



Challenging The Status Quo of Sustainability

Permaculture fostering human-nature relations and re-enchanting nature in Uppsala

Owais Syed

Independent project • 30 credits
Swedish University of Agricultural Sciences, SLU
Faculty of Natural Resources and Agricultural Sciences
Department of Urban and Rural Development
Agriculture Programme - Rural Development
Uppsala 2022



Challenging the Status Quo of Sustainability. Permaculture fostering human-nature relations and re-enchanting nature in Uppsala

Att Utmana Status Quo för hållbarhet. Permakultur som främjar relationer mellan människa och natur och åter-förtrollar natur i Uppsala

Owais Syed

Supervisor: Linus Rosén, Swedish University of Agricultural Sciences, SLU, Department of Urban and Rural Development

Examiner: Katarina Pettersson, Swedish University of Agricultural Sciences, SLU, Department of Urban and Rural Development

Credits: 30 credits

Level: Second cycle, A2E

Course title: Master thesis in Rural Development, A2E - Agriculture Programme - Rural Development

Course code: EX0890

Programme/education: Agriculture Programme - Rural Development

Course coordinating dept: Department of Urban and Rural Development

Place of publication: Uppsala

Year of publication: 2022

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Online publication: <https://stud.epsilon.slu.se>

Keywords: Permaculture, Sustainability, Views of Nature, Enlightenment & Re-Enchantment

Swedish University of Agricultural Sciences
Faculty of Natural Resources and Agricultural Sciences
Department of Urban and Rural Development
Division of Rural Development

Abstract

To understand the current situation when it comes to the environmental challenges humans and nature are facing in 21st century, I think there is a need to look back in history to search for root causes. In order to understand how historically, views of nature and human-nature relationships emerged impacting our current age, e.g., how enlightenment and modernity led to a dis-enchantment of nature. The thesis also explores current views of nature, to see if there are any connection between these. The aim of this thesis is to gain a deeper understanding if permaculture might contribute to a change in view of nature, through studying a permaculture movement called Ultuna permaculture in Uppsala, Sweden. The group consists of students and is active in an area called Ultuna, where one of Swedish University of Agriculture Science main campus is located. The views of nature will be explored through observations and interviews with the board members of Ultuna permaculture and paid extra attention to if and how they have been impacted by their engagement with permaculture. These views in turn influence how humans relate to nature and approach her, and how their view of nature impacts their view on sustainability. Findings show that for some members, whom already have a relationship to nature due to much time spent in nature or being on a quest to address issues of climate change, permaculture becomes a way to practically do something about it. To work towards something that in common day term is known as 'sustainability' or 'sustainable development', these terms are not viewed as something positive in the movement or defined in term of permaculture. There are also views of spirituality, and nature being something more than the observable, reminding of the idea of enchantment. Concluding that permaculture is re-enchanting nature in Uppsala, beyond the notion of sustainability.

Keywords: Permaculture, Sustainability, Views of Nature, Enlightenment & re-enchantment

Sammanfattning

För att förstå den nuvarande situationen när det kommer till de miljöutmaningar som människan och naturen står inför under 2000-talet, tror jag att det finns ett behov av att blicka tillbaka i historien för att söka efter bakomliggande orsaker. För att förstå hur historiskt, syn på naturen och relationer mellan människa och natur växte fram och påverkade vår nuvarande tid, till exempel hur upplysning och modernitet ledde till en avförtrollning av naturen. Uppsatsen utforskar också aktuella natursyn, för att se om det finns något samband mellan dessa. Syftet med detta examensarbete är att utforska om permakultur leder till förändring i natursyn genom att studera en permakulturrörelse vid namn Ultuna permakultur i Uppsala, Sverige. Gruppen består av studenter och är verksamma i ett område som heter Ultuna, där ett av Sveriges Lantbruksuniversitets huvudcampus ligger. Synen på naturen kommer att utforskas genom observationer och intervjuer med styrelseledamöterna i Ultuna permakultur och ägnas extra uppmärksamhet åt om och hur de har påverkats av sitt engagemang i permakultur. Dessa synsätt påverkar i sin tur hur människor förhåller sig till naturen och närmar sig henne, och hur deras syn på naturen påverkar deras syn på hållbarhet. Resultat visar att för vissa medlemmar, som redan har en relation till naturen på grund av att spenderat mycket tid i naturen eller är på jakt efter att ta itu med frågor om klimatförändringar, blir permakultur ett sätt att praktiskt taget göra något åt det. För att arbeta mot något som i dagligt tal är känt som "hållbarhet" eller "hållbar utveckling", ses dessa termer inte som något positivt i rörelsen eller definieras i termer av permakultur. Det finns också synpunkter på andlighet och att naturen är något mer än det observerbara, som påminner om tanken på förtrollning. Studien visar att permakultur åter-förtrollar natur i Uppsala, bortom idén om hållbarhet.

Nyckelord: Permakultur, Hållbarhet, Natursyn, Upplysning & åter-förtrollning

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Abbreviations

SLU	Swedish University of Agricultural Sciences
UPK	Ultuna Permakultur
PDC	Permaculture Design Certificate

1. Introduction

Enlightenment can be argued to have laid the foundation to our modern scientifically advanced society that made it possible for industrial revolution to take shape, together with colonialism leading to globalization (Nightingale et al. 2019). These developments also brought with it certain challenges that both humans and nature are facing e.g., environmental, mostly due to human actions (ibid). *Permaculture* emerged as a proposed solution to the problems posed by modern industrial development (Leahy 2021) to lead a more *sustainable* development. The foundations of permaculture were laid by Bill Mollison and David Holmgren (1978) in Australia with their book *Permaculture One*. In this book there is an emphasis on replacing annual crops with perennials to create an integrated evolving system of perennial or self-perpetuating plant and animal species useful to humans. The term comes from the two words ‘permanent’ and ‘agriculture’-indicating an agricultural system that can be carried out in perpetuity - an idea usually expressed now by the term ‘sustainable’ (ibid). In the book they also present how this should be carried out through giving certain principles of using diverse plants assisting each other, creating an ecosystem.

Later Bill Mollison wrote *Permaculture: A Designers' Manual* (1988). This book went further to include other dimensions to the philosophy of permaculture, where now it included all aspects of concern, for a society to be sustainable, in perpetuity, with that meaning that there is a harmony and balance between *humans and nature*, a loop that leads to regeneration, rather than degradation. These ideas and thoughts were spread through international tours, and there were educational courses with Permaculture design certificates (PDC). The main coursebook of *PDC* was *A Designers manual*. The manual developed as well as the updates, the manual was later more inclusive of grain production due to the advancements in technology. Later updated editions went on to broaden the spectrum of what permaculture now also included in its addressing ‘the harmonious integration of landscape and people providing their food, energy, shelter and other material and non-material needs in a sustainable way’ (Leahy 2021: 08) This includes every kind of technology, energy, metalwork, ceramics, digital IT, if these can be done without harm to humans and nature (Ibid).

The philosophy and practice of permaculture has since spread all over the world. It has however taken different forms and shapes in different regions, even though

the same or similar principles are applied, the intentions and reasons can differ for the practitioners and communities practicing permaculture. It is often described as a movement (Lehay 2021). This thesis studies a permaculture movement in Uppsala, Sweden called Ultuna permaculture lead by students. Ultuna is on the outskirts of Uppsala, where the city fades and the more rural landscapes start to emerge. The people who have initiated this project are students, initially two brothers. Today, almost three years after its beginning, it's a flourishing garden, on what previously was a grass lawn, between some buildings, on the outskirts of Ultuna. In one article written by one of the brothers, he writes that they exist to challenge the status quo of urban development (cf. Whitman 2021). There is an emphasis on that humans need to change the ways we perceive the world. Away from separate units and isolated systems that are found in the cities where there is a disconnect between institutions, humans and nature, humans and humans, and towards context, networks and relationships between institutions, people and nature. In other words, away from a narrow and mechanistic worldview and towards a more holistic worldview and a balance between humans and nature (ibid). Ultuna permacultures garden is between the city of Uppsala and the rural area of Uppsala. It is also here, where one of the main campuses of Swedish University of Agricultural Sciences is located.

Research on permaculture is multifaceted, from it suggesting that it fosters human-nature relationships (Pamela Richardson-Ngwenya 2019), permaculture being a worldview (Morel et al. 2019) or being something that can transform urban landscapes (Wasiliu 2020). This thesis, however, attempts to deeper examine if the practice of permaculture contributes to a change in the *view of nature* among its practitioners. This is important to study since our view of things impacts how we relate to it, in this case how we humans relate to nature, specifically how we cultivate it for production of food and the relationships that emerges from it. Since we are facing challenges in humans' relationship with nature where we are impacting the environment of the earth in a negative way (Nightingale et al. 2019), there is a need to further study this on different levels and in different contexts, in order to properly address the issue. This I do believe is an important aspect to inquire when addressing sustainability and sustainable development. Since research suggests that a separation between humans and nature, have contributed to environmental destructions of 21st century (Nightingale et al. 2019). One reason for this is also argued to be the dis-enchantment of nature that happened due to ideas that emerged from enlightenment and modernity (Jenkins 2000). An enchanted nature would mean that nature is more than mere physical or material (ibid), and having a life of its own, at the same time connected to all life. In some worldviews, nature would also be seen as connected to spiritual dimensions (Nasr 1997).

This thesis examines the view of nature that is present among the active board members of Ultuna permaculture and its relation to their engagement with permaculture, and their views on sustainability. This to further explore how and to what extent permaculture initiatives are creating new human-nature relationships that can be playing a key role in transition forward towards a society where human-nature relationships result in regeneration and not degradation of the earth. Is it possibly also leading to *re-enchantment of nature*?

This is important to examine because there is a need to gain deeper insight in ways of practice that are proposed as a solution for the challenges that our world is facing like environmental degradation, in this case through permaculture.

1.1 Aim and research question

The aim of this thesis is to gain a deeper understanding of how permaculture might contribute to a change in view of nature, specifically a re-enchantment of nature (see chapter 2.1) and how it relates to the sustainability narrative emerging from the enlightenment.

My overarching question is:

Does permaculture transform peoples' view of nature and their relationship to it as a consequence of being involved in a permaculture project?

The question is approached to answer through a case study done examining the view of nature held by the board members of Ultuna Permaculture and their understanding of sustainability

This question is divided into the following sub-questions that are:

- Has Ultuna permacultures board members' view and relation to nature changed/developed due to their engagement in the practice of permaculture?
- How does board members view of nature impact their views on sustainability?
- Is permaculture contributing to re-enchantment of nature?

1.2 Structure of thesis

After this introduction and the aim, the background highlights some insight into the historical reasons for emergence of a view of nature and human nature relationships that have led to current environmental challenges. Then a short background to the developments of sustainability and permaculture is presented to give the reader adequate understanding on the topic the thesis tries to carry out the research on. Then the theoretical framework that has been the lens from which the empirical material has been analyzed through is presented. Thereafter, the method chapter follows, with sections on case study, interviews, reflexivity and ethics. This is followed by an findings and discussion chapter on the empirical material. Lastly, there is a concluding summary of the findings.

1.3 Limitations of the thesis

The study is focused mainly on the geographical area of Uppsala County, specifically an area called Ultuna, where one campus of the Swedish University of Agricultural Sciences is located and the garden of Ultuna permaculture. The focus of the research is however on the board members who are all students and have been engaged in the Ultuna Permaculture project, changes in their view of nature and their understanding of sustainability. This has been done since it's beyond the scope of this study to capture all dynamics of the project and its impacts. Permaculture is also seen as a global movement (Lehay 2021), with local projects that have been realized around the world (ibid). Studying one local initiative does not necessarily say anything about another permaculture initiative, it can however give insight into how it is practiced in a specific place by i.e., by students in Ultuna and aspects of change it is contributing with. Something that has been left out are the "Ambassadors of Ultuna permaculture" that is their social media group of people that support them, either wanting to have a closer view of their development or getting information about when they can help. Due to time limit, and an ambition to do an in-depth study, I decided to focus only on interviewing the board members of Ultuna permaculture.

2. Background

To understand why there is a need to foster deeper human-nature relationships we must explore some historical reasons that could be seen as reasons why a separation between humans and nature took place, and what the consequences of such a separation were. This section presents some historical reasons that became the foundation for our current development paradigm that is still prevalent today and is contributing to many issues that we as humans are facing in our relation to nature, e.g., the environment. Permaculture is proposed as one narrative of sustainability that has been suggested to foster a deeper relationship with nature among its practitioners, something that is the primary purpose of study for this thesis.

2.1. Root causes: an intellectual history

Historical record shows that concerns over human impact on earth extend back well over 2000 years and different explanations and understandings of why human habitats decline (Nightingale et al. 2019). The Greeks attributed environmental degradation to moral and political decline within a society that failed to live in harmony with its landscape (ibid). Since development is a continuation of events, and are usually a result of previous actions, it can be wise to also investigate the history that could have influenced an outcome. There might also be solutions and theories of solutions to current problems that were also present before in history. There are generally many factors and incidents in history that have had an impact on a society's development. The enlightenment era (17-18th century) is often referred to as an impactful period that laid the foundation for the modern west, that can today be considered as the global order giving rise to the environmental issues that came with the modern development of the enlightenment worldview (Nightingale et. al 2019). Two integral aspects of the enlightenment worldview are the Newtonian/mechanistic worldview and the Cartesian worldview (Helmfrid 2007). It is not a hidden fact that Newton was a religious person and had a taste for mystical sciences such as alchemy and wrote on metaphysical matters (Nasr 1997). However, his works on physics came to dominate and become a strong foundation in the scientific revolution and its worldview that arose during the enlightenment. The mechanistic physics of Newton in the sphere of scientific worldview resulted in a mechanistic conception of the universe and totally away from holistic and

organic interpretation of things. Another strong element in the sphere of scientific worldview of enlightenment was Descartes method to reach ‘certainty in knowledge’, through reducing the rich diversity of external reality to pure quantity and philosophy of mathematics. The problem was not these ideas but making these paradigms the dominant source of legitimate knowledge of the objective world (ibid). Descartes also laid the foundation for science to deal with the inquiry of the physical/material aspects and leaving the spiritual matters like meaning and intentions to the church (Helmfrid 2007). This Newton-Cartesian development led to a separation between the sacred and profane, also resulting in the emergence of a secular worldview (ibid), a world view devoid of anything spiritual (Nasr 1997).

The era of enlightenment is seen as an era that emphasized rationalism and science that with time led to establishing itself as a hegemonic epistemological authority, excluding other epistemologies (Jenkins 2000), that could be valid or of value (Helmfrid 2007). This meant that views on human-nature relationships that had been present before became marginalized, or with time forgotten. Subsequently, human-nature relationships were shaped in the shadow of enlightenment. From the enlightenment emerged a view of separation between humans and nature (Nightingale et. al. 2019). Similar views were however already also present in pre-enlightenment worldviews. In the Abrahamic traditions (Judaism, Christianity & Islam) there is a certain separation between humans and the rest of the creation (Helmfrid 2007), however the views on nature found here are varied. Enlightenment however made this separation from a mere materialistic perspective, the concept of sacred was eliminated (ibid). The concept of nature being sacred are mostly found in indigenous traditions, eastern traditions and can also be found in some interpretations of the Abrahamic tradition, e.g., the more mystical interpretations (Nasr 1997). The nature being sacred are views that are still found today among various cultures, religions and traditions.

2.1.1 The Enchanted nature

Modernity could be argued to have been borne out of the enlightenment era and is seen as a period that some argue led to the disenchantment of the world, and nature (Jenkins 2000). In a disenchanted world, everything becomes understandable and tamable, even if not for the moment, understood and tamed. Increasingly the world becomes human-centered and everything that is not human becomes more impersonal. Pre-enlightenment worldviews are on the other hand considered to be more enchanted where there was a sense of magic, moral, cognitive and integrative unity (ibid). Here we could say that the living connection felt between humans that gives us a sense of a deeper way of being with each other than mere our physical and material existence, was also acknowledged among humans in their relationship with nature. Nature was more than a mere physical thing, and more a living thing

connected to human beings and there was a moral responsibility to respectfully approach it. By enchantment here is meant the understanding and experiences of the world in which there is more to life than the material, the visible or the explainable; in which the philosophies and principles of reason or rationality cannot by definition dream of the totality of life; in which the daily norms and routines of linear time and space are only part of the story; and in which the collective sum of sociability and belonging is elusively greater than its individual parts (Jenkins 2000). This means that the value of the integrated reality of things on material and deeper levels are more than one individual thing's existence. Even the interactions that happen are valuable, but from a perspective where reality is enchanted, they have a larger effect and impact than the direct observed result of an action.

The worldview of cartesian dualism laid the ground for the separation between the material realm and the spiritual realm that pre-enlightenment worldview mostly saw as integrated in differing degrees (Nasr 1997). This was later also joined with the Newtonian worldview that further mechanized the cartesian material view of humans and nature. Subsequently, there was an emergence of a scientific inquiry tradition that emphasized on the material realm, and excluded the spiritual realm, with spiritual meaning a deeper existence present in and beyond the material realm. The consequence was an over emphasis on the observable and measurable in the material realm. This subsequently led to a view of govern, control and dominate nature. There was a denial of or almost to no consideration given to the spiritual realm, that could be argued is also present in the material realm, e.g., in the worldviews of indigenous and religious traditions (ibid).

The mentality of domination over nature through technology to cater human needs has led to many environmental issues. That could be argued to a large extent due to the view of nature that emerged during enlightenment (Nasr 1997), however, also interpretations of the Abrahamic traditions that tend to interpret their tradition more in the outward practices, rather than inward feelings and spirituality e.g., the puritanic and protestant interpretation. However, these have had less direct impact on the development discourse since enlightenment. The development narrative has long been carrying this worldview of enlightenment. There has in the 20th century been an acknowledgement of the damages that have been done by our modern civilization whose cradle was the enlightenment. This has led to the need for more sustainable development (ibid).

2.2.0 The narrative of sustainability

Since the emergence of the insight about the dire need for humans to lead a development that is sustainable for humans and environment, there have been many theories and suggestions on how this can be attained. Sustainability has been on the

global agenda since the world nations gathered at Stockholm 1972, Rio de Janeiro in 1992 and Kyoto 1997 to address these issues (Nightingale et al 2019). Since then, many meetings have been held on the topic of ‘sustainable development’ where many countries, organizations, companies, individuals have been involved in contributing to make development more sustainable (Helmfrid 2007). Sustainability and Sustainable development were the terms that came about as a consequence of this increased awareness and the dialogues between different nations and actors. Sustainability is closely related to the practice of sustainable development, which can be understood as attempts to operationalize, or put into effect, ideas of sustainability (Nightingale et. al 2019). Sustainable development programs seek to govern or change relations among economies, societies, and ecologies in order to achieve sustainability. This has been the dominant discourse defining the agenda of the vision for future development (ibid).

There are many narratives of sustainability, including different approaches on how it best can be attained. Permaculture is one approach to sustainability (Richardson-Ngwenya 2019) proposed by Mollison and Holmgren (Leahy 2021). Initially proposing a sustainable model for agriculture (Mollison & Holmgren 1978), the theory has since then been developed by the founders and has now become a broad umbrella term addressing all issues of society impacting humans and environment (Mollison 1988; Holmgren 2018). What distinguishes ‘permaculture’ from ‘environmentalism’ is that permaculture is a design system for sustainability, drawing on the insights of systems theory (Leahy 2021), with a motto of “care of earth, care of people, return of surplus” (Richardson-Ngwenya 2019). The deeper understanding in the permaculture philosophy is that natural and cultural aspects are connected on a deeper level, also humans and nature. Through its practical engagements, there is an understanding that it fosters a structure of mutually dependent and integrated socio-ecological relations, whereby humans are positioned as participants in a system where other parts of that system (animals, plants, waterways, etc.) also have significant rights and roles to play. Humans are seen less as managers and more as coworkers, with a vision of generating a system of health and abundance from which all (humans and nonhumans) benefit. Permaculture therefore requires a shift in sustainability thinking away from that commonly associated with modernizing tropes of sustainable development agendas that are often criticized as being the product of the enlightenment worldview itself (ibid pp. 205). There is a view in the dominant discourse of sustainability and sustainable development that humans and nature are separate (Nightingale et al. 2019), and nature needs to be tamed and quantified in order to make money from it, and if not using it for capital gain there is a view that the ecosystem is there to serve us humans, hence the frequent use of ecosystem services. Socionature challenges this framing that has emerged from enlightenment. A Socionature view

ontologically shifts the relationships between humans and the environment, joining the analytically and imaginatively. A view that human societies have no meaning without their interrelations with the rest of the environment (ibid).

2.2.1 Previous and further research on permaculture

Previous research has been done on various permaculture initiatives around the world focusing on different aspects. Pamela Richardson-Ngwenya (2019) studied permaculture initiatives in Zimbabwe that are creating alternate discourses of sustainability than that of the state. She observed that people in rural Africa adopted some permaculture practices as “traditional” rather than viewing them as foreign ideas. There was also a sense of connectedness to a broader global network, at the same time there was a focus on local development congruent with the place and its resources. There was also a good use of modern technology in the use of the internet and social media. This also led to interconnectedness, something that permaculture initiatives thrive on, since there is an aspect of knowledge sharing that is a central cornerstone in its practice (ibid).

Permaculture is proposed as a management model to innovate through to reach sustainability (Rhodes 2015). Morel et al. (2019) describes permaculture as a decentralized movement that disseminates a distinct worldview, design system and a set of practices. Its central concept being that humans can reduce or replace energy and pollution-intensive industrial technologies, especially in agriculture, through intensive use of biological resources and thoughtful, holistic, design patterned after natural ecosystems (ibid). There is also literature suggesting that permaculture could be used as a method for sustainable urban planning (Kennedy, 1991) and how permaculture is bringing socio-ecological transformation in urban settings in India (Wasiliu 2020). There is also a critique that permaculture, like many other environmental movements, fails on the fronts of inclusion and diversity of different ethnic backgrounds, with a dominance of white/Caucasian people (Ferguson, 2015). One explanation to this is that it may be due to its origin being in the global north (ibid). There has been substantial research done on permaculture initiatives around the world. However, since the projects take different shapes, despite following the same principles, its emphasis on taking consideration of local context makes every project and initiative unique. I also noticed that much of existing research focuses on the practice of permaculture and how it is bringing change from a food production and social sustainability perspective, focusing less on the individuals as much in these initiatives. I argue there is a need to further study how and to what extent the phenomenon of permaculture is transforming the view of nature among practitioners of permaculture and subsequently fostering human nature relationships. This in order to see if permaculture is a possible remedy to the

disenchantment of nature resulting from enlightenment and modernity. Could permaculture possibly contribute to the re-enchantment of nature?

3. Theoretical framework

To explore if permaculture contributes to a change in the view of nature among its' practitioners and fosters new human-nature relationships, we first need a theoretical understanding of what we refer to as 'nature'. In this section I will elaborate three views on nature presented by Helmfrid (2007) where she writes it from a first-person view, that I have translated from original Swedish text and then explain how it will be applied to study the view of nature among permaculture practitioners. These three spheres will give me the lens to see among three different views of nature that can be summarized in these three spheres that carry their views on nature and that subsequently become foundations for different narratives of sustainability. The purpose, in other words, is to analyze to what extent Ultuna Permaculture sits within or outside certain sustainability discourses and human-nature relationship as understood in the conceptual literature.

The basis for this reasoning is that there are different narratives of sustainability (Dryzek 2005), that can be traced back to different ideas in history and way of seeing the world and deriving knowledge from certain epistemological references. Depending on how we see the world also affects how we model our theories and ways of suggesting ways to approach sustainability and sustainable development. A theory consists of a thesis, terms, models, and possible interpretations and explanations (Kajiser & Öhlander 2011). Most social theories are in one way, or another linked to a materialistic, deterministic and mechanistic world view (Wendt 2006) apart from some poststructuralist theories. When addressing the topic of permaculture and sustainability, this study attempts to be aware of the discourses borne out of enlightenment and western ideals for growth and development, still found in many discourses of sustainability and sustainable development. Theories are usually connected to a tradition of inquiry, that in turn is borne out of worldviews and epistemologies. Since the ambition when answering my research question, is to see from beyond the established views that has resulted in the disenchantment of nature, that has consequently resulted in environmental challenges, this awareness plays a central role in this study.

In my analysis I build on Helmfrid (2007), who presents three different perspectives of the view of nature found in human societies today. The first one can be seen as associated with the enlightenment paradigm, the second is more a realization about the issue created due to the first one, and an attempt to change the

course of development. The first two spheres are closer to each other. The third perspective, the collective body, can be seen as more inclusive of worldviews that stand in contrast to the first two spheres. Through these three spheres, the collected data will be analyzed to see what views of nature are present in the permaculture group.

The first view of nature Helmfrid (2007) calls *the unending source*. This view of nature, she argues, has been the more dominant past century and has driven the development agenda and is influenced by the discourses that emerged from enlightenment, i.e., the reductionistic scientific view and dominance over nature narrative. Permaculture carries a critique towards the reductionistic discourse of enlightenment (Lehay 2021). Here as Helmfrid (2007) describes, there is a difference between the nature of the beings of Humans and that of the being of animals and plants. *“Humans are rational and can separate between good and evil. Humans bear the capacity to have ethico-moral agency and can put value on nature. The creators of civilization, progressed through ages, creatively innovated technology. The wonders of the agricultural landscapes are made by humans. Nature is there as a robust resource that has the ability to produce, cope with threats and recover, and offer humans its unending natural resources for their use (for food, infrastructure, economy, technology etc.). Our knowledge gives us the ability to learn more about the resources available, so we can extract them, like oil, and use them for our cars and industry. If for instance, the resources end, we will find new ones and replace them. We can replace the lakes with swimming pools. In the discoveries of the new scientific findings, we may find what we have not yet discovered. Maybe there is more information in the most minute particle in nature, that carries information, that holds the answer about nature, so we can better innovate and create what we do not yet know is possible”* (ibid, pp. 10-11).

The second sphere of view of nature is called *the fragile eternity* machine. This sphere's view of nature contains many elements that can be seen present in permaculture, i.e., its emphasis on the need to live in harmony with nature. In this sphere Helmfrid (2007) presents a view of nature as an ecosystem that has limits and can be fragile. *“There are certain limits to extraction of the resources, and a possibility of the system to collapse and turn into something else from its original state. We need to act respectfully and carefully. The sun's rays and the creation of energy through chemical processes of nature produce and sustain life. The economy needs to adjust to nature's laws and be in harmony with them. The process of recycling and reuse of resources are crucial and cater and care for nature's systems to thrive. This is the great challenge humans face, how to start living in harmony with nature again. Changes in economy, technology and lifestyle are needed. We need to become more efficient, and time is running out. There is not one solution, all options need to be considered. We need to focus on the real needs of human beings, and not that of what the consumer society tells us. There is a sense of the*

need for global justice and the insight of the environmental destruction done in the past centuries after the industrial revolution by human beings, unparalleled from any time in history. Here there is the view of humans being the caretakers or managers of nature, an idea also found in the bible” (ibid pp. 12-13).

*The third sphere of view of nature is called **the collective body**. In this sphere Helmfrid (2007) presents a view where there is an understanding that humans have never been separated from nature. Our bodies carry material as old as the universe itself, billions of years old. We are small specks in the totality of creation. Basic science can prove that humans are one with nature and dependent on nature. What humans do impacts other beings, which in turn impacts humans themselves. Herbs from nature heal us, we are intertwined. Our modern intellectual and rational mind often becomes a barrier for us experiencing the oneness with nature. In many indigenous and cultures near to nature, there has been an innate understanding of this oneness and deeper connection between humans and nature. They communicated with nature’s beings, a communication that has been cut between modern humans and the olden nature. How we relate to others, define who we are “to become us, we have to be the other”. Deep down in humans, there is no “I”, we are one. Science has now come to certain conclusions that have similar patterns to that of some of the old indigenous traditions. Modern science describes living organisms as vibrating systems, and quantum mechanics describes the world as “a fabric of floating whole”. Everything in this fabric of whole is equal, there is no given right to anyone to manipulate the other for one’s own personal gain (ibid pp 13-15).*

Helmfrid’s three spheres on views of nature allow me to probe how permaculture practices relate to different human-nature relationships, and to what extent peoples’ involvement in permaculture practices develop other views of nature as an effect of their engagement. However, these are generalized categories, based on Helmfrids’ (2007) fifteen years of experience dealing with the question of sustainability and the relationship between Humans and Nature. And she clarifies that an individual can see themselves in more than one sphere. It is hard to capture all the ways humans view nature and their relationship with it. However, due to the common understanding of premises, worldviews and knowledge acquired in a context can give rise to similar views of nature. The information and experiences we have result in understanding and knowledge we produce, our epistemology gives life to our ontology, and sometimes, vice versa. This relates to my study in the examination of the views of nature among the permaculture movement and how the context and the practice contributes to a change in their views of nature, and what sphere or spheres these views can be seen to belong to.

4. Methodology

This chapter show how I go about to produce knowledge, what methods I find appropriate to use, how to shape and use these to collect empirical material to generate knowledge through it. In order to answer my research question, I will be doing a qualitative case study. The study of a single case or an array of several cases are needed to the progress of social sciences (Feagin et al. 1992). This case study will be based on interviews with the board members of Ultuna permaculture and observations on their movement. Some elements of phenomenology will also be integrated in the process, i.e., understanding the view of the active members of Ultuna permaculture on nature. The aim was to explore individuals' lived experience over a period and getting to know these individuals in a specific context and their stories about their lives order to examine human-nature relations in the context of Ultuna permaculture and their views on sustainability. To further see if permaculture is leading to re-enchantment of nature.

4.1 Case Study

When carrying out the inquiry strategy of case study research (Creswell & Creswell 2018), it is important to set certain boundaries and present a context (Orum 2015). Hence it will be needed to explain how such study will be carried out and the nature of it (Ibid). This will be a case study of a single place, and more specifically a study that studies individuals in that particular context, to explore how and if that context contributes to certain changes in these individuals' views of nature. This will be done through studying Ultuna permaculture which is mainly a student movement that is working with the practice of permaculture, mainly in Uppsala, Sweden. Data collection for the case study will be done through interviewing and observing the board members. I also consider this case something Orum (2015) calls *the prototypical case*. This type of case can also be a model of how a similar phenomenon can be studied in the future in a range of cases whose character is similar to that of the prototypical case. This is mainly in light of the entry point of analysis when studying the phenomenon and bringing to light the views of nature and how that is impacting a larger change, e.g., re-enchanting nature again?

4.1.1 Interviews

Through the semi-structured, in-depth interviews, I attempt to gain insight into the board members views of nature as well as some aspects of their journeys before and after their engagement with permaculture.

Research interview is where knowledge is constructed and produced, in the interaction between the interviewer and the respondent (Kvale & Brinkmann 2019). To gain a deeper knowledge about the practice of permaculture this method can be fruitful. Since the research interview is about understanding how the respondents perceive and understand things from their lived perspective, it will be a good method of choice, since that will be instrumental in answering my research question, specifically how they view nature.

All interviews took place on zoom, except one. The zoom interviews went well, and since everyone is used to this format of communication after the pandemics, I think it wasn't any specific barrier. Some questions were sent to some of the board members a day or two before. This so they could get some time to reflect on some questions, they did however look just some time before the interview they told me. I still had some follow up questions that still made it semi-structure format in the interview.

Even though I had certain thoughts that my telling too much could have any alteration in the board members due to their knowing. Thus, I initially chose not to send the questions. Later I sent the questions to four of the people I interviewed. I don't think this was unethical, not sending to the two other people (Max & Swenja). This gave me as a researcher a view into how the nature of the interviews can vary when asking questions with some being prepared and others less. All were however briefed. And since the two interviews took place later than the four previous, it wasn't on purpose, but mere forgetfulness. I think sending the questions was good, since some questions could need some time of reflection. This I think had a positive effect since they could reflect on some of these questions, in order to give thought through answers with depth.

To those I forgot sending the questions due to a gap in carrying out the first four interviews and the two later ones, but only conveyed an idea what the interview topic was about to the two, I think this had an impact on their answer to some questions. Like, "what is nature for you", or "how would you define nature?", questions that can need some time to ponder over. I did however get adequate material through the interviews from all six board members of Ultuna permaculture. I will do a short presentation of the six board members here next:

William is one of the board members who is also one of the initiators of Ultuna permaculture project and is on his third year in the agronomist program in rural development at SLU. He was born and raised in a suburb in Stockholm.

Max is Williams elder brother and they initiated Ultuna permaculture together, and is currently doing his Ph.D. in environmental sciences, in which he has a master's degree in from SLU. He was also born and raised in Stockholm.

Rana is a fourth-year landscape architecture student at SLU who has been active in the project since the very early days of its initiation. She was also from a suburb in Stockholm where she was born and raised.

Sanaz was born in Iran and came to Sweden when she was 20 years old. She lived in Dalarna when she came to Sweden and is also fourth-year student in the landscape architecture program at SLU.

Daniel was born and raised in Örebro and is on his second year of the agronomist program in rural development at SLU. He has been active in the permaculture project since early days of his study.

Svenja is originally from a small city in Germany and is currently doing master's in environmental communication and management at SLU. She is the newest of members among these six board members.

The interviews were done in Swedish and were later translated to English during transcribing. I also asked the respondents if the information from the interviews could be used for my research and the mentioning of their name. Therefore, with the permission from the informants, their real names have been used in the thesis report.

In this approach, there are aspects of phenomenology. Phenomenological approaches in a non-philosophical general way have been predominant in qualitative research (Kvale och Brinkman 2019). In this study the inspiration from phenomenology contributes to understanding the practice of permaculture and its impact on the view of nature among the active members of Ultuna permaculture. While the study explores a process in the framework of a case study, the study also describes the essence of the experience, which can be considered a phenomenological inquiry. Some inspiration was taken from the phenomenological tradition of inquiry, this gave me guidelines to choose the participants for data collection, where 3-10 individuals are an appropriate number (Creswell & Creswell 2018), subsequently six people from the board were interviewed, three male and three female, all in their 20's. In order to be able to gain detailed experiences with nature and carry an in-depth analysis in my case study.

4.1.4 Observations

In an observation, the researcher can participate in a case study as an observer participant where the role of the researcher is known (Creswell & Creswell 2018). This gives the researcher a firsthand experience with the participants. More information can be recorded that concerns what is being studied. The observation took place in one of the workshops that was held by the initiators of the project and a webinar held by the Ultuna permaculture. This gave me the opportunity to gain insight into how they are putting permaculture into practice beyond just gardening, e.g., in the relationships with each other. My partaking in the workshop and presenting the reason why I was there also led me to create relationships with the board members which hopefully created some trust.

Observations can give information about something that is given and obvious for people that they don't even think about mentioning in an interview (Pripp & Öhlander 2011). I also availed this opportunity to observe the group dynamic and different patterns that take place in the project, among the members, their relationship with each other. The observation has partly been complementary to the main data, that are derived from interviews. Observations and interactions have been an important aspect and the interactions have been both with a purpose of research and create relationships. These observations contributed to me seeing how engaged the members are in the movement and was important since the aim of this study was to study how their engagement in permaculture impacts their relationship to nature. How the group context looks since it is in and through this context the views of nature emerge, through practice of permaculture in Utluna.

4.1.4 Reflexivity

In qualitative research the inquirer is involved in a sustained and intensive experience with participants (Creswell & Creswell 2018). This introduces a range of strategic, ethical, and personal issues into the qualitative research process (ibid). Being reflexive of my role as a researcher in the process and my inclination and thoughts about the studied subject (Robson 2016), are necessary to be aware of. I have been observing the development of Ultuna permaculture, since I have had an admiration for the project. Hence, my research has an emotional attachment on some levels, due to my personal interest in permaculture as sustainability narrative. This could have affected the process and may have been impacting the research on my side during the process. However, being aware of this early in the process has been helpful, how my previous experiences can shape my research process. This may have made me come nearer to the subject of study on an emotional level also,

which made it more meaningful to carry out the research and became a motivational factor. For me this was less of an issue, since I knew that for me it was about gaining a deeper insight into a topic, I find interesting, which made my research process enjoyable, and more interesting, and simultaneously being aware of the need of trying to stay neutral. One aspect I found to be worth mentioning is that I also had a fear of being critical of findings, and that the findings would contribute to some hurt since I knew some of the board members. This, however, became less of an issue with time, as their attitudes were so positive for me doing this research and the data that was collected was rich and I became more objective with time, and distanced myself from those feelings in a positive way.

4.1.5 Ethics & anonymity

The aspect of ethics when carrying out research is very important, this could for instance mean to have the proper conduct (Creswell & Creswell). This did in this research include letting participants in research know what they will be part of and their consent. During the workshop for the board members, I had the opportunity to present my ambition to study and tell them the nature of my study. They were later also briefed before the interviews more specifically

Another important aspect of my research was the issue of either presenting my research participants or making them anonymous. Since I was going to carry my research on a specific place that was going to be named in the thesis and its location, it wouldn't be hard to find the people involved in the initiative. I did however think of making them anonymous through changing names, but since I would mention their background, I asked how the people being interviewed felt about this aspect. All of them were positive that their views be used in the research and had no issues with their names being used. If even one board member showed any concern, and not wanting their name mentioned, I would have anonymized everyone or used pseudonyms, and if necessary, also for the name of the project and place. One concern that could potentially rise is how they will appear in a report (Robson 2016). On the other hand, too much anonymity or seeking to disguise may distance the report from the reality it is trying to describe or understand (ibid). Since the members of the board were fine with their names being included. Hence, with their consent I introduce them in this case study and share their interesting journeys and views of nature & on sustainability.

5. Findings and Discussion

This chapter is divided in three sections and each having sub-sections where I throughout present the findings, discuss and analyse them. In 5.1 I will present the nature of permaculture, as movement and how nature is seen as a teacher. The importance of learning the permaculture principles and philosophy in order to apply them. In 5.2. I will present a more in-depth views of nature of the board members and analysis of it. In 5.3 the board members views of nature on permaculture and its relation to sustainability is explored and analysed.

5.1 The Nature of Ultuna Permaculture

Permaculture is practiced differently in different places and regions. Even though there are certain principles and ways of going about it, there can be different approaches, intentions and motives of why people, movements and organizations do it (Lehay 2021). In this chapter I will explore some aspects of the nature of Ultuna permaculture. Why they are doing it and what deeper understandings are present in their reasoning. This has become an interest of this study because it shows why the organization exists and this reason is a factor that has to do with its relationship to nature. Which in turn will also be important in order to understand the individual's view of nature.

5.1.1 Permaculture as movement

In order to answer my research question that is specifically trying to study the view of nature among the board members of Ultuna permaculture, it is important to understand the nature of Ultuna Permaculture.

I was invited to a workshop that was led by Max and William where I also met Rana, Sanaz, Swenja and Daniel. Beyond the physical aspect of planting a garden, Ultuna permaculture considers itself part of the permaculture movement. A movement that wants to promote a change in society by inspiring people and society through making the change happen in how humans relate to nature and sustainable food production by showing the permaculture garden in Ultuna. This is something both Max and William expressed in their interviews, that they don't believe in

shouting and screaming at other people to change, referring to much of today's climate activism, but to make the change happen, and let people see that it is possible to bring a change. That they are a part of the permaculture movement was also apparent, where Max did refer to it explicitly during the workshop. A movement he said, “*that is necessary for the regeneration of ecosystems on our planet*”. In the scientific literature, permaculture is described as a movement (Lehay 2021; Richardson-Ngwenya 2019). The movement is often based on designing and implementing with the 12 principles of permaculture that William and Max went through in the workshop, something also mentioned in Leahy (2021):

1. Observe and interact;
2. Catch and store energy;
3. Obtain a yield;
4. Apply self-regulation and feedback;
5. Use and value renewables;
6. Produce no waste;
7. Design from patterns to details;
8. Integrate, don't segregate;
9. Use small, slow solution;
10. Use and value diversity;
11. Use edges and value the marginals and
12. Creatively use and respond to change.

This is foremostly done in agriculture firstly, but in many places the broader philosophy is enacted on or adopted. This means everything that can potentially create a disbalance, needs to be addressed, hence included in the permaculture philosophy. In order to create a balance and harmony between humans and nature, this also includes economy and technology etc., and not only in agriculture (Lehay 2021). With disbalance I mean a system that is not working in the promotion of a positive outcome from its relationship, this understanding I draw on the systems view of permaculture and the emphasis on relationships. Permaculture is evolving with time and is not a static concept or philosophy (Namulili 2011). Permaculture movements are also similar in their nature, having roots in agriculture, then growing into the societal culture, with an ambition to address all aspects of society that can be considered harmful to humans and nature. Here we also see similarities in permaculture philosophy with Helmfrids' (2007) *The fragile eternity machine*, where there is an emphasis on living in harmony with nature, and also a view that sees things as systems built on relationships. It is the emphasis in this sphere that humans need to take responsibility to not exceed the boundaries of the limits of an ecosystem. Ideas also found in other environmental narratives like resilience thinking. However, here with responsibility I mean the narrative of stewardship, and humans being the subject and nature being the object, that indicates some sort of separation. This will be further explored in later chapters and sections. How this view of nature takes further shape in the practice of permaculture.

5.1.2 Nature as teacher

In this section I will present permaculture principles and philosophy that are translated into practice by Ultuna permaculture that are important to understand in order to better understand the context in which the changes in views of nature among the board members take place. Here I also share first-hand experience where I got to see how the group works and interacts with each other in order to learn more. This was important for the research since I wanted to see how the practice of permaculture is impacting the view of nature among the board members.

In the workshop led by Max and William they explained how to apply the 12 principles and demonstrated on a drawn house with a lawn. The energy in the room was inspiring and uplifting. Max tells us that we will work on a case. A future project called “the good home”, where they are collecting money to transform a normal house lawn to a permaculture garden. Max starts with *asking* “*why we should transform house lawns into permaculture gardens? What is our relationship to earth?*” He demonstrates a tomatoes’ journey that comes from Spain, and all the relationships that it goes through. Through this he makes an argument that this tomato is unsustainable and is not actually producing value, saying: “*It consumes more energy to produce that tomato than what it gives back.*” Max was criticizing this way of producing food, where there is a heavy use of fossil fuels, through giving the example of this tomato. This tomato can be argued is being produced in a system that can be seen as part of the first sphere, *the unending source*, where the use of fossil fuels isn’t considered a problem. The critique of *the unending source* will be further addressed later in the thesis. Max emphasizes the importance of thinking in terms of relationships, saying “*things emerge through their relationships, to people and things.*” Max highlighted that there needs to be created a new relationship with the house owners and their gardens, where they can transform, expressing: “*their ‘dead’ gardens, to value producing gardens, with food and biodiversity. This is needed in order to transition from the unsustainable global food chains, and its negative impact on the earth*”, he says.

He was in a way talking about the theory of change permaculture proposes, where the importance of relationships is central. “*Change in a complex system doesn’t happen in the isolated component of a system, but through the relationship between components.*” Says Max, “*We need to change the premises about things more than the things themselves*” he adds. There was an emphasis here on the systems and ecosystem design, and a critique of the current way of producing food on a large industrial scale. Max also mentioned that we need to make an ecosystem that contains edible plants, saying that “*we must eat also*”. There were many elements of what Helmfrid (2007) argues in the sphere of the fragile machine here. Especially the expressed need for care and acting in harmony with Nature and learning from nature's patterns. Here we see that there is a view that emphasizes the

need for the ecosystem to foremostly serve humans, to produce food for us humans. The view here on biodiversity is also reduced to the edible plants that are mainly emphasized. This raises the question, if permaculture despite claims of challenging the human-centric views of change, is inherently similar in its nature. Something that not necessarily is wrong, but a question that do arise. This also suggests that permaculture may still promote a human-centric view on nature, while still being considerate of nature? However, this also raises the question, how does this relate to other species in nature? Even if it may benefit other animals that may also eat some of this produce, how welcomed are they? And what animals may be excluded due to the choice of plants, that some animals may not find as consumable. These thoughts were not present either in the literature overview nor in my interviews and observation. However, Max did express how they had spotted different animals and insects that where “*hanging in the permaculture garden*”, something he found to be good, and that they were welcomed.

Permaculture, despite being a movement, can look different in different places, depending on the contextual setting of a place. This is something Max and Rana also emphasized. Rana said that it is important to plant the right tree in the right place, according to the climate and the environment, saying: “*Planting tree species from Japan in Sweden is not appropriate*”. A critique also Max had on the plantations of Eucalyptus in south of Sweden. Max said that:

“We have lost the essential understanding of what our role in the ecosystem is. The practice of planting trees is also problematic, it’s not about planting a tree, it’s about planting the right tree appropriate for the place. The trend of planting eucalyptus and fir in south of Sweden where there should be beeches and oaks.”

During the workshop William also expressed that: “*Placing things most appropriately is a central purpose of permaculture.*” One thinking in permaculture philosophy can thus be seen as something that wants to place things in their right place. This can be trees, plants, but also other things such as technology or economy. Permaculture thus wants to place humans and nature in harmony with each other, and create a good environment. With this I interpret that if something does not harm being in a place, and can adjust, cope and be net positive for humans, nature and the environment, it can be justified to carry out that act. This however raises the question: What is the rightest thing (e.g., species) for a specific place, and who will decide that? To this question, the answer I derived considering what was said above is that the answer permaculture philosophy gives is the ecosystem of a place decides, the nature patterns that are present there already. This is also a view present in the view of nature of *the fragile machine* when it comes to managing nature, a view that can be argued is present as a read thread in their practice. This view seems also have emerged among the board members as their translation of permaculture principle in their practice, however, similar understandings may also

be present in other permaculture movement, since the 12 principles are found in almost all permaculture movements (Lehay 2021).

The view of learning from nature and mimicking the ecosystem may have stemmed from the inspiration the founder of permaculture has taken in the designing of its philosophy from the Tasmanian indigenous culture (Namulili 2011). This view of nature in the practitioners' relation to nature is something that is visible. This inherent view in the permaculture may be what makes it unique as sustainability narrative and is a view that the board members carried as presented above, and will be further explored. They carry a view of nature that sees nature as teacher, of humans, that humans need to learn from, a view I would argue that is from *the collective body*. However, it is humans who still are the ones who have the agency, and the emphasis is on produce for humans. This view of nature in the practice of mimicking and learning from nature in permaculture, considering the views above this far, makes the views of nature translated into practice a hybrid of *the collective body* and *the fragile eternity machine*.

In Mollison and Holmgren's writings (Lehay 2021), when explaining permacultures design philosophy and the evolution of complex ecosystems based on certain universal principles, there is an emphasis that these will be applied differently according to context, which is necessary in order to attain balance. Their scientific foundation is systems ecology, a branch of systems theory. Systems theory is concerned with the relationships between elements that make up a system (ibid). In *the fragile machine* Helmfrid (2007) presents a view on nature as an ecosystem and the way to address the issues of sustainability in a systematic manner, where knowledge plays an important role. Through learning more about nature's way of functioning we can learn to create sustainable technology. There is an emphasis on the balance of the material flow and a closed loop cycle (ibid). I do reflect on if permaculture could be seen as a technology in this respect, that is emerging with time, accumulating and integrating the best practices to reach harmony between humans and nature. Does the view of nature that permaculture promotes in the practice among the board members fit in *the fragile machine*, or if it only has certain aspects of that paradigm? However, to call permaculture and its narrative "machine" as a metaphor, can be further explored, and due to the ethics permaculture carries, another question that arises in if machines can be ethical and have soft values, like other living beings with consciousness. As mentioned earlier, if permaculture is a hybrid between the collective body and the fragile eternity machine, or is it the fragile eternity machine carrying some views of the collective body?

There is a view of nature as systems in our age, that is also visible in permaculture and the board members. Max mentioned that permaculture is also about systems

thinking, something Leahy (2021) also means permaculture derives inspiration from. systems are generally associated with technological systems and becomes a relatable term for humans of 21st century to see through, this view is mechanistic however in its nature I would argue, leading to a risk of falling prey for what it aspires to cure, the reductionist paradigm of enlightenment, with the translated practice of permaculture as mentioned in the views of the board members and the system thinking view among others, also in light of literature, carries it into the sphere of *the fragile machine*, predominantly. The question that remains unanswered is if permaculture despite its critique of reductionism, carries certain views in its philosophy and practice that are part of the same reductionist tradition that was borne out of enlightenment? Or is it trying to communicate to a system that is operating as a consequence of certain views of nature, and suggesting a different view of nature to it, in a language the system understands? Suggesting the ways of the Tasmanian indigenous people, in a manner that the machine understands.

Permaculture is a practice carried out by humans where there are principles that suggest how humans should design the agricultural landscape and from there on also build on a community that could theoretically also lay a foundation for a society, a view that is present in the unending source (Helmfrid 2007), humans being the initiators of civilization. Humans play a central role in carrying out the work in accordance with permaculture principles that take inspiration from nature. The managerial aspects of nature do however not reflect in the view of nature as in *the unending source*, since there is an emphasis that we are connected to and dependent on nature, nature is fragile, complex, finite and sets condition, all being characteristics of *the fragile eternity machine*. There is however a utilitarian aspect, that the aspects of resource utility need to be understood in a long term way. Here, we do see a human-centric view towards nature.

In this section we see how knowledge about permaculture is distributed through workshops and that there is an emphasis on the principles and relationships that permaculture is based on. A critique of *the unending source* was also present in the story of the tomato. The sphere I found elements from most were *the fragile machine*. There was also the perspective that we humans are dependent on the flow of material from nature, and that it is limited, and needs to be taken care of. There is the perspective of learning from the ecosystem and replicating it, indicative of the sphere of *the collective body*. The idea that *nature* does this best, taking care of its resources, hence we learn from it.

5.2 View of nature in Ultuna Permaculture

This chapter will present the empirical material and analyze it through the three spheres of Helmfrid (2007) to identify the different view of nature that is present in Ultuna permaculture among its board members in the present day. These may not be static views they've held or will hold, since my understanding was that all members were continuously learning more and developing their view of and their relationship to nature. I will be presenting them in the order of time spent in the project. Max and William will be presented first together, then Rana and Sanaz, and finally Daniel and Swenja. This chapter presents some more in-depth journeys of the members since it is an important aspect of this study to see changes and developments in their view of nature, specifically during their engagement with permaculture. In this section the board members' view of nature will be illustrated with the empirical findings and then analyzed in order to answer my research question: *How and to what extent does permaculture transform peoples' view of nature and their relationship to it as a consequence of being involved in a permaculture project?*

5.2.1 A relationship with nature

In this section I present and analyze the views on nature among the initiators of the project, Max and William. They both have had a journey together with each other and with nature, hence they do share many experiences, therefore I chose to present them together. They have also since they started Ultuna permaculture worked closely with each other.

There is an understanding about the historical roots of the problems that the society is facing today, e.g., environmental issues, in Ultuna permaculture. There is an understanding of separation between humans and nature among the board members of Ultuna permaculture. Max thinks that in order to understand the separation that took place between humans and nature, we have to go back in history to understand this, he says:

“The problem is deeply rooted, that we need to go back to enlightenment and before that even maybe. Go so long back to identify where this separation took place or started. between human and nature”.

Max and William have since a young age spent much time in the forest near their house in Bromma, Stockholm. They also grew food on their house rooftop when they were younger, William told me. William used to spend every day after school in the nearby forest and play alone, with his brother or friends. For him it was a natural part of his life to be there in the forest. Max on the other hand spent less time in the forest, since he also spent time on the football field. They both also spent time in Hälsingland, in a rural setting, where they planted in the garden and spent

much time in the forest. My understanding was that there was a bonding that took place during these years with nature, especially with the forests of Bromma and Hälsingland. Both brothers have a strong friendship between them that seems to have given them similar experiences in their relationship with nature. For Max and William nature has aspects of enchantment, for them it is a sacred place. This, however, takes an intellectual and practical manifestation through their practice of permaculture where they can find meaning and do something about something they care for. This becomes visible in their common will to initiate the Ultuna permaculture project. Max told me that: *“in search of the best way to work for nature in an age of environmental degradation and climate change, I found Permaculture to be the best approach to address the issues.”* William had also during his years of search and worry for how humans are treating nature, found out about permaculture in a book, which he then further read and was highly inspired. They both felt a strong urge to do something to address the dis-equilibrium between humans and nature. Some of these views are also present in the *fragile eternity machine*. The sense of need among individuals for doing something about the environmental destruction done in the past centuries after the industrialization (Helmfrid 2007).

Max describes that he feels a deeper way of being when he is nature. When I ask him, what nature is, he has a hard time describing it in terms. He says:

“It’s more a feeling that is the description of nature for me, an emotion. It can be experienced, it’s a complete connectedness,” and the closest word that he finds to describe it is *“Awe”*.

He says he only feels this described emotion when he is in nature but doesn't feel the feeling of complete connectedness sitting in his apartment in Stockholm or being indoors in concrete buildings or cities. This view of nature is found in *the collective body*, where there is an intrinsic value in the personal experience connected with everything living (Helmfrid 2007).

William defines nature as something spatial in dimension and something we move through. The four seasons and the yearly cycles are part of it. But he sees nature foremostly as processes and patterns. These processes he means are complex and humans will never understand them completely in an objective way. We can understand what meanings they have for us, and how we can interact with them. He gives an example of the process of degradation, when he composts and sees how things die, and gives nutrition to soil. The process when the dandelion sprouts from the asphalt, the natural process of succession. Before starting the permaculture garden, they both had a strong relationship to nature, hence there was a view of nature that they also had hard time explaining since it was a deeper bond, this was something I observed and interpreted from what they said and how they reflected on the question. William said that he had gotten more practical knowledge after

engaging in the permaculture project and Max said that he had been more involved in the administrative works, but also did the garden work. Their strong view of nature has led them to have adopted the lens of permaculture, which has given them a tool to practically do something that can be materialized and make a change that is visible to the naked eye.

There is also a broader outlook on the world from the lens of permaculture as practice and philosophy that is addressing it through the project. There is a questioning of the paradigms of how we see and have seen nature as a society. During the workshop, Max asks the question:

“Where does the idea emerge that drives the western research and science? That we Humans stand outside and can watch something objectively and how that observed thing can benefit/profit us and we can use it. This view of nature found in our culture is important to address” says Max.

“It’s a deeply rooted worldview”, he continues. Here we see how max criticizes the utilitarian view of nature that has been existing in our society. For Max the most important factor in the pursuit for attainment of sustainability is not primarily a practical change. He say: *“It’s not about changing to a fleet of electrical cars or a mere question of energy. The first step would be to identify or address how we humans see the world, what is it that we are ‘Seeing’?”* This understanding is also found in the writings of Mollison and Holmgren (Lehay 2021), a critique of the reductionistic way of seeing things, having roots in the enlightenment thinking. Emerging from the reductionistic scientific worldview, within it embedded the Newtonian-Cartesian paradigms (Helmfrid 2007). The direct critique there towards reductionism, is an indirect critique of enlightenment, and the subsequent consequences from it. One main critique here is that the reductionist view fail to see different parts in human society and in nature as connected, or at most superficially connected. That was clearly visible in some of Max arguments, and in his critique, that our views need to go from reductionistic to holistic. Nasr (1997) argues that the holistic and organic understanding of nature and reality was lost largely due to the high emphasis on the mechanistic physics of Newton and views of Descartes on scientific inquiry in the scientific world view that later became the dominant cornerstones, as a result further down in history gave birth to reductionistic view of nature and reality, I would also argue, that furthered separation between humans and nature.

Here Max and William argue for the view permaculture offers, thinking in relationship terms, *“we are our relationships”*, says Max, *“between humans and humans, and between humans and nature.”* Parts of nature are related and not isolated entities, and there is an emphasis that humans should realize this and embody this view. This is something Helmfrid (2007) addresses in the view of nature of the third sphere, *The collective body*. That new emerging science of

quantum mechanics proposes that our world is more connected on fundamental levels. In *the collective body* there is an indirect critique to the current mainstream views on nature, and a view that it lacks a holistic view.

5.2.2 Emergent view of nature

In this section I will be presenting the journey of two landscape architects who both had a paradigmatic shift in their view of nature as a result of their engagement in Ultuna permaculture.

Even if the view of nature hasn't changed that radically for Max and William due to their practice of permaculture, it has for Rana and Sanaz. Rana told me that she grew up in Stockholm and has very few memories of spending time in nature. She said she spent most time indoors studying, and for her nature was something far away, in the forest. When she applied to the program in landscape architecture, one aspect that drew her attention was the opportunity to spend more time outside. She felt that it could be good for her, and that she needed it. The landscape architecture program had a strong emphasis on the aesthetic aspects of designing a garden or landscape. Which she soon came to find challenging. She had a feeling that something was missing, some principles. After two years, she got to know about permaculture, and decided to go to the first meeting and see what it was about, the description had already intrigued her interest. She then joined Ultuna permaculture and found it to be life changing. It put words and structure to some of her intuitive feelings and thoughts she had. She was looking for some meaningful practical engagement, and she found that in permaculture. She was now happily spending much time in the creation of the garden and in the project. The understanding derived from the interview with her and my observation of her motions, indicated that it was a paradigm shift in her relation to the outdoors and nature. She said that she views nature very differently now, expressing that: "*it is connected on so many levels, and I feels much more respect and admiration for it.*"

After her engagement in the project, she also enjoyed being outdoors doing her landscape architecture assignments and studies. She had a totally new outlook on plants and species she saw, and she also said that "*I was starting to listen to nature*", emphasizing after saying that: "*trust me, I am not crazy.*" This is something Richardson-Ngwenya (2019) talks about, how engaging in permaculture practice foster a structure of mutually dependent and integrated socio-ecological relations, whereby humans are positioned as participants in a system where other parts of that system (animals, plants, waterways, etc.) also have significant rights and roles to play (ibid pp. 205). Rana's relationship with nature was initiated and strengthened after engaging with permaculture. Her view of nature was born anew and is still expanding. Here we see how permaculture has contributed to change in the view of nature of Rana. By spending time in nature and interacting with nature

through the principles of permaculture, she went from a view of nature where she saw herself far from nature to a view of nature where she was feeling so close to nature, to the extent she felt she could hear nature speaking to her. She went from sphere of *the unending source* to the sphere of *the fragile eternity machine*. Another interesting aspect that can be worth mentioning is her feeling of something not being right in her program, can it be her intuition that was telling her something, and she was keen to listen, and follow a deeper calling of some sort, that made her act differently. Helmfrid (2007) talks about the role of the intuition in search of knowledge and understanding of nature and reality in *the collective body*, Rana's mentioning of listening to nature, would also qualify her to be operating in this sphere.

Sanaz was born and raised in northern Iran, where she said there was a lot of greenery. She was studying architecture before coming here, and later found out about landscape architecture when she came to Sweden, which she is happy to have to have found. She encountered Ultuna permaculture through Facebook event. Since partaking in the first introductory event held by William and Max where they presented the idea of the permaculture garden, she also, like Rana, have been part in the Ultuna permaculture. Both Rana and Sanaz were with from the very initial days of the project and are still very active today. They do a little bit of everything, except the economics. Recently they both arranged a webinar on sustainability and permaculture, where they both expressed how they view landscape architecture differently after engaging with permaculture. Their views on how their views of nature has made them see their practice of landscape architecture will be discussed in later sections.

Sanaz told me that she had adopted a holistic view when it comes to seeing things. Something that indicated for me that she felt a lack of, previously. She says that “*we can regain and strengthen our bond with nature through permaculture, through engaging with the earth and growing food*” something she thinks has been lost. She also mentions our dependence on natural resources, and the need to take care of them. For her, permaculture has taught her a way to take from nature and give to nature. She gives the example of using compost and not chemical fertilizers. She says all this affects our world view; it helps us gain new perspectives. She highlights the problems of today's consumer culture. She thinks that introducing permaculture in urban landscapes can show what values nature creates, she says:

“*Permaculture can function as a catalyst for transformation of our culture from consumption to a culture where emphasis on relationships is more valued, between humans and humans, and humans and nature.*”

Here we see a critique towards *the unending sources*, and a proposal to move towards the sphere of *the fragile eternity machine*, and even *the collective body* that

Sanaz have adopted due to her engagement in permaculture, considering the holistic view. Both for Rana and Sanaz, permaculture is also about a way of living and a lifestyle, it's about making conscious choices in all aspects of life that will have a positive impact. They both expressed to be much happier, and Sanaa said her anxiety has disappeared when talking to people permaculture and also other things. It has also given more confidence, and a satisfaction in that they are doing something good for the planet. They were two of the board members that were more clearly impacted through their engagement and were telling this with a high enthusiasm during the interviews, how life changing experience it has been to have been involved with the practice of permaculture. It was also apparent that it was not just about planting the vegetables and the greens, but the interactions with people and presenting their garden and the work they do that also was an integral part of this transformation.

Both went from living with a view of nature as an *unending source* to a view of nature as in *the fragile eternity machine*. Their practice with permaculture contributed to them gaining new relationships with nature. Also, even beyond, into the sphere of *the collective body*. From forests being somewhere far away, to starting to listen to trees, as living, talking. For Sanaz this shows in her adoption of a holistic view. This demonstrates that permaculture can contribute to change in a person's view of nature, if they engage in its practice. For Rana, Nature got re-enchanted, and Sanaz holistic view, made her exit a reductionist paradigm of enlightenment.

5.2.3 An enchanted nature

In this section I will present some views of nature that can be considered having a relation to the sphere of *the collective body* and ideas of enchantment. The journey of Daniel and Swenja had some similarities. Some views from the interview with Max are also presented. These will further also be important views to shed light on if permaculture is leading to the *re-enchantment* of nature.

Daniel had visited a couple of farms before abroad where permaculture was practiced, before encountering Ultuna permaculture. On the question of his relationship with nature, he said: "*I spent much time in the forest when I was young, picking berries and mushrooms, in order to avail the resources that are in nature, and I remember that feeling very meaningful.*" Daniel expressed that he considers himself being in nature sitting in his apartment despite being in the city. He said: "*nature is all around us, we have just reconstructed and transformed nature and created construction with nature in nature, I feel more and more that I am part of something larger than myself, something which creates a curiosity and wonder, and respect in many ways for nature.*" He becomes more affected when he hears about

nature being destroyed. He tells me about a place he spent a lot of time at their family's forest in Dalsland, describing childhood experience: *"There was a path into the forest, and there was a sacred sight, a church. It was a very minimalistic church, with only a wooden cross and some stones around it."* It felt very special for him to be there he said. Recently when he went back and told me: *"they had cut trees around this cross, and now this cross was standing in the middle of a larger field, something that made me sad, there was a loss of magic in that sacred place"* he said, magic he experienced when he was young. He also tells that in recent years, about around the time the interest of permaculture and nature arose, he was also interested in spirituality, in particular the indigenous traditions of Shamanism and other nature traditions. A view of nature that is close to the sphere of *the collective body* (Helmfrid 2007) is present here in Daniel's journey, that may not have changed specifically due to his permaculture engagement, but it gives a way to express his view of nature through the practice of permaculture. There is also a desire to gain some deeper views on nature, hence his search in the metaphysics of indigenous tradition and becoming more acquainted with a nature in my understanding he thinks is enchanted.

An interest in indigenous tradition and spirituality was also an integral part of Swenjas journey and her view of nature. Swenja told me she didn't have any significant experiences with nature growing up that she remembers, apart from traveling to beaches and playing outside. Later in life climate change and environmental concern led her to become more involved and a conscious relationship with nature emerged. She finds permaculture a way to do something for nature that is sustainable and practical because of its practice of growing food without pesticides and something that can be done anywhere, if one decides to do it. She hasn't been active for very long, and not spent so much time in the garden. She describes her relationship with nature as: *"something deeper than words actually can capture"*, in similarity to Max. She says that: *"My journey towards nature has also been a spiritual one. For me nature is something more than observable, having an intrinsic value and life of its own. I have spent time in nature and meditated."* On my question what spiritual tradition she finds interesting? she mentioned she had taken a course in the Nordic mythological tradition of Oden and Freja which she finds intriguing. In her journey and search there are views of nature that can be categorized initially as *the fragile machine* when she realized that the earth is facing climate and environmental challenges, and the earth being fragile, and that she needs to do something about it. This further led her to search for answers, something her choice of masters program indicates also, her will to understand the complex issues of human impact on nature and environment and how to manage it. Her journey does however continue beyond *the fragile eternity machine*, into the sphere of *the collective body*. The experiences she has had in nature and her interest in spirituality has led her to engage in the practice of

permaculture and sees it as a valuable practice to strengthen her relationship with nature.

When I first spoke to Max, he also mentioned that he was reading a book by Neil Price, *The way of the Viking*. From there he gave an example of planting the seed even if Ragnarök is coming, Ragnarök is the concept of end times of earth according to Viking philosophy. The exegesis of that was in his saying: "*it is importance to live with integrity and never give up, despite the circumstances.*" This example of Ragnarök he also shared at the workshop. This shows where Max brings his inspiration from to broaden his view of nature and understanding of how the local indigenous people acted for nature, in this case a view from the worldview of the Nordic mythology. This shows that there is a search for answers beyond the sphere of *the fragile machine* and a search and acceptance of the views of *the collective body*. Max also told me that he is inspired by nomadic ethics, indigenous people and permacultures ethics of care. We then spoke about indigenous people, highlighting how we in the modern western context do injustice when we make it sound like a homogenous group, when in reality their epistemologies, ontologies, metaphysics and worldviews can differ a lot or be completely different.

There has been interest among the members to search for knowledge of the indigenous traditions of various places and times among the board members. I found it interesting that both Max and Swenja both went back to find indigenous views of nature from the European traditions, something that made me think about the emphasis on local knowledge in permaculture. How this principle is also contributing to search for local indigenous knowledges from pre-enlightenment and renaissance worldviews. There is an openness among board members to explore beyond the current dominant views on knowledge that emerged from enlightenment that carry a view of nature being only material. While there are present among them the views of nature that resembles *the fragile eternity machine* as mentioned in the earlier chapter e.g., in light of systems thinking, there is also clearly apparent that when searched further in their views of nature and knowledges they carry, it does speak for a view of nature that is also resembling the sphere of *the collective body*. Helmfrid (2007) argues that *the fragile eternity machine* and *the collective body* are closer to each other, and both carry a view of nature that speaks to care for nature, in different degrees and for different reasons. While *the fragile eternity machine* focuses on immediate actions humans need to take in order to save their existence, *the collective body* focus on meaning, intention and how existence first even came to be. Here we see board members taking action, and also reflecting on bigger questions, simultaneously.

In these sections we got some insight into the board members of ultuna permaculture's view of nature. Some people bonded with nature and felt a strong closeness from an earlier age. In the case of William and Max who spent a lot of

time in forests, their strong view of nature made them find answers to how to best work to mitigate the destruction that humans are creating on the planet, on nature, and for them permaculture is the way to do that. Rana and Sanaz found their way to landscape architecture and had a desire to experience nature. This didn't truly happen before they came in contact with permaculture, and their view of nature shifted paradigmatically. Daniel and Swenja, both expressed that their journey and expansion of their view of nature was intertwined with a spiritual journey. Both of them also searched for meaning and answer in indigenous traditions that they considered were closer to nature. Even Max mentioned a principle from Viking 'metaphysics', and his interest for indigenous cultures and nomadic ethics.

These are important findings for this thesis indicating towards a search for or understanding of an enchanted nature, views related to *the collective body*, the presence of interest for spirituality and indigenous among some of the board members. This can be seen as a way to go beyond the paradigms of enlightenment and the theories and explanations that emerged from that, as the sole epistemological source to gain knowledge about the world. There is a search among the board members for finding other ways to relate to nature, and how that has looked previously in other indigenous traditions. It may be hard to attain this relational way of thinking if one is unaware how that could be possible due to the residuals from the enlightenment worldview that has shaped much of the globalized west. Hence, in search for answers and to initiate a new relationship with nature, permaculture becomes something that facilitates this. Not necessarily changing the view of nature paradigmatically for everyone but giving others already having a grown view of nature and meaningful engagement with nature. For some the practice of permaculture changes their views of nature paradigmatically, and re-enchants nature, for others it becomes a way to practically do something due to a view of nature they already carry, seeing nature as either important to take care of, in order for humans to be able to live in it, or nature should be treated with care since it deserves it, a better treatment from humans. There are also elements of nature being enchanted in the board members stories and views, with that meaning having deeper life or value of its own, for some it is also a question of spirituality.

5.3 Challenging status quo

In this chapter I will present the board members views of nature and permaculture, specifically how it relates to their views on sustainability.

5.3.1 Dimensions of permaculture

In this section the political dimension of permaculture and its view of change towards sustainability that is driven by the view of nature, is presented. Max tells

me that Ultuna permaculture also has a political dimension. He considers it to also be a political act, away from the corridors of politics. This he means is due to an underlying intention to change the system that is controlled or formed through politics. He tells me that politics is discussed today mostly on social media, where he thinks there is a lot of hate and toxicity there and a very bad medium for the democratic dialogue. He says that: *“permaculture garden can be a great place for the democratic dialogue and where people can meet and exchange ideas about life and philosophy while planting potatoes”*. Max told me that there is a huge number of people that come and help. He thinks there is a desire among people who live in the cities to want to get connected to nature and work with soil. He tells me that he thinks there is a need for such projects in urban places because he has observed that people are wanting to engage with nature. Sanaz told me that people from all ages and backgrounds come and help them. Families with children also come and help water, taste and have fun being there. People want to join their events and come and talk with them. Both Helmfrid (2007) and Nasr (1997) writes that there is a desire among humans to connect with nature. This can be felt more in urban spaces, where the disconnect between humans and nature is more present.

Traditionally food production has been associated with the rural areas (woods 2011). The division of rural and urban is one of the oldest ideas in geography and is deeply ingrained in our culture (ibid). Max and Ultuna permaculture are proposing that food production should enter the urban settings where for instance lawns can be transformed into food gardens and food forests. Through this they are challenging this binary division between rural and urban. He believes that more people will have to engage in permaculture and grow their own food to meet the challenges of the future. He says:

“One aspect that is crucial in this transformation is to mobilize people to contribute with some human labor e.g., sowing potatoes. This could result in us excluding fossil fuel since we dig with a digger, and creating communities. And also using compost instead of artificial fertilizers. Also avoiding all types of pesticides. This will also lead to less transports, resulting in less emissions of greenhouse gases.”

Max tells me that he does support all progressive political policies that are suggested on state level and plans in favor of the environment. But he considers these policies are not very effective in reality, and it's always about somewhere in the future. He believes permaculture is a way to start attaining sustainability immediately, he says:

“By connecting with the earth through growing food first sustainably, creating ecosystems and new relationships, it's a more present way of approaching sustainability, beginning with yourself

and your immediate environment. What can you change now, do that!” He says that permaculture is of whole another mentality when it comes to making a societal change, he says: *“it’s slow incremental change that is dependent on individuals.”* He continues: *“the most ultimate source of power is land and the basic needs such as food and shelter. Take them for yourself through a permaculture way, and see the change happens.”*

He thinks environmentalists, NGO and many people wanting a sustainable change thinks that change sits somewhere else, like only in politics. Permaculture however suggests that change comes from out relating to land. A change that comes before political change, he thinks. He says that:

“Structures emerge from ecologies, where nodes that give rise to new nodes, and don’t come from nowhere. Our institutions have emerged from our social ways of being, the different nodes of ideas and practices have given rise to structures that carry these views and perspectives, but have been materialized in institutional practices. It’s a relationship between, student-teacher, teacher-university, university-government etc that is an ecology that produces a student or citizen. Therefore, if we want to change the institutions and their practices, we need to change the ecologies that they emerge from and make the foundations of such ecologies that have consideration for nature and carry an ethics for earth and people.”

He says it’s a very sophisticated way to approach change in line with the latest system thinking.

This view of nature is very linked to *the fragile eternity machine* where there is the concept of ecosystem. There is a view that making the parts in an ecosystem based on nature's pattern will have a positive effect for both humans and nature. This is suggested by foremostly connecting with nature through growing food with permaculture principles and connecting with other people and creating new relationships among people and with nature. Hence, there is a proposal, that through more permaculture projects we can create an ecology that can give rise to new institutions, that in turn will have impact on society, environment and eventually on civilization.

5.3.2 In Urban planning

In this section I present how changes in view of nature due to engagement with permaculture leads to larger impact in other fields, and how permaculture principles are moving beyond its own borders.

There is an emphasis on the need for permaculture projects in urban settings among the board members because they think it will lead to people living in urban settings who are distant from nature, closer to it. Since Rana and Sanaz have learned about permaculture philosophy and principles, they try to incorporate as much as possible in their design project in their landscape architect courses. This is something they

have also been criticized for sometimes, since they are breaking the rules of the design methodology in their program, that propose another way of going about when designing. They both told me that they still do find ways to apply the principles of permaculture in their design process. For them, permaculture principles are applicable in their field. The first four years they said there was a lot of emphasis on following a specific method. Sometimes even no method, but “*one’s creative flow*” as Rana told me. This was the first thing that triggered her in the first place to find a method of design, the lack of it in the first year.

Later it became apparent to them that there is no method that is neutral, and that the design of a project will reflect a certain way the person who is designing the landscape sees things. Their own understanding of the underlying discourse in their field became more apparent and the case for permaculture became stronger. They both think the emphasis on the aesthetic and economic aspect has been dominant. They think the current way of practicing landscape architecture is unsustainable, mainly due to the little emphasis given to the ecological values. When telling me about this, Rana expressed: “*We have to go back in history in order to understand this*” Similar to what Max said, and an central aspect of this study, to look back in history in order to identify our current views of nature. Rana told me she had written an essay where she traced back the historical root of landscape architecture to renaissance and baroque ideals, something she believes goes even further back. This she thinks has influenced today's practice since there is the emphasis as she expresses:

“Humans can design best, and in accordance with their aesthetic taste and that is also pleasant for the eye. Here we can see a view of separation between humans and nature, and nature should be planned according to human taste and reasons.”

Baroque and renaissance can also be placed in the sphere of *the unending source* where humans stand in separation or over nature, an age where there was initially a dominance of a Christian worldview and later the emergence of the enlightenment worldview. Both of these are placed by Helmfrid (2007) in *the unending source*. Since Rana’s and Sanaz engagement in permaculture, they have gained a view of nature that is also being translated into their practice of landscape architecture with the lens of permaculture and their view on sustainability. When Sanaz and Rana spoke about sustainability and permaculture, they also tended to connect it to their field of landscape architecture. They were very confident that permaculture principles and philosophy can have a positive impact on the practice of landscape architecture in regard to it becoming more sustainable, which today they see to be unsustainable. Because they considered it’s not taking into consideration nature as much as it should, and that it is too human-centric. In their education, most

discussions on sustainability in relation to landscape architecture revolves around 'ecosystem services', according to them. According to Nightingale et. al. (2019) 'ecosystem service' perspective is part of the mainstream sustainable development discourse emerging from enlightenment. A perspective that sees ecosystem as something for humans to benefit from, from its services. Something we see in their views on nature impacting their view on sustainability is an ambition to bring society and nature together through landscape planning, a view that can be considered a socionature-centric view. That has emerged among these two landscape architects due to their engagement with permaculture.

5.4 Beyond sustainability

In this section I further explore the permaculture practitioners views of natures impact on views on sustainability and the critique of it, similar to that we have encountered in earlier sections.

For Daniel, sustainability and sustainable development are words that annoys him. He says:

"It's so unclear and is interpreted in so many ways". Continuing: "Permaculture represents a much more realistic way of sustainability and sustainable development Permaculture is what sustainable development should be" according to him.

He thinks, understanding how the natural system works, and mimicking these patterns in the design of the social system.

William calls sustainable development a watered-down concept, emptied out of all meaning. He says: *"That no one says they want an unsustainable development. We have all these goals that we want to work towards somewhere in the future"*.

Permaculture he says:

"Is about relating to one's own environment, and how one can create sustainable relationships in the now, relationships that benefit everyone involved. How do I take control over my relationships now? It is a more present way of acting and an active way of taking care of things that can be controlled", according to him. "Instead of setting a goal for the future, it's a mindset", he says. "How do we create caring relationships around us in the present?"

If more people start to practice permaculture, larger social systems can change, according to William. He believes permaculture is for everybody. It's a design tool that he sometimes calls a “*theory of everything*” when people ask him what permaculture is. He says:

“Permaculture is about taking care of the resources around oneself, take care of one's immediate economy, the conventional industrial agriculture is not so conventional, It's a big parenthesis in agricultural history.”

Here he criticizes industrial agriculture of the past century, which he thinks has been a unique practice on such scale in human history. Further, he argues that industrial agriculture has eroded soils and degraded land, water and air, and biodiversity on a large scale. Here we see that there is a critique of the first sphere, the *unending source* in where Helmfrid (2007). This view she argues emerges from enlightenment thinking, that can also be further argued as central for industrialization to have taken shape, that subsequently also had its influence on the agriculture landscape.

He says:

“Ultuna permaculture uses waste streams from the industrial society and also things that are not considered as resources, like invasive plants, for compost. This kind of agriculture can feed the world with food, something which conventional agriculture is not doing today”

All of the board members interviewed were critical to the concept sustainable development or sustainability as it is understood today in the common day context. They did not think all aspects are problematic, but the main dominant sustainable development discourse is very vague. They all think permaculture is a path towards what we actually want to achieve in our wanting to achieve a ‘sustainable’ society. Even though they are still learning about permaculture through their practice and engagement with literature to further get insight into the philosophy of permaculture, everyone was very confident in the potential that permaculture holds to solve many of the issues of what we in everyday life would call unsustainable, e.g., the food production, and thinking of minimizing waste. Permaculture is what sustainability should be, is what I understood all the board members were saying in one way or another, like the views of Daniel and William mentioned above.

The view of permaculture on sustainability is a very practical one as one reads in David and Mollison's (1978; 1988; 2018; Leahy 2021) works. This is also reflected in Max and the other members' view on sustainability. However, even though Max talks a lot about food when talking about permaculture, he believes it is much more than that. He says that: “*I always end up talking about ethics when*

talking about permaculture. He asks why are we doing anything? What's the point?" For him it's about being an ethical and moral human being, reminding of the idea of the ancient Greeks views on the need of ethics for a society to thrive (Nightingale et al.), e.g., something Aristotele wrote a whole works on in Nicomachean ethics (Ross 1999). For Max however, it's based on being caring through an ethics of care. Care of earth, people and nature. This aspect view of care was also present in the other board members of Ultuna permaculture. Swenja also expressed permaculture being a worldview, a view also Morel et al. (2019) presents. Swenja also expressed that:

“Permaculture's approach towards sustainability is to take action in the inward landscape of one's Self and the outward landscape of the lawn, garden or field.”

There was also the view that “the relationship of permaculture to sustainability is one of critique” as Max put it. He continues saying:

“Sustainable development is an expression of the idea that it changes from above, and that we need to sustain something. It's about goals we need to reach, in the future somewhere.”

Max thinks that permaculture is rejecting the idea of sustaining as sustainability proposes, but rather proposes the idea of regeneration. “*We need to get away from the previous ways that have created these issues*”, he says. “*We need to regenerate and restore the seas and land, there is no point in sustaining (...) It's beyond sustaining*”, he explains. This critique is also found in David and Mollisons work (Leahy 2021). The critique to the sustainable development discourses emerging from a reductionist worldview of enlightenment was very apparently visible in many interviews, either explicitly or inexplicitly, as we also encountered in previous sections. Permacultures narrative to address the environmental challenges in my understanding from what the board members have told me do predominantly operate in the sphere of *the fragile eternity machine*, like most sustainability narratives, despite its critique of sustainability as a narrative. What, on the other hand sets it apart is its inspiration which it takes from the Tasmanian indigenous cultures as mentioned in a previous section 5.1.2, where these elements places permaculture on the border of *the fragile eternity machine*, close to *the collective body*. Where the view of nature can be argued to be enchanted, and sees things as connected. Another understanding I derive from the interviews is that permaculture tries to address the root issues of human-nature separation that emerged from enlightenment, or even before, through engagement with nature in order to regain a relationship, connection and a union, with also an ambition to re-enchanted nature again. This is also reflected in the views of the board members of Ultuna permaculture. Where I saw that a deeper way of relating to nature, makes them question how to actually address the issues of ‘sustainability’, which for them Permaculture does most appropriately, beyond the notion of sustainability.

6. Conclusion

The knowledge sharing about permaculture principles and philosophy in Ultuna permaculture is an important aspect when it comes to fostering humans-nature relationship. There was also an emphasis on learning from nature's pattern, but on the other hand there is a focus on produce for humans, where I think permaculture feels to reduce itself in trying to address environmental challenges and that of biodiversity. The translated practice of permaculture by Ultuna permaculture makes it operate predominantly in the sphere of *the fragile eternity machine*. There are also thoughts of placing things in right order, i.e., planting the correct species of a locus. The idea of learning from nature, however, does make permaculture practiced by the board members of Ultuna permaculture despite being in *the fragile eternity machine*, stand very near *the collective body*. In many of their personal views of nature, they do show an understanding of nature being enchanted, making the board members operate from *the collective body*. Also showing an awareness of the separation between humans and nature that occurred during enlightenment or some even saying further back in history. It was hard for some to point fingers exactly when their view of nature expanded or changed, but for some it certainly did during the process of making the garden. For some it was a paradigmatic shift in their views of nature, for others it was more subtle, or skill enriching. For most board members nature was more than the mere visible and materialistic thing that is visible for the eye, some also indicating it being spiritual. This can also be seen in their interest of and influence from the indigenous traditions that see nature as enchanted, by enchanted, meaning, that there is more to nature than what the eye sees, but what one's being feels, like connectedness or 'Awe'. In the board, some people already saw nature as enchanted or sacred before their engagement in the permaculture project, for other nature became re-enchanted after their engagement.

For the board members of Ultuna permaculture, Permaculture is what society calls sustainability or sustainable development, terms they didn't hesitate to criticize and rebel to use. Meaning that their way of Permaculture is a more appropriate way to address what sustainability and sustainable development tries, but fails to do. Permaculture, according to them, is beyond the notion of sustainability, it is what sustainability should have been. I argue that Ultuna permaculture is challenging the status quo of sustainability, fostering human-nature relations and re-enchancing nature in Uppsala.

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Popular science summary

To understand the current situation when it comes to the environmental challenges humans and nature are facing in 21st century, I think there is a need to look back in history to search for root causes. In order to understand how historically, views of nature and human-nature relationships emerged impacting our current age, e.g., how enlightenment and modernity led to a dis-enchantment of nature. The thesis also explores current views of nature, to see if there are any connection between these. The aim of this thesis is to explore these views of nature present in a context of a permaculture movement called Ultuna permaculture in Uppsala, Sweden. The group consists of students and is active in an area called Ultuna, where one of Swedish University of Agriculture Science main campus is located. The views of nature will be explored through observations and interviews with the board members of Ultuna permaculture and paid extra attention to if and how they have been impacted by their engagement with permaculture. These views in turn influence how humans relate to nature and approach her, and how their view of nature impacts their view on sustainability. Findings show that for some members, whom already have a relationship to nature due to much time spent in nature or being on a quest to address issues of climate change, permaculture becomes a way to practically do something about it. To work towards something that in common day term is known as 'sustainability' or 'sustainable development', these terms are not viewed as something positive in the movement or defined in term of permaculture. There are also views of spirituality, and nature being something more than the observable, reminding of the idea of enchantment. Concluding that permaculture is re-enchanting nature in Uppsala, beyond the notion of sustainability.

Acknowledgements

I would firstly like to Thank God. Then my parents who have supported and loved me throughout my life and encouraged me in the pursuit of seeking knowledge. I am also thankful to my dear grandparents and my lovely sisters. I also extend my thanks to my larger family i.e., relatives and friends, who have been there with me during my academic journey. A warm and special thanks goes to my supervisor for this thesis, Linus Rosén, who throughout the process was there whenever I needed, giving me good feedback and advice. A second warm thanks go to Malin Ekblad, who carefully read my thesis, and gave helpful feedback and advice. Last, but not least, I would like to thank all people who have contributed in me learning about life and reality, which has made my life meaningful, something that has contributed for me to appreciate beauty in life.

I Pray for Everyone's Best!

With Love,

Yours Truly.

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