment one may say that this story has both realistic and conventional places. By this I mean that everything around the station, like the ocean, are highly realistic settings while the inside of the research station is stylised,

exemplified by how they have made a "natural" environment inside a dome. This is of course also one of the arguments Fernanda uses to convince Jamie to sell Ella, that Ella will outgrow the station and therefore needs more space, which Fernanda says she can provide.

Discussion

The analysis has shown that two main ideas come forth in this story. One is the idea of humans always developing to survive and live on as a species, and the other is that it is morally wrong to temper with what is God's work. These ideas are so different that the religious group use violence to stop the researchers. Thus, the society of this story is fragmentized as also is emphasised by how the wealthy sponsor Fernanda has additional ships for her protection and how the research station must move around in fear of the Revelationers. The small society of the research station is the small community that the reader has an insight into, and it is the ideas of these people, that one learns through the protagonist, that is encouraged. The ideas that emerge from there are related to human progress, as Bookchin (1996) is occupied with, for dealing with socioenvironmental issues. The photosapien appear to eat less and therefore impact the environment less, and as such it ensures life quality and brings the natural world and the human culture together as one.

The environment is problematized (Goga et al, 2018), yet the belief in humanity to fix that problem is alive within the group of researchers. The environmental issues are by the Revelationers seen as God's work, while by the researchers it is seen as a challenge that needs to be met. The world, as described in the analysis does not seem to be healthy and therefore the solution to this problem is not by fixing the environment, but by changing the human species. The posthumanistic traits shown in this story is therefore seen as necessary for humanity's survival in an environmentally challenging world. Therefore, as Jamie argues, they see it as logical to change and improve humans as it is to change the environment. They are trying to redesign humans so that humans can adapt to a challenging world. Redesigning humans in this way, may, however, have ethical concerns as Zangenberg (2018) is concerned with. For instance, this is portrayed by the Revelationers belief that one should not change what God has made. Also, from a humanistic perspective, it may cause problems as the homo sapiens may then be replaced by a photosapien. However, from a naturalistic worldview, as is portrayed through Jamie in this story, there seem to be no major ethical concerns of improving humans so that they may have a better life in a challenging

environment. Based on these descriptions of the photosapien, one may say that this story is in line with Klaus Schwab's (2016) optimistic approach to biotechnology that it may be used to make a better world.

Lastly, the story shows a perspective on posthumanism where biotechnology plays a central role to develop a new human species, the photosapiens. The development of this species is set in a positive light and personified through the little girl Ella and the "twin" babies. The goal does not seem to be to develop what Harari (2017) calls demi-gods, but rather for humanity to survive through symbiosis with other species. Yet, humanity's goal to live on forever may be a step towards becoming a deity as Harari (2017) understands it. This view of posthumanism also has similarities with that of material ecology (Haraway, 2007), that if everything is matter, then one may see it as placing different pieces of Lego together. These babies came to life through dedicated researchers where the main character Jamie, as shown in the analysis, chose to mine her ovaries. This shows that she has perspectives like those of material ecology, as Jamie seems to see her body as matter. If she can use some of that matter to construct new matter, then there is no reason not to do it.

3.2.3 "Watch out, Red Crusher!" By Shel Graves from the *Glass and Gardens: Solarpunk Summers* anthology

Plot

"Watch out, Red Crusher! "By Shel Graves (2018) follows the character and protagonist Andee who lives in a place called Aberdonia. Aberdonia is a community where all the people have been injected with something called *solar nanites*. These solar nanites provide electricity to society, but they also provide a side effect to each person by making them glow. This glowing has made an immense impact on the society of Aberdonia. Children display shades that shift from one colour to another, but as an adult, you are expected to stick with one shade and certain shades and behaviours are unacceptable. Also, one has to find an occupation so that one may be "welcomed into the community [...] or face exile to the uncivilized Freeway—home to murderers and thieves" (p.49). This proves to be difficult for some, including the protagonist, but also the character that bears the name of the story; *the Red Crusher* whose real name is Irwin. "His red betrayed an aggressive anger and most Aberdonians, including his own parents, feared him" (p. 50). Society has strict rules of whom they accept, therefore being able to control your shade and anger is important to get included. There are nuances, however, and while Irwin's anger and aggressiveness are considered bad, Andee's red glow and anger towards Irwin, at the end of the story, seems to be considered a good thing as it is a response to him being aggressive. In this scene, Irwin has pushed their shade-mentor Madame Morell in anger and may be about to hurt her more, something which ignites Andee's temper. In this sense, this story explores some of the impacts new technology may have.

The story is told chronologically from a third-person perspective with insight into the thoughts of the main character Andee. It is divided into different "scenes" or tiny "chapters" by three dots, indicated with "***" which functions as "stage curtains". These dots help bind elements of the story together, for example, they introduce a flashback with a memory of Irwin Hunter, where it is told how he got the name "Red Crusher" before that segments end with "***" and the main story continues. There are several of these flashbacks, where Andee recalls her memories of Irwin, who is one of the main topics of the story. As such they are very important to the story and provides the reader with sympathy for Irwin, who by his redness and anger is seen down upon in this society.

This story revolves around the character the protagonist Andee, and Irwin who may function as an antagonist in this story. As such the story is driven by the characterization of and by the characters Andee and Irwin. To be accepted into the community you must have certain shades to not be cast out. This is what concerns Andee through the whole story who struggles with her shade being a depressing blue, in addition to her worrying about Irwin whose shade is red, which means that he is angry and may be aggressive, characteristics that are not acceptable in this community. Therefore, one may say that what binds this story together is Andee and the issue of shades.

Closely attached to this issue of shades is "The Red Crusher" whose name appears frequently throughout the story, and though it was Irwin who first got that nickname, it has become "synonymous with any uncontrolled red glow—a potentially violent person." (p. 52). Because this is the definition, Andee is constantly warned if there is a "red crusher" wandering around. It is brought up frequently and reminds Andee of Irwin and makes her aware of him and of her shade, which she is not happy with.

Character

The main characters of this story are the protagonist Andee and the antagonist Irwin. Andee is concerned about her shade as it is a depressing blue, not green as her parents have. This has led her to take classes from Madame Morell as the blue shade she has is challenging to live with: "Everyone could see her insecurity and that made Andee feel even worse no matter how she tried to hide it" (p. 50). However, as the story develops, there is a character development happening as Andee goes from blue to a light shade of green, which is the same shade as her parents until at the end of the story her shade transforms and settles at a glowing red shade, just the same as the red crusher. Her anger is pointed towards Irwin who has pushed Madame Morell and she demands him to go into exile. Before this happens, Madame Morell has in some ways foreseen this as she says: "You have things in common'" (p. 51). Andee does not agree though, thinking in response to this, she compares herself to Irwin: "She was depressed, not dangerous. She wouldn't risk her place in Aberdonia for him" (p. 51). This shows how Andee is both close to Irwin and opposed to him as she too is struggling with her shade and ends up red and angry herself.

Irwin is characterised as almost always angry and sometimes also aggressive. The first meeting the reader has with Irwin is when he tells a story to Madame Morell. He tells a story that he had been tasked by Madame Morell to go to the council leader, so he went there to talk with him. However, when the council leader asked about politics, Irwin disagreed with the council leader, got angry and in the end threw an object, the Solar Pact monument, at the council leader. In other words, Irwin is, from the very beginning, described as an angry and aggressive youth, who opposes the leadership of the community. Andee, however, through her memories of Irwin, tells a story of a boy who could be calm and have a yellow shade instead. Also, Irwin explains how he got the name Red Crusher as an accident, that he lost a cake, got embarrassed and therefore started to smash it as that would be less embarrassing. The children at school called him the Red Crusher after this, a name he never could get rid of.

Here are characterized two young people who struggle in finding their way into a society with a certain set of strict rules. They both represent youth and the struggles that the youth face in the transition between being a child and an adult. As everyone glows with colour, one cannot hide away what one feels, though it is not always clear what the colours imply.

Andee is a mimetic character who goes through a character journey from being blue and depressed and wanting to be alone, to be a light green like her parents until she seems to find her true self when becoming red and standing up for madame Morell. Irwin on the other hand is red and stays red, or he is violent and stays violent as can be said because of how he physically hurts people at the beginning and the end of the story. Thus, Irwin may be said to be a synthetic character as, though there are segments of yellow, in public he is usually red and aggressive and therefore serves the purpose of the antagonist. One may say that he is the antagonist because he opposes the community of Aberdonia, arguing that the system is unfair, while Andee on the other hand while recognizing that he has some valid points, disagrees with him and with her anger she at last drives him away from the community.

Setting

"Watch out, Red Crusher!" is set in the future in the community and village Aberdonia. It is filled with domes close to the ocean where they have a park called the Abersea park. It is also a society in need of power, and therefore "Everything in Aberdonia, from ped paths to domes to the Spiked Sun Solar Pact statue itself, did its best to capture the waning sun and power the community—and that included its people" (p. 55). As such, one may imagine that when the people were outside the land would look like a field of glowing lanterns, as they, because of capturing the sun through the solar nanites, each glowed. Also, it seems to be a community that wants to take care of the environment as one of the minor characters *Marina* wants to be an ocean protector, while her parents are forest protectors. This implies that they are located somewhere close to a forest and the ocean. In contrast to this community is "the Freeway" where all the outcasts have to go. It is not described what the area is like, except that it is filled with thieves and violent people, though this may be an explanation to scare people from wanting to exile the community as the freeway is never thoroughly described.

The setting of this story is not what is central to this story, rather it is the nanite-injected humans who are in focus. The environment seems to be more in place for the characters than vice versa and I will therefore argue that it is an artifice construct. Although it does have realistic traits the fact remains that the environment in which the story takes place seems to be a constructed platform, built for the sake of the characters. It is also hard to say that the environment portrays a certain mood, rather it seems that the people's shades set the mood.

Discussion

As the analysis has shown, the society of Aberdonia is deeply affected by the consequences of the solar nanites glowing effect. As seen, in the process of coming to age in this story one has to find oneself and settle into a type of shade and work. If one fails to meet the requirement of society, one has to go "the freeway" which may be described as a dystopia as it is only described as home to thieves and aggressive people. In contrast, the society of Aberdonia is by the protagonist described as a utopia in her fear of being cast out due to her sad, depressing shade. As a utopia, Aberdonia may then be described as free from thieves and aggressive people, and presumably also sad depressed people (though this last remark is highly uncertain, yet what Andee is afraid of). This in addition to how the people of the society each had their role to play, such as how Andee's friend became an ocean protector or how Andee may be said to have found her role as protector of the Aberdonian values, shows some traits of why this society is called a utopia by Andee herself.

By having each person become a small power plant by injection of power nanites, the community's energy needs are covered. Nevertheless, it, like all other energy making sources, has a cost, though this time it directly affects the individuals of this society. The fact that everyone can see what one feels or who one is may be seen as an intrusion of the private life of each individual as the emotions, of at least the youth, are on display. Also, casting out people with certain shades may even be categorised as a type of segregation, though one may of course argue that the alternative would/could be a prison. The people of Aberdonia, hence, seem to accept the notion that "either you are with us, or you are against us". The story ergo shows that biotechnology has both positive and negative sides. As such, it may be compared to Zangenberg's (2018) critical and sceptical view on posthumanism, in contrast with the positive voice of Schwab (2016). This story thus shows that using biotechnology on humans may be a great way to solve problems such as the need for energy, but it may also reinforce or cause some new problems.

Injecting these solar nanites is a step towards changing what the human is, and as seen it has both a physiological and a social effect. It is a type of cyborg engineering as described by

Harari (2017), where one tries to improve the human. Though this story seems to do this type of engineering as a means of letting humans use more electrical power and hence does not improve the human body. Rather one may argue that injecting these solar nanites into humans, has a lesser impact on the environment, though for Aberdonia the whole area seems to try to capture the power of the sun. Also, as these solar nanites make humans glow, one may say that they help to tell the story of humans by highlighting the emotional aspect of humans. As such one may view this almost as a type of symbiosis between two types of matter as described in material ecology (lovino & Oppermann, 2014), that together tells new stories that might never have been told if the human's emotions were kept within themselves.

3.2.4 "In the Hearts of Dragons" by Stephanie Wagner from the *Wings of Renewal: A Solarpunk Dragon anthology*

Plot

"In the Hearts of Dragons" by Stephanie Wagner (2015) is set in space aboard a Dragon spaceship. The protagonist one follows is named *Marisol*, a scientist who for the first time is aboard a Dragonship. The Dragonship and the scientist aboard holds a great deal of advanced knowledge and the possibility to jump in hyperspace. This technology is therefore wanted by other organisations who are willing to pay for it and this sets up a conflict between some of the characters, with possibly severe consequences. The Dragonship is elegant with fresh air and it has a whole level dedicated to trees and livestock like chickens, ducks, rabbits, and goats to provide the population with food. Another level consists of different science labs and in the middle of the Dragonship is also the heart of the dragon, which functions as the control centre for the vehicle. This is the place where the pilots control the dragon by being in some sort of symbiosis and telepathic connection with it. The dragon must accept the pilot for this telepathic connection to work. The pilot is therefore an important job and a difficult job to get. To be the pilot and control the dragon is, however, a wanted position, especially by other organisations so, therefore, the pilot is one day found dead.

This leaves chaos on the ship as no one, except the dragon, knows who or what killed the pilot. The dragon cannot communicate through words so instead, it shuts down all systems,

including life-support, hence, getting a new pilot connected with the dragon is imminent. A person telepathically connected with the Dragon may tell it what to do, though it chooses if it wants to listen or not. Alan, one of Marisol's colleagues is the last one who spoke to the pilot and he says she just collapsed, though when Marisol hugs him, he flinches. Alan is the character who argued that it would be wise to join forces with Exo corp., a colonizing company so that Exo Corp would receive Dragonship technology, while Alan and the rest of the crew would receive resources to expand on that technology. Thus, he has a reason for killing the pilot, yet Marisol seems to be unaware until she catches him in action where he controls the Dragon with a console of some sort, forcing it to go where he wants. However, the dragon pushes him away with some force that makes Alan unconscious or dead. This leaves the dragon fragile as it caused some explosion, but in the end, though it looks like a mess, Marisol embraces the Dragon's request to connect with it and at this, the story ends.

The story is told chronologically from a third-person perspective with insight into the character and protagonist Marisol. It starts with Marisol entering the Dragonship for the first time, and one follows her on her time on the ship. The story is divided into different "scenes" or "chapters" by three dots: "***". These functions as "stage curtains", introducing the shift between two different scenes, leaving out information that is less relevant to the story. Also, they introduce the dream segments, which are important in this story.

These dreams happen two times at different periods and are similar, yet not the same. They both start with Marisol walking through a forest looking for something. The first time, this something finds her and takes her to fly in the night sky. Most likely it is the dragon who reaches out to her. While in the second dream, she is also looking to find this something, but this time she is stressed and when she finds it, she is met with thoughts like "Wrong ... danger ... hurry ... not safe" (p. 32). The first time the night sky is full of stars, while the second time there are no stars. As such these two dreams contrast one another, but they show that Marisol has a connection with the dragon and that it is the dragon who reaches out to her, not the other way around. They foreshadow later events, though they do happen in real-time, such as the second dream which wakes Marisol and leaves her wandering down to the heart of the dragon. There she finds what is wrong and who is doing it, as mentioned earlier.

The plot is focused on Marisol and her experiences aboard the ship. One sees what she sees, and her dreams and thoughts are revealed to the reader, as well as the evolving bond between her and the dragon. Through her, one hears for example about the conflict between the ExoCorp's Delta colony, and the organization to which the Dragonship belongs to. ExoCorp annexes colonies and most people who live within those colonies live with just the bare necessities. Alan, though, has a different picture of them as he sees them as fair and as an organization that allows everyone to climb the ladder. Marisol, however, does not believe this story and stands with her principles that it would be bad if ExoCorp would get the hyperspace- and the Dragonship technology, as they then would only colonize more and grow in power. Further one sees how important Marisol is, because of the bond with the dragon as seen with the dream segments in the paragraph above.

Character

Marisol Ellison is the protagonist of this story and is portrayed through her thoughts, conversations, her dreams, and her actions. She is a scientist who loves and is intrigued by the Dragonship. She is also described as fond of another character, named Yumiko Miyamoto, "a petite, vivacious solar panel engineering apprentice" (p. 22). Yumiko draws Marisol out to do familiar works, such as to pluck weeds from the outdoor garden, which is an activity that relaxes Marisol. Further, it seems that Marisol enjoys the company of others, and cares for others as seen with Yumiko, but also with other characters. For example, she comforts Alan, after the pilot is found dead and he is the last one who talked with the pilot. Further, Marisol is characterized by her dreams. In those she is looking for something, and in the first dream a presence flies into her so that she flies into the night sky full of stars and therefore "She felt joy, excitement. This was what she was made for. This was her purpose" (p. 26). It seems likely that this is the dragon reaching out to her, making a bond with her as dragons do with the pilots, Marisol, however, is not a pilot but a scientist, so it takes a long time before she accepts this thought.

Marisol is a special character in that she can bond with the dragon, without her own effort to do so. Why the dragon bonds with her, is not known, though it may have to do with Marisol's character in one way or another. It may imply that the dragon believes her to be trustworthy and that she would act in the best interest of the dragon and the Dragonship. Based on this one may say that she represents the characteristics of the "chosen one" or

hero-figure, like Harry Potter from the Harry Potter series by J.K. Rowling or King Arthur from the story of King Arthur and His Knights by Howard Pyle. No other person on the ship is accepted by the dragon, except Marisol, though all those who have trained telepathically and many more tries to connect with it (p. 30). However, why she may represent the "chosen one", her character may be said to be mimetic as she is described as a person with different sides of her, as is shown shortly in the paragraph above.

Setting

The story takes place on a Dragonship, i.e., a dragon that serves as a ship. There are indications in the text that this Dragonship has been designed: "It took fifty years and most of the scientists on Earth to develop the Dragonships" (pp. 27-28). Yet it is alive, so it seems that the Dragon has been created in man's image and that its hyperspace abilities is also a technology that is developed by man. It is called a liveship and to control it a person must make a telepathic connection with the dragon who is the ship. The dragon seems to be the one who decides to make this connection, though the humans may also train telepathically to make this transition easier. The place where one "controls" the Dragonship, seems to happen in the "control-centre" or "heart" which is described as "full of sensory and telepathic connections" and looks like "a glass-walled hexagonal structure [which] surrounded a central pedestal with a glowing pale purple sphere embedded in the top" (p. 24). Further, the ship has several levels, one is "soil-based, where we grow our trees [etc.]," another holds science labs and there is an "amphitheater, meal hall, artisan workshops" "vertical farms" and more. (p. 22) It also has its internal day-night system creating an artificial day and night.

The setting is stylized, as it is a Dragonship. The environment, being a dragon, literally sets the mood at the ship, if it is distressed it calls out in alarm, and if attacked it may close lifesystems and escape pods, otherwise, however, it keeps life-systems alive, and everyone is happy. As such it sets the mood, but it also gives hints about the characters of the story, by deciding whom to bond with and by showing signs that something is, or someone is doing something wrong. It responds to the actions of the characters and functions as a living scene where it mostly leaves the characters alone, but if one does something wrong, it reacts.

The fact that the setting is "alive" is interesting as it highlights the notion of the environment and how we are interconnected with it. The Dragonship is therefore both setting and character at the same time. If the dragon is both, then it may symbolise how every action of humans has consequences to the environment. As the analysis shows, humans may impact the environment in very different ways as is portrayed through the differences between the character of Marisol and Alan. As the dragon hold this role as both character and setting, it does not only help highlight the ecological elements of the story, but it also challenges the whole notion of setting, by being a setting that is alive.

Discussion

The analysis of "In the hearts of Dragons" has shown life aboard a ship that is alive and how the people aboard this ship live with each other and how they relate to this ship, who is a dragon. The posthumanistic traits come forth in the connection between the human and the dragon by telepathic connection. This allows the human chosen by the dragon and the dragon to control the ship together in the interest of both. This symbiosis and telepathic connection between human and dragon may be due to how Harari (2017) explains that everyone in their simplest form is algorithms and to Haraway's (2007) opinion that everything is matter. All matter tells a story according to Haraway and all algorithms may be understood, though they manifest in different ways, according to Harari. Hence, the posthumanistic traits that may be found in this story are humanity's ability to communicate with another being telepathically due to the connection that already exists between the two entities. Exactly how this is possible is, however, not described in the story, but maybe the explanations of humans as algorithms by Harari or as matter by Haraway provides plausible answers to that question.

The people aboard this living setting appear to be mostly scientists, so many within the society onboard here is occupied with researching. Also, as most of them work together, one may claim that this is a collaborative community helping each other out. Further, the fact that the people live within a living dragon that has both animals and vegetables in it, show a way of connecting human culture with nature to a type of "free nature" as Bookchin coined the term (Bookchin, 1996). Nature here is, however, domesticated, so that itself may be said to be part of human culture. In light of material ecology (Haraway, 2007), one sees how both the people and the Dragonship holds agency and hence, the society presented here seems

to be living ecologically. Also, they present a research facility and in contrast to other colonising companies, they seem to respect others. Being on a living ship has its benefits as the dragon has mechanisms that help it protect itself, though these may also prove negatively as seen through the closing of the life support systems. However, these mechanisms do eventually also protect the ship from ending up in the hands of people with presumably bad intention, as the Exo Corp organization represents.

The deep connection between the humans and the dragon is shown through how alive the setting is, as described in the analysis of the setting. This highlight the notion that everything may be seen as matter, and therefore, tells a story and hence affect each other. It may represent how deeply connected everyone and everything is, and together the dragon and Marisol may represent what Haraway (2007) calls a figure, as they shape one another and create meaning together. This deep connection may highlight how important the actions of both the dragon and the humans are for this connection to be healthy and productive. Therefore, one may draw lines from this connection to the connection between humans and the environment, and if so, this story shows how important that connection is, and how big an effect humans may have on the environment, as is seen by the contrast of how Alan and Marisol interact with the dragon.

3.2.5 Summary

The posthumanistic traits that are found within the three stories shown in this subchapter show that they are very different ways of posthumanism. "Solar Child" presents a new species, the photosapien. While "Watch out, Red Crusher!" puts light on the positive and negative consequences of cyborg engineering and lastly "In the Hearts of Dragons" highlights the relationship and symbiosis between humans and dragons and the telepathic connection that exist between some selected humans and the dragon. Thus, they give indications that the posthumanistic traits portrayed within solarpunk are not necessarily similar in the type of posthuman traits they present. Neither are they similar in what consequences they have for society. However, all the stories show a way of thinking of humans as part of the environment and in such a close relationship with is as is described by the thoughts and theories of both Haraway (2007) and Harari (2017). As shown through the different analyses and discussions, in all the stories, the posthuman traits directly affect the people within the different societies. In 3.2.1 one sees how assisted evolution through biotechnology is used as means to bring humanity forward, and how this is violently resisted by a radical religious group. It shows a fragmented society and a world that struggles with environmental impacts, hence assisted evolution is seen as a plausible solution to these problems. The story of 3.2.3, however, rather seems to take a more critical view, like Zangenberg (2018), on changing the human. Despite this though, the society of Aberdonia is described as a utopia, though as shown, even utopias may have their flaws. Lastly, the story of 3.2.4 shows how closely connected humans and the environment are, as the dragon is both character and setting at the same time. It, therefore, highlights humans impacts on the environment and how humans can either force the environment to do something, causing it to backfire or humans can respect the environment to provide happiness and comfort for both.

3.3 Social-ecological and societal perspective

3.3.1 Introduction

This subchapter deals with how the three short stories "The Boston Hearth Project" by T.X. Watson, "Riot of the Wind and Sun" by Jennifer Lee Rossmann and "Petrichor" by Megan Reynolds address societal questions and will be analysed concerning the ideas of social ecology and utopia/dystopia. The following research questions, as mentioned in 1.1 will help guide me in my analysis and discussion:

- e) What kind of social issues are presented in the stories?
- f) What kind of social value systems emerge from the stories?

The stories presented in this chapter range from Watson's story about a hostile takeover of a building to Rossmann's story about youth wanting a music band to come to their forgotten town and at last Reynolds's story that deals with how a town's prejudice is proved wrong. The analysis and discussion will show how each of them responds to the societal perspective as presented in chapter 2.4, to provide answers to the overarching question and the research questions above.

3.3.2 "The Boston Hearth Project" by T.X. Watson from the *Sunvault: Stories of Solarpunk and Eco-speculation* anthology

Plot

"The Boston Hearth Project" by T. X. Watson (2017) is a story about a hostile takeover of a new advanced building in Boston, built for the wealthy and taken over for the sake of the homeless people. The story starts with email correspondence between the protagonist Andie and a representative of the organization X.S.U. which supports digital activism and human rights. Andie signs zir emails with zie/zir, so I will use this gender-neutral pronoun when referring to zir. Andie wants to apply for a job at the X.S.U., and therefore zie hands in zir essay for the job and what zie describes may have legal consequences. X.S.U ensure zir that it is safe, so Andie hands it in and shares zir story and journey from when zie was a gamer and how zie went on to become a professional hacker and activist. What Andie describes that may have legal consequences is the fact that zie and others tried and succeeded in making a hostile takeover of an advanced building called the Hale building. This happened with the help of a group of volunteers, led by the character Kay.

The group of volunteers hand out food for the homeless, and Kay lets eight to nine homeless stay at her place every night. In the basement, there is a hackerspace where Andie may develop zir skills. The need for shelter is, however, larger than what Kay and the volunteers can offer, especially with the increasingly challenging environment. So, they come up with a plan to take over the Hale building, which has a closed ecosystem, built not to be in touch with the outside world. They plan to take over this building and invite all the homeless and activists within Boston to come and live in the building. As such the story has similarities to the pop-cultural topos of the robin hood story, with a clear moral for standing up for the poor and sticking it to the rich. Also, this shows that the story is structured around conflict and maybe most of all around Andie's journey from being a gamer to becoming an ethical hacker.

The story starts with email correspondence told in the present time, before it moves on to an embedded story, which is told in the past tense, as it is about Andie's background and part of zir job application. The job application is the reason for Andie to share zir story and what motivates zir for telling the story that is told. Andie's essay is therefore told in

retrospect with frequent use of ellipses. It is told in an orderly chronological way, following Andie's selected moments of zir journey. As such Andie highlights parts of zir life that zie feels would be beneficial for zir to be accepted at the organization X.S.U. The essay zie has to hand in has to deal with the question: "When have you worked well as part of a team?" (p. 15).

The story revolves around Andie and zir thoughts and actions. It also seems that what holds this story together are Andie's experiences. Andie selects highlights from zir life, such as when zie won zir first competition as a fifteen-year-old or that zie played a team-based game with AR equipment. Zir main focus is not the gaming experience, however, but the Boston Hearth project, which was introduced to zir by Kay whom zie met playing the AR game. The AR game was cancelled, so the time Andie had planned for gaming now has to be filled with something else, namely volunteer work with Kay for homeless queer people. Andie probably shed the most light on this part because this is the area that shaped zir character the most and means the most to zir. Also, it is probably here zie worked best as part of a team since this project was something zie burned for.

The special emphasis then is on the work towards and execution of the plan to take over the Hale building, a project which the volunteers call the Boston Hearth project. Andie's skillset is computer-based, so zir area is hacking and keeping track of another character which will do the actual break-in of the building to let everyone in. They do this because they are motivated by social justice, they do not see it as fair that the rich should survive and thrive while the poor will suffer and starve. It is evident from Andie's story that zie is motivated by this and sees it as a good thing to be a good hacker figure.

Andie's gaming experience prepares zir for breaking into the building. Most importantly, and the most relevant example, is the relationship between the game called FREON, where one uses Augmented reality equipment to play, and the break-in of the Hale Building. Augmented reality allows one to see the real world with more details than without an AR kit. In the FREON game, there is one *control player* who had access to all information and cameras, one *action player* who is dependent on the control player's information to do anything and lastly, the team has a team captain. Andie had the role of the *control player* in this game, and the action player who had to move had to be athletic. This game, therefore, prepares Andie for what zie would later do and foreshadows the events of the takeover. At

the time of the break-in, the plan is to let Andie be the *control player* and let Juniper, who does parkour, be the action player in real life.

They succeeded in taking over the building, and not just that, they are recognized by the state, as well as inspiring people in other cities to do the same. "New York and Portland have both turned over building projects to activists for fear of facing another hostile takeover" (p. 25). It is a utopic ending, as it all ends well, except for the ones whom the Hale building was meant for and those who are arrested by the police for the hostile takeover.

The plot demonstrates a society where the wealthy have control over the city of Boston and a society where money governs what will happen, as seen both through Andie's FREON game, which is cancelled due to poor viewership and through the Hale building which is built for the wealthy and powerful. However, Andie and the other volunteers set out to change this premise so that they may create their utopia where those in need will get the help they need. Their goal to create this utopia of theirs does not come without the price of going against the law and some moral obligations. Yet, their actions seem to develop from desperation, and they end up saving lives. Whether what they have done is right or wrong is left for the reader to decide, though this story seems to cheer on the thieves who steal from the rich and give to the poor.

Character

Andie is mainly characterized through zir thoughts and actions, in addition to some minor symbols that help strengthen the image of zir character. After describing how zie was a great gamer, zie goes on to talk about Kay and the project she led. Upon describing this, Andie writes: "What I did with Kay was the most rewarding and important thing I've done so far in my life" (p. 16). What zie talks about is to turn over the Hale building from the rich to the poor homeless people whose situation has only worsened over the years. Being a major part of this, Andie takes great pride and describes in detail what zie did. In describing zir role in this, zie characterizes zirself as smart and cunning with a distinct value system of what justice is. Zie also seems to take it upon zirself to play the role of Robin Hood. "Steal from the rich and give to the poor" seem to be the main goal that is set in Andie's head. Andie goes far in stating that without stealing the building from the rich, the homeless people will die because of the terrible climate during winter. He provides proof of why this is important

after capturing the building, stating that "There was a 92 percent drop in deaths by exposure in Boston this winter" (pp. 24- 25). This shows that Andie place life above property and therefore sees it as social justice to share property so that everyone will be able to live and survive in the harsh environments.

Further, Andie must use either a wheelchair or crutches as one learns when zie sits in the hotel room by the Hale building, ready to direct the parkour character Juniper. This is an interesting symbolism, as it, in addition to the fact that Andie uses the pronoun zir, differentiates zir from the rest of society. Maybe these two factors help zir identify with the homeless people and maybe zie, therefore, was also glad to help Kay in her mission to save queer homeless people. Andie is also young, in zir late teens or early twenties, which may make zir more prone to do actions that are unlawful if the fruits of those actions are good. All these characteristics help differentiate Andie from the wealthy politicians and businessmen and may help zir to see past them and the law, to the homeless people who are in desperate need of help.

To belong to a team is also important to Andie as zie and Juniper are wearing matching robes at the time of the break-in (pp. 17-18). Andie emphasizes how important teamwork was for the Hearth project, at the end of zir essay:

Teamwork was the central skill of the Hearth Project at every stage: in planning, in execution, in follow-up, and in protecting each other from the state. This work deepened my understanding of and appreciation for collective action. It's hard, and it has costs, and it demands immense trust and intimacy. I'm excited to come to X.S.U. to join in efforts to change the world that I don't have to keep so quiet. (p. 25)

Andie also uses the pronoun "we" a lot, to include both zirself and all others involved in the takeover. An example of this is when the building has been taken, and the police are trying to get into the building. The house occupiers then let them into the doorway, turned up the heat so that the police almost get heat strokes, then took their weapons, deconstructed them, and threw the weapon pieces back at their cars. To go against the police in this way is radical and unlawful, yet it is *for the greater good*, following what seems to be Andie's line of thinking, as they then got to keep the building.

This also gives clues to how the characters in this short story see social issues. Kay seems to be the inspiring source and leader for Andie and the other volunteers. Kay has a strong heart for the weak and it is implied by Andie that Kay pays for the food supplies that are given out. Andie admires Kay, and she is most likely the reason for zir development into becoming an activist for reducing social differences. There are no second thoughts or any thoughts regarding if it is not right to make a hostile takeover of the Hale centre. It, therefore, seems that Andie and the group of volunteers zie is part of sees social justice and life above the law. The law seems to be both an obstacle and an opportunity for them, as one, the police will always be after them, and two, they managed to lawfully receive the building from the state. As such, they seek to solve social issues, regardless of what the lawful consequences might be but do not hesitate to use the law, when the law is on their side.

Based on these characteristics I would argue that Andie may be described as a character that represents the modern pop-cultural topos of the robin hood cult hacker figure, the type that sees illegal hacking as means to do good, instead of seeing the act of hacking as a bad thing in itself. Further, though zie have traits that may describe zir as a mimetic character, one may say that zie is portrayed as an idea or as a thematic character. One may say this because of how the notion of doing something legally wrong becomes ethically right because of the results it gives. Therefore, one may call this short story a modern robin-hood story.

Setting

The time seems to be set in our present time (2021) or near future in the city of Boston, which makes it a realistic setting. The fact that the narrator also links to a webpage of the hostile takeover, as will be shown in the analysis further below, confirms this statement. As shown in the plot, the place also sets the mood of the story as the different places contrasts each other and a feeling of injustice may impose itself upon the reader.

There are three central places to this story that are important. One is the streets of Boston where the homeless people live; the second is Kay's home where all the preparations for the hostile takeover take place and the third is the Hale centre, which is the main target and the greatest building in the whole state of Massachusetts.

The streets of Boston are not described explicitly, but through the situation of the homeless people:

The rate of winter deaths of homeless people in Boston has been increasing every year since climate change has made weather patterns more and more erratic. The city was never equipped to protect the homeless during polar vortices, and it was getting worse, not better. There had been no new construction of homeless facilities, and two closures, in the last five years. (p. 16)

As seen from this excerpt, the climate has made the streets of Boston cold and unwelcoming. Also, the state seems to have done nothing to better the situation for the homeless, it rather seems to have done things worse for them by the closing of two facilities. The weather is described as dangerous and problematic, something from which people need protection.

While the streets are uninviting, Kay lives in a rather special location. She lives "in an old retrofitted church, with a windmill on the spire and transparent solar panels in front of the stain-glass windows" (p. 16). These helps power the hackerspace in her basement, as well as her kitchen. The hackerspace is important as this is the place where a lot of the skills of hacking into an advanced building are learnt. The kitchen is important as it is used to "make food to give away almost every day" (p. 16). The fact that she lives in a church and uses it to help others may also function as a double symbolism, the first being that the original use of the church is gone, the second being that from this building comes goodness. This building is, however, not large enough to help all, but the Hale centre does on the other end seem large enough.

The Hale centre is described as "basically a first class hotel, set up so that business people and politicians wouldn't have to go around interacting with the actual city" (p. 16). It has high-class technology and can withstand any storm for days, as it has a "custom-engineered closed ecosystem" (p. 16). The centre is full of luxury and contrasts with the rest of Boston. The air is a lot better inside the building than it is outside, like being somewhere far away from the city's smell and mud. Also, to add to the contrast of how great this building contrasts with the city of Boston; it has a closed weather system, which gives sun inside while it is overcast outside.

The setting of this story is a realistic setting with the poor living on the streets, the rich (politicians and businesspeople) in the tower (Hale centre) and the good Samaritans with

only so much to offer in Kay's church. The rich do not care about the poor, as a fact in this story, they make it worse for the poor. Luckily, many Jesus figures are deriving from Kay's retrofitted church who are there to save the poor, by giving out food and eventually capture the Hale centre for them. Where the streets have terrible air quality, the Hale building has clean air. Further the homeless are out in the open, come winter, come storms, while the rich build fences around themselves to avoid seeing despair. These immensely different settings for the rich and the poor are the motivating factor for tipping the scale and letting the poor get access to life, through the "salvation" of the Hale Building.

The narrator, Andie, also links to the webpage <u>http://bostonhearthproject.org</u> in zir essay. Clicking into this webpage, one sees how the Hearth (The Hale centre) now has become what the activists dreamt of:

The Hearth is Boston's largest homelessness shelter, providing unconditional support to up to 10,000 residents during environmental crises, and as much support as possible for area residents during non-catastrophic periods.

The Hearth was founded in December 2021, when, in response to protest over homelessness in Boston, the city turned over the building to the Boston Hearth Project Foundation. The Hearth is the most advanced and complete Living Building in Boston, and can sustain at 60 percent capacity for up to a month, longer than the most intense storm crises on record. (*The Boston Hearth Project*)

This building, as seen from the descriptions, holds the keys to changing the status quo. Also, it shows the power of the storyteller. This webpage says the city turned the building over, while Andie states it as a hostile takeover. Whatever truly happened, the Hearth seems to be securely placed in the hands of volunteers and homeless people at the expanse of the rich and to the blessing of the poor. The notion that what someone builds can be taken over by someone working towards a social goal of equality, is a radical idea. While the actions are morally questionable, the consequences of the actions done, are great, at least according to the narrator. According to Andie, as seen above, this takeover may help 10 000 people at a time during an environmental crisis and it always provides shelter to people in need if capacity reaches.

Discussion

The analysis has shown that "The Boston Hearth Project" presents a society where the wealthy and rich are in control, but where volunteers are changing this by taking over the wealthy's most priced building in the city of Boston. The two competing ideas are capitalism, symbolised through the Hale centre with its closed ecosystem, and social anarchy described through the capture of the Hale centre and sharing it with all those in need. In a way, Andie and the other volunteers are creating a type of socio-liberal utopia by having control of the most important building of the city of Boston. They oppose the state through opposing the police and they oppose capitalism and private ownership by capturing the Hale centre. Though social ecology (Bookchin, 1980) does not exactly encourage it, there are similarities between, if not the actions, but between the consequences of this story and social ecology. Social ecology, like this story, opposes hierarchical structures and capitalism, and rather presents the idea of decentralized social institutions that are occupied with aiding people in need and enacting solidarity. The Hale building, after the house occupation, may be said to hold such a role and the volunteers in control of the building are showing solidarity by taking care of people in need.

The story presents several social issues, where the most prominent ones are homelessness, cold-hearted capitalism and stealing. Capitalism is portrayed in a bad light as Andie tells a story of how the wealthy built their "paradise" in the middle of a city that struggles with homelessness. Homelessness is a social issue that needs fixing according to the narrator, and this happens by stealing the building of the wealthy. As such stealing is put in a good light and they set solidarity over the law. Cold-hearted capitalism is the enemy which stands in the way of solving the problems of injustice and homelessness. Therefore, to steal the capitalists' most prominent project, which solves the other two problems, is seen as a lesser evil and therefore justified. As such this story sets forth the notion of social progress, like in social ecology, where they replace capitalism for human happiness for the poor.

This story, as social ecology, claims that there is a close relationship between environmental and social issues. This is seen for example through the analysis of setting, where immensely different ideas challenge each other. The environment is a real problem and during winter it leads to deaths, as people without housing has no or little protection. If not for the radical actions taken by Andie and the volunteers, one may expect that these deaths would

continue as the wealthy and powerful are portrayed as selfish. As seen in the character analysis, after the takeover "there was a 92 percent drop in deaths" (Watson, 2017, pp. 24 -25). This shows that Andie and the other volunteers place life above property and therefore sees it as social justice to share property so that everyone will be able to live and survive in the harsh environment.

The analysis also shows how important teamwork is for Andie and the volunteers. Working together they take on the giants, something of which would be impossible to do alone. Also, leadership is seen as a great value, as is portrayed through how Kay leads and organises the volunteers. Andie gladly follows Kay and is proud to be part of these volunteers. This show that good leadership, whatever social value system one may like to follow, is important and may lead to greatness. Together, through teamwork and good leadership, Andie and the others achieve a sort of utopia for the homeless, in contrast with the dystopic descriptions of how the homeless lived at the beginning of the story. This utopia is the Hale centre, as it provides a safe environment for the homeless which is directly opposite of the situation they were in at the beginning of the story.

3.3.3 "Riot of the Wind and Sun" by Jennifer Lee Rossmann from the *Glass and Gardens: Solarpunk Summers* anthology

Plot

"Riot of the Wind and Sun" by Jennifer Lee Rossmann (2018) is told through a third-person narrator, with focus on the protagonist Kirra. The story is set in the future, in the town of Cooper Pedy in the outback of South Australia. The reader learns that there has been a war that settled the electrical-power disputes between the towns that made energy, and the cities that demanded energy. The towns won, and now, though the cities received the most power, the towns received power at times too. Cooper Pedy has both solar panels and windmills, which provides energy to itself, but mostly to the southern capital Adelaide. The main issue of the story is that this town is invisible to all of Australia, which means that no one comes to visit as it is dark there at night. One day, one of the characters, Zeph, reads on her tablet that the band *The Riot of the Wind and Sun* are going to play in a random place soon. The problem is, however, that they would never come to the town and outpost Cooper Pedy to play, as they do not know it exists. However, one day an opportunity presents itself as a plane is going to fly over Australia to map where people live. Kirra grasps this chance, and with her friend Zeph, she thinks of how to best show their existence, so that the band may come to them.

First comes the idea of gathering all the shining beads and other equipment they have and from them, form letters which say "Cooper Pedy". However, the day before the plane was to arrive, the wind covers all these letters in sand, ruining the whole plan. Luckily for them though, they do not give up and come up with a solution that involves the whole community. The whole community wear clothes that shine in the dark, so by Kirra's instructions they line up as glowing letters. This leads to a new spot of light on Australia's map, which in turn leads to curiosity, and most important of all to the characters, to the arrival of the music band *The Riot of the Wind and Sun*.

"Riot of the Wind and Sun" is told chronologically and starts by introducing the music band, the main goal of the characters is bringing the band to their town. Between each "scene" the space in between, or the ellipsis, are marked with three stars, "***", which functions as "stage curtains" and indicates a scene shift. Each of these "scenes" always ends with some suspension or an introduction to the next "scene". For instance, one may compare some of the last sentences between each scene shift:

Last sentence in the first scene: "If only they knew it [Cooper Pedy] existed" (p. 32).

Last sentence in the second scene: "She nodded to herself. "Let's put Coober Pedy on the map." (p. 34) "

Last sentences in the fifth scene: "A breeze picked up [...] throwing sharp projectiles of sand at her face. It showed no signs of stopping and by the end of the night, a sloped pile had accumulated at the base of each turbine." (p. 36)

Each of these sentences may be called suspension builders or sentences that prepare the reader for what happens next. As seen, the goal is to show Cooper Pedy's existence, starting with a problem, continuing with a solution, but then this solution is no longer valid, as seen in the fifth part.

These scene shifts above help bind the text together. Equally important, however, is Kirra and her friend Zeph who carry out the action. Kirra is the one who makes things happen,

while Zeph is the spark of which Kirra's ideas catch fire. An example of this is when Zeph says: "Just have to get us on the map," (p. 32) and not long after she comes running and tells Kirra that there will be a new census map which will be mapped in a week. Together, these two elements, along with Kirra's fandom of the band and the illuminating beads of which she sews clothing, she gets the idea to put Cooper Pedy on the map. This also shows how important the relationship between Kirra and her friend Zeph is for moving the story forward.

The task of showing the world that Cooper Pedy exists, repeats itself throughout the story with repetitive frequency as exemplified with the excerpts in the first paragraph. The larger city, Adelaide, some days, and all nights takes all the power that is generated, leaving Cooper Pedy in darkness. However, Cooper Pedy wants to show that they exist, they also want to be in the spotlight, because it is not so fun to be left in the dark. The way this is emphasised repetitively is, therefore, an important aspect of this story. It takes a collaboration of the town members to collect their luminescent spare parts, and again it takes the collaboration of the town members when they have to stand as letters in the desert when the plane arrives for photographing and for mapping the country.

Character

The main characters in this story are the protagonist Kirra, and her friend Zeph. They are both girls who love the music of the radical protest band *The Riot of the Wind and Sun*. This band is "known for being edgy and rebellious" (p. 31) and for having fought for small towns like Cooper Pedy, so that they may keep some of the power they make "instead of having all of it diverted to Adelaide and the other big cities" (p. 32). As the girls are from Cooper Pedy, they can identify with this band and stick it to the big cities that want all the power they can get. However, the people of Cooper Pedy have found a way to thread their colourful and shiny beads onto fabric so that they glow in the dark. Kirra and Zeph do not like being in the dark, because then they do not get to participate in all the fun, such as concerts, getting to meet tourists, etc. Therefore, being motivated to get these types of attractions, Kirra goes all in with all of her illuminating equipment and inspires Zeph and many other kids and adults to do the same to form the letters of Cooper Pedy. From these events, one sees that Kirra is the protagonist of the story and the one who brings the ideas and carries them out. Kirra is at first characterized by what music she likes, as described in the paragraph above. Further, she has feminine characteristics such as when her friend Zeph paints her nails with glowing colours, which complements her dark skin. Having dark skin in Australia may imply that she is an aboriginal or has an aboriginal family. This may add an extra layer of difference between the small towns and the major cities and to the wars that were fought between them. The aboriginals have experienced many struggles in Australia over the years because of exploitation, though in this story it is not her origin, but the power supply that has been battled about, still there is the notion of the majority vs the minority that fills the background of the story. Further, Kirra and Zeph are described as teenagers, which becomes most clear when they are playing music: "but no one could criticize the volume of their music if they stayed in the storeroom" (p. 31). This show one thing: that Kirra and Zeph want to play loud music, while at the same time wanting to annoy others, which is tendencies of being bored. Lastly, Kirra is a dreamer who follows through on her dreams. Zeph helps her come up with her dreams and helps her go through with them, but it is always Kirra who leads and makes them happen. Kirra's dream of this story: to have loud music come to town, and to let people know they exist so that they may have visitors.

Based on the characterization of Kirra, one may say that she represents a distinctive individuality, as she has distinctive features. She is a person who, upon facing a crisis, decides to not let it stop her, which implies that she is a strong character. Her character can therefore be described as a mimetic character as she in many ways is portrayed as a person. However, there are also indications that she is simply playing the role of the heroine. One may say this because she is the one, though with some help from her friend Zeph, who saves the town from darkness and brings a concert to town. She links their single town with people from the rest of Australia. Being this catalyst and heroine also allows one to see her as an idea, i.e. that her character is just as much thematic as it is mimetic. Also, an interesting symbol which links Kirra closer to her town is the ending scene, when she is dancing to the music of "The Riot of the Wind and Sun": "Kirra twirled in her beaded gown, her braids cutting the air like the blades of a turbine" (pp. 37- 38). This may symbolize that Kirra is simply a representation of Cooper Pedy, and is closely in contact with the environment she has grown up in.

Setting

The story is set in the future, in a very dry, hot place with a lot of sand, sun, and wind. These are perfect conditions for environmentally friendly ways of producing energy. However, the conditions are also perfect for the sand to cover the solar panels, which leaves work for the people who live in Cooper Pedy to shove the sand away. During the daytime, it is too warm and too dangerous to go outside without protective clothing or equipment, therefore the town of Cooper Pedy is an underground town, where they live in caves or underground where it is cooler. Cooper Pedy is an old opal mining town, but now it seems to have been reduced to an energy-making place, using the desert area for solar panels and wind turbines. For some reason, Cooper Pedy has disappeared from the map, maybe because it does not emit light at night and because living underground, makes it hard to see.

The place described is realistic, as, for one, Cooper Pedy exists in real life and has underground buildings because of the heat. Second, Cooper Pedy is a mining town in real life, and it makes sense that the mines at some point will be too empty to make a profit. Third, disputes over power sources are at our present time (2021) an issue and therefore it seems likely that this will also be an issue in the future and something to be put forth in this story. As such, all these features imply that this is a realistic setting which may cause the reader to think about and to be aware of what consequences power consumption may have.

The fact that the town is in darkness and in that way somewhat alone in the great country of Australia, decides the frame of the story. Kirra wants to blow this frame to pieces by letting the lightful people form letters in the darkness. She succeeds in this mission and the frame is changed as Cooper Pedy is finally to be found on the map, and the story ends with a concert that may be the beginning of changing the setting of Cooper Pedy in the future. Though Kirra and the town succeed in changing this frame, there is another frame that is harder to change, namely the environment and the structures which are already built. The environment is dry, dangerously hot and filled with solar panels and wind turbines. This limits the way these characters may live, but also it shows humanity's creativity as they have built underground structures and use hovercrafts and protective gear to be outside in the harsh sun rays.

Discussion

The analysis of "Riot of the Wind and Sun" has shown how the people of Cooper Pedy live a life cut out from the rest of Australian society in the desert. This has left them to lack influences from other places, despite the influences they get through their electronic devices. Their town has adapted to its ecosystem by building houses underground and in caves. As such it holds similarities to Bookchin's (1980) descriptions of ecocommunities because they adapt like pieces of a puzzle to their ecosystem. Also, being cut off from society in this way is seen as positive from the social-ecological perspective, because they are then a decentralized community, which pollutes less. However, an important point in social ecology's description of these ecocommunities is that they should have a reasonable size, to have cultural diversity. Kirra and her friend Zeph miss this cultural diversity, with emphasis on musical experiences, and therefore they set this as the main goal for the town of Cooper Pedy to achieve, as shown in the analysis.

Another issue this town struggles with is how hot the environment is. The sun has powerful UV beams and is dangerous and hence something which the characters must protect themselves from. Also, the wind is problematic as it often covers the solar panels and eventually also the illuminated letters. The environment is therefore problematized, but the community has still found a way to live with it. Yet, the powerful sun and wind are celebrated because they provide environmentally friendly power (Goga et al, 2018). One may therefore say that one of the values of this community, is to harness the resources that nature provides. However, most of the power that they harvest through the sun and wind, are sent to power up the major cities, such as Adelaide (Rossmann, 2018). This shows that natural resources, as the sun and wind, are very valuable, and therefore also cause social issues as shown through the fact that Cooper Pedy is not always having power.

Lacking power may, however, may also have positive consequences. For example, it may have caused society to develop the necessary skills for making colourful illuminating fabrics that makes them shine in the darkness. These illuminating fabrics may arguably be said to be an important part of their culture. It makes them shine in the dark, which, when standing together, makes the town known to all of Australia. Considering social ecology, one may say that this society has evolved and realized "its potentialities for human happiness" (Bookchin, 1996, p. 21), as they have achieved the goal of becoming known for the rest of Australia. This

has positive consequences, such as causing the band that Kirra and her friend are huge fans of to arrive. Also, it causes cultural and most likely economic progress as the community will get other artists and tourist coming the way to the old mining community. This may lead the community to receive more electrical power as their society may be recognized by the rest of the country. As such one sees a society of collaboration that stands and shines together, which is an important value of this society.

3.3.4 "Petrichor" by Megan Reynolds, from the Wings of Renewal: A Solarpunk Dragon Anthology

Plot

"Petrichor" by Megan Reynolds (2015) is told through a third-person perspective, with the protagonist Elena in focus. The title *petrichor* is a word which the oxford dictionary defines as "A pleasant, distinctive smell frequently accompanying the first rain after a long period of warm, dry weather in certain regions" (petrichor, n.d). The title may therefore give some hints of what this text is about and what kind of mood the reader may expect of the story.

It is set in a town which struggles with drought, while a witch just outside of town has a blooming garden and is therefore also blamed by the town for bringing the drought. The story starts with a scene where Elena, who is dared by her friends to steal a flower from the witch's garden, goes through with the challenge. She takes a Senna flower from the garden and jumps back over the fence when she senses wind and sees that a dragon appears over a hilltop. The dragon is rumoured to communicate with the witch, so Elena hides as best as she can and heads home. At home, her aunt sees the flower she has stolen and makes her go back to the witch to apologize and offer to work for the witch in return for stealing the flower. Elena goes there, apologizes, and the witch who is named Anabel accepts Elena's offer. Anabel offers Elena to sleep at her place over the weeks when she will work there, which Elena accepts. The relationship between Elena and Anabel grows and after a while also becomes intimate. The notion that the witch brought the drought is quickly scrapped by Elena who on the contrary discovers that Anabel is the reason for bringing the rain, which happens when she is in her dragon shape. Producing and bringing the rain while being in dragon shape, leaves Anabel exhausted, but getting to know Anabel, Elena decides to offer

to help her. In the end, there is therefore no longer one, but two dragons who brings the rain to town.

The story is told chronologically with ellipses between the different "scenes". These are simple, effective omissions, marked by three dots: ***, and function as "stage curtains". This allows for effective transitions and exciting beginnings and ends, allowing tension to be built. An example of this division is when Elena has accepted her aunt's wish to work for the witch and is to go there the next day, and in the next scene she stands before the door, which was normal-sized, "but it might as well be a hundred feet tall" (p. 54). Further, these transitions allow for leaving moments of tension, such as on page 71: " 'Oops,' she said, her cheeks still red. Elena's only response was to laugh and kiss her again" (p. 71). After which the scene shifts and leaves Elena's and Anabel's romance alone.

This romance between Elena and Anabel is something that evolves and the romantic moments between them are therefore narrated several times and goes from flirting to becoming a relationship. The fact that this is a lesbian relationship is important, as this both challenges the common norm of our worldly society and it adds a layer of otherness in the story to the two characters. Another interesting factor to this story is that one of Elena's friends, Cal, is described with the gender-neutral pronoun "ne" which may imply that "ne" is transsexual or of gender non-conforming because both Elena, Anabel and Elena's other friend Lara are described with the pronoun "she". Together these elements may show that the society that is described in this story, is liberal in terms of sex, gender, and relationships.

Another way of describing this society is the fact that they all seem to be occupied with contributing to the community. This is for instance clear from Cal's tirade when ne hears that Elena is going to stay at the witch's place. Upon hearing this, ne blames the witch for bringing the drought, for not helping the townspeople and for not sharing the vegetables from her garden. All good reasons for Elena not to accept Anabel's offer. From Cal's tirade, one may say that for one, this community have their struggles with drought. Secondly, they help each other out and it also seems to be expected of you to contribute. Lastly, one share the food one has because growing food when struggling with drought is difficult. Further, the fact that her aunt recommended her to work for the witch after Elena stole the flower, shows that this society has its justice system as well. This is also implied when Elena tells her

friend Lara that the town council would make the same judgement if she should go against her aunt's wishes.

However, despite Cal's tirade and the town's scepticism, Elena has faith in the witch. She notices that some nights Anabel disappears, and when she comes back, she is exhausted and needs to sleep a lot. This repeats itself with repetitive frequency and leads Elena to want to help, seeing how exhausted Anabel is. The reason for Anabel's disappearances is because when she turns into a dragon and brings rain, it requires a lot of energy and leaves her exhausted. This occurs six times, first three by Anabel alone, then three more at which time Anabel has taught or is teaching Elena how to become a dragon, then they fly together. Anabel turns into a dragon, to bring rain to the town, while the town believes Anabel is the one who brought the drought. Having got to know and fallen in love with Anabel, Elena does, however, feel that is her task to show the town, that they are wrong. That Anabel is the towns saviour, not its demon. Therefore, they decide to make a rainstorm.

They travel to the ocean, camp at the beach for a week and fly out every day to make steam and rain clouds and then they bring it to town. They are ready to reveal what they now both are to the town: witches, shapeshifters, and bringers of rain. They fly in, gets everyone's attention and when the crowd had gathered, they land and Elena speaks to the crowd: " 'You have all said the witch brought the drought,' [...]' You were wrong. The drought came alone. But she brings the rain'" (p. 80). Further, Elena takes her time to also appreciate the town's effort: "' Just as each of you grows food or builds furniture or repairs clothing,' Elena added, 'we bring the rain' "(p. 81). This shows further characteristics of Elena, as one who is occupied with community, justice and appreciating the abilities of all. It also shows that Elena and Anabel deeply care about the town and wants to contribute to society.

It is the main character Elena who moves the narrative forward. The story revolves around her character and it is she who brings coherence to the story, being the link between the town and the witch, Anabel. Further, the fact that the narration follows Elena and her actions and thoughts, shows that everything that happens is in some way, connected to her. Her developing relationship with Anabel is also very important for the plot because this relationship leads to the conclusion of the story, where Elena and Anabel manage to bring a rainstorm to the town, revealing to the town, that what they saw as an evil witch, is not evil, but a good one.

Character

As seen from the plot, Elena is the one who drives the narrative forward; she is the main character and the protagonist of the short story. She is described at first through her actions, as she jumps over the fence to catch a flower from the witch's garden, being dared into doing it by her friends. She is there alone and decides to pick a Senna flower which the witch has many of, but the town has none. Making her way towards the flower she takes "care not to step on [the tiny spherical cacti]" (p.51). Together these actions give the reader an impression of Elena, already on the first page, as a brave and artful woman. However, she is confronted by her aunt in the next pages, where she is strongly encouraged to go to the witch's house and offer to work for her as amends for stealing the flower (p. 53). Also, her aunt has to remind her that she is "not a teenager anymore" (p.53) in response to learning of how her friends had goaded her. She takes this advice and though she thinks *"it's just a flower"* (p. 54), this conversation and her thoughts show that she is childish, has pride and is selfish, but also that she has the humility and the courage to go to the witch's house to apologize and offer to work for her.

The punishment leads Elena to meet the witch, whose name she only learns later is Anabel. Anabel takes Elena up on her offer and even invites Elena to stay at her place, during the week when she is working, as it is an hour's walk from Elena's place (p. 55). This may show that Anabel is lonely, yet also kind and that she believes in justice, as she accepts Elena's offer. The fact that Anabel invites Elena to stay over, may also be a small hint to the romantic relationship that will evolve between them later in the story. The fact that Elena accepts Anabel's offer is looked upon as a crazy idea by her friends, as the society they are part of, sees Anabel as an evil selfish witch, while Elena, however, decides to conquer her scepticism and accept the idea. Luckily for her, it seems to have been good for her to look past her bias and rather experience who the witch is first-hand, as they happen to grow close to each other.

Elena, having grown fond of Anabel, wants to help her with bringing rain to the town. And as their romance grows closer and they also become more physically intimate with each other, Anabel's magic transfers to Elena. Anabel tries to teach Elena the skills of being a dragon, and together they try to bring the rain to the town to save it from drought.

Having presented some of Elena and Anabel's characteristics have shown that they both can be seen as mimetic characters, seeing their complexity and different choices they have made and how they are described. However, the dragon, though it is only the human in a dragon's form, may instead be an artifice construct and an idea. For one, the dragon seems to only have one task: to bring water to the city, by using its dangerous fire powers for good. As such it may be a symbol of humanity, that it is within us the possibility to do a great amount of terror, but that we can always choose to do good over bad.

Setting

The story is set in a town which suffers from drought. Just outside the town lies the witch's house and for some reason, her garden looks well off. Therefore, based on these differences in the environment, as well as the fact that she moved in when the drought struck, she is blamed by the townspeople for bringing the drought to the town. Also, the witch, Anabel, lives alone in her house, which contrasts with how Elena lives. Elena does not live alone, but with her aunt, because that was not something people did anymore "because it was so much more efficient to share housing" (p. 52). This is also true of most townspeople. Together all these elements are shaping the mood of the story and adds distance between Anabel and the townspeople.

The setting of this story also gives the reader some hints and clues about the characters. The fact that Anabel has a garden and lives apart from the rest of the town, may give a hint that she is different from most people and that she takes care to maintain her garden. Also, on Elena's first day of working for her, she excuses for the mess in the living room, when leading Elena through to the garden. Upon observing this though, Elena thinks that it is not so bad because "the house was brightly lit and airy" (p. 59). Also, when arriving in the garden, Elena sees a garden packed with vegetables, so it is clear what is Anabel's priorities. Also, Anabel does not only plant vegetables, but also flowers for the bees and says "We can't plant just for ourselves. Our lives would never flourish" (p. 60) Elena then remembers how she had learned in the classroom "the importance of loving the Earth that she might return that love" (p. 60). And from these small moments, one sees how Elena's relationship with the environment grows, as well as how the environment help shape the relationship between Elena and Anabel.

One of the main topics of this story is about the environment, because of the drought which affects the environment which in turn affects the people who live in that environment. The drought is part of the reason why Elena stole a rare flower from the witch's garden, it is the reason for the town's suspicions towards Anabel and it brings Anabel and Elena close. In other words, the environment strongly shapes the communities and the relationships that are built in this story. It is within the frame, set by the environment, that the people live and can either change or adapt to live in the conditions that are set. In this case, they have to adapt to drought, until Anabel and Elena travels to the ocean, fires it up to steam and drives the clouds to town. Then there is a shift in the environment, going from dry to fertile land so the townspeople become happy. In such a way, the drought which first distanced the town and the witch from each other is also the reason for bringing them together.

Discussion

The analysis of "Petrichor" has shown a society that has similarities with the descriptions Bookchin (1980) gives of an *ecocommunity*. The society appears to have a decentralized structure, as governmental control is not mentioned, yet the fact that there is a town council may imply a hierarchical structure, though this is not emphasised in the story. There is also a great focus within this society, as within the idea of Bookchin's *ecocommunities*, that one should grow local resources and be diverse. This is seen by society's acceptance of all genders and relationships, and of the great focus that is given on growing local foods and repairing clothes, etc. They also live together in shared housing as a means of an eco-friendly lifestyle.

There are not so many social issues in focus within this society, despite maybe the most prominent one: the towns prejudice towards Anabel. Also, there are environmental challenges that come from the drought. This story challenges prejudice by showing the relationship between Elena and Anabel and how they relate to the community. Through this relationship a powerful message is portrayed: that one is often mistaken by one's assumptions of a person, and that to be brave in meeting newcomers is important and may even improve your happiness. Further, if Elena had not gone to the steps of going to work for the witch with all of herself, the town would only have one witch bringing the rain and as one learns from the story that is an exhausting task. Therefore, the town is much better off

with having two witches who bring the rain so that the town may survive and even beat the drought.

The analysis has also shown that "Petrichor" is a story where the relationship between the individual and the community is very important. This is e.g., seen through Elena's obligation to go work for the witch, and through Cal's tirade. Through working for the witch, Elena both pays for her mistakes and learns how the witch contributes to the community as well as to the environment. From Cal' tirade, one learns how the community struggles with drought and how important it is that everyone contributes to the community. This is also evident from Elena's speech after bringing the storm to town, showing how she and Anabel, as well as everyone in the village, contributes to the community each in their way.

These are all tendencies of how this community manages to be a collaborative ecological society where they appreciate the works of each other as well as dealing with and taking care of the environment. This is further seen through the analysis of the setting, where Anabel teaches Elena about giving something back to the environment while planting flowers, celebrating nature for what it gives. The story implies that they do this for the sake of the people and as such sees the environment from an anthropocentric perspective. However, the analysis also shows how dependent society is on the environment, with the drought making it hard to grow food so nature is also problematized (Goga et al, 2018).

3.3.5 Summary

The three short stories presented through both analysis and discussion in this chapter have shown how important the relationship between the individual and the community is. While the stories differ in focus, they each show that it is a central value within the societies to contribute to the community in one way or another. In Watson's story, this is seen through how Andie helps take over a building to help people that are most in need. Rossmann's story is different and rather focuses on how Kirra and her friends are helped by the whole community to build letters, so that they may have their favourite band come to visit. Lastly, Reynolds's story has shown how important it is for all in that society to contribute to the community, be it through repairing clothes, or through turning into a dragon to bring the rain. Further, they have each shown that they struggle with environmental issues. In 3.3.2 one sees how the cold winter storms are dangerous and causes deaths among the homeless. In 3.3.3, in contrast to the cold winter of Boston, Cooper Pedy struggles with dangerously hot temperatures and rays from the sun, along with a lot of wind in the desert area it is placed in. The community of 3.3.4 also struggles with a dry environment and a drought that makes it difficult to harvest the soil. As such, in all the stories the environment is problematized (Goga et al, 2018). Also, each of the stories, in their way, confirms the theory of social ecology (Bookchin, 1996) that social problems are also ecological problems. Without these environmental issues, the social issues of these stories might not have occurred. As such, one may say that the environmental issues enforce the social issues are not as closely attached as in the other stories, instead of the focus of the social issues the focus is on misassumptions. Though the environmental issues directly affect society there and may be the reason for these misassumptions in the first place. Hence, this shows that all these short stories show how environmental issues and social issues are closely linked.

4. Summary and concluding thoughts

This thesis has presented several different perspectives on solarpunk to highlight both the societal and environmental aspects of the genre, through looking at nine short stories within the genre solarpunk. The goal has been to answer the overarching question: *What type of societies does the literary genre of solarpunk present and how do these societies relate to the environment and environmental issues?* with the help of answers to the research questions a-f as presented in 1.1. To answer these questions, I have performed a close reading of nine short stories with a focus on the narrative elements plot, character, and setting, and again analysed this material within the theoretical framework of deep ecology, social theory with an emphasis on social ecology, and posthumanism as described in 2.2, 2.3 and 2.4. The analysis and discussion of the nine short stories have provided me with some findings, relevant to the questions of this thesis. In this chapter, I will provide a comprehensive representation of these findings, as they have been presented through both the discussions and the summaries of the subchapters 3.1, 3.2 and 3.3.

Some of the central findings of this thesis with regards to the research questions are for one, that place matters. All three groups of short stories as in 3.1, 3.2 and 3.2., have shown that place is important and that it impacts the societies that exist within the different short stories. In most stories, the environment is also problematized and either causes or enforces social issues. This is especially evident from chapter 3.3, through the story of "The Boston Hearth Project" where the social issues reinforce the environmental issues that exist in Boston. As shown in 3.2, posthumanism is portrayed as a plausible solution to environmental problems and is generally portrayed in a positive light, especially in "Solar Child", though in "Watch out, Red Crusher!" one also sees how the posthumanistic traits may have both positive and negative consequences. Further, all societies appear to be liberal in terms of e.g., gender and hold high the ideal of treating each other respectfully. However, one sees from some of the stories, like 3.3.2 that the characters are not afraid to do questionable actions, such as stealing a building, if the consequences may save lives.

As seen from this selection of findings, one may start to understand what kind of societies the literary genre of solarpunk generally present. They have distinct value systems such as a liberal view in terms of new technology, the structure of a community and of gender. The environment and/or environmental issues are central to the societies as the societies are dependent on the environment. In some stories, the people cope with a challenging environment, in others, one changes the way of the human and yet again in other stories one decides that it is best to leave earth for the unexplored space. What is central in all stories is how important it is for the individual to contribute or be part of a community, even in the short story "Pop and the CFT" one may state this, as Gabe willingly pays the tax.

This last remark, that each individual wants to contribute or be part of a community, may be an interesting aspect to bring into the education of children or youth. I believe several of the short stories have themes that are relevant and may be exciting for, especially youth, to read and discuss. As mentioned in the beginning, the stories may for instance be used in the classroom to talk about possible ways to deal with the environmental issues that the world face now, and in the future. Fiction holds immense possibilities for showing how ideas may play out, through a fictional reality, which may inspire the reader in real life. Also, fiction may challenge the world view of the reader and hence help educate the reader and show that different perspectives exist in the world.

To conclude this master thesis, I will repeat that while this thesis has tried to provide a thorough overview of some central characteristics of the solarpunk genre, there remains a lot more to be said on the issue. The short stories described in this thesis have more to offer than I have drawn from them here, and there are a lot more solarpunk short stories that could have been analysed instead of the selection here made. Therefore, more research on the subject is required. This thesis has been written within the field of Children and Young Adult literature, and hence I have tried to show that even if the stories not stated as children or YA literature, that does not mean that it is not relevant for them. I hope the reader has found this thesis inspiring, and that the reader, therefore, takes the time to explore new genres, such as solarpunk, as they may open doors to entirely new worlds.

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