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Ecological conservation and rewilding

A conceptual analysis



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Resume

Biodiversiteten er faldende og dette truer vores levevilkår på jorden. Dette speciale interesserer sig for at undersøge, hvad der kan og skal gøres for at stoppe denne trussel.

Der findes mange ideer og måder at prøve at håndtere dette på. En af dem er naturfredning/bevarelse og en anden er genvildning af naturen.

I dette speciale projekteres der på en specifik form for naturfredning, heri omtalt som 'ecological conservation' eller på dansk økosystemsbevarelse, samt genvildning set som en specifik metode og fremgangsmåde til at skabe eller genskabe økosystemer.

Projektet er delt op i to sektioner, hvor den første fokuserer på økosystemsbevarelse og den anden del fokuserer på genvildningskonceptet.

I projektet argumenteres der for, at økosystemsbevarelse er en proces, som forsøger at beskytte eller bevare eksisterende økosystemer. Samtidigt argumenteres der for, at langt de fleste former for naturbevaring vil kunne beskrives som værende økosystembevarelse i det, at flora og faunaen kun eksistere i kraft af økosystemets facilitering.

Efter den indledende diskussion og redegørelse af konceptet økosystemsbevarelse, bliver etikens rolle i naturfredningsprojekter diskuteret med et fokus på den værditeoretiske baggrund, der argumenteres for at være nødvendig for en korrekt udførelse af naturfredningsprojekterne. Her bliver flere forskellige værditeoretiske perspektiver undersøgt blandt andet intrinsisk værdi og instrumental værdi.

Der bliver her argumenteret for, hvorfor især en systematisk værdi i denne naturbevaringspraksis er favorable, men at den også har sine svagheder. Hvorfor det er nødvendigt at skabe en ny form for værditænkning, som kan fungere som en ramme for naturbevaringspraksisser. Denne nye form for værditænkning bliver analyseret som værende en mangefacetteret værditænkning, da den kombinerer og indeholder alle de diskuteret værditeoretiske tilgange med udgangspunkt i systemtænkning og systematiskværdi.

Efter dette skifter specialet fokus fra økosystemsbevaring til genvildningskonceptet. Her er begrebet især sat i fokus. Siden den begrebslige innovation i 1989 har konceptet udviklet sig meget, og mange nye tanker om og metoder til at udføre genforvildning på er blevet taget i brug. Nogen af hovedtankerne i denne diskussion, er blandt andet ideen om at forsøge at genskabe naturen tilbage til en bestemt tid, hvor den var urørt af mennesker, hvilket der argumenteres for at i praksis at være stort set umuligt. I den forbindelse bliver fordelene og ulemperne ved de forskellige definitioner diskuteret, og der argumenteres for, at en genforvildningsproces, der har et fokus bagudrettet mod tidligere tilstedeværende økosystemer, og samtidigt tage højde for natur-menneske relationen, er favorable for en succesfuld genforvildning.

Udover dette bliver Dolly Jørgensens påstand, om at genvildning risikere at blive et plastisk koncept, diskuteret, under hensynstaging til Andrea R. Gammons kritik og argumentation for at genvildning burde behandles som et klyngekoncept.

At et koncept bliver plastisk, betyder i sin essens, at det bliver et koncept med så stor bredde, at det ender med at miste den mening, det er sat ud til at have i forhold til at genskabe naturen. Hvorimod klyngekonceptstilgangen, der bliver tilnærmelsesvist støttet op om i dette projekt, tager en tilgang af et koncept kan have multiple definatoriske karakteristika eller aspekter hvor ingen af dem er en nødvendighed at have for at kunne definere konceptet. Dette er blandt andet med det formål ikke at forsinke konceptets og praksissens udvikling som er nødvendig for biodiversiteten.

Disse to perspektiver bliver afslutningsvist brugt til at påvise nødvendigheden af en middelvej for genvildningskonceptet, der både lader det være åben til fortolkning og samtidigt at have en ramme til at fastsætte, hvad der er og hvad der ikke bør ses som genvildning. Dette bliver baseret på en idé om, at en fælles etos skal være bagvedlæggende i alle fortolkninger af genvildning.

Slutligt bliver værditænkningen, der blev introduceret i afsnittet om naturbevaring, trukket ned og sat i forhold til genforvildningskonceptet. Her nås den samme konklusion om nødvendigheden af en ny værditeoretisk tilgang. Her bliver der lagt vægt på at blandt andet individuel intrinsisk værdi bør have en større fokus eller andel i den nye værditeoretiske tilgang, på en basis af dyreetisk velfærds tænkning i relation til de individer, der bliver sårbare i kraft af en genforvildningsproces.

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Introduction

We are in a global climate crisis, and further, a global fall in biodiversity has been observed, and it is being considered the start of the next mass extinction. This is today a well-known fact (WWF 2020). The global fall in biodiversity and the next mass extinction does, however, differ from the previous mass extinctions as the fall can be tracked back to our actions as humans, which unfortunately means that we are to take full responsibility for this crisis. It also means we have an obligation to try to resolve the crisis that we have created.

To treat the problem of the global fall in biodiversity and the sixth known mass extinction of life on earth, multiple approaches are used; one of these can be called ecological conservation¹, which seeks to protect nature and existing ecosystems from further decline. Another approach is known as rewilding, in which, besides protecting the existing ecosystems and nature, has the goal to try increasing the biodiversity of the world through multiple different methods and practices.

These two different approaches of trying to fulfill our obligation to fix the damage we have done will be the focus of this master's thesis, where there will be performed a conceptual analysis of the concepts ecological conservation and rewilding, with a foundation on value theory and systemic thinking.

To do this, the paper will be split into two sections, the first focusing on ecological conservation and the second section focusing on the concept of rewilding.

It is, however, to be noted that rewilding is thought of as a specific type of ecological restoration that is closely linked to ecological conservation, and with the idea of ecological conservation being the foundation for the approach of rewilding as to recreate or create new ecosystems one is first to know how to protect the ecosystems we already have.

The first section starts out by seeking to define what ecological conservation is. Thereafter ethics and value theory's role in conservation will be discussed. This will lead to a discussion of different types of value theory and what approach the practice of ecological conservation ought to take. Lastly, the notion of systemic thinking will be introduced as it is viewed as a necessary way of thinking to perform both ecological conservation and rewilding.

The second section, with the focus on rewilding, will start out with an introduction to the concept itself. After this, different approaches and definitions will be discussed to serve the need of gaining a clear understanding of this complex concept. This will lead to a discussion of two opposite ways of seeking to approach rewilding. One arguing for the need for a specific definition to rewilding that is to be maintained in the academic circles,

¹ Often just referred to as conservation in the project

and the other which argues for conservation to be left broad and open to interpretation. This will result in a discussion of which approach should be best to be taken for the success of the goal of rewilding.

Lastly, the value theory approaches introduced in the ecological conservation section will be set in relation to rewilding, where the need for specific attention to some of the value theory approaches is required due to the added factor of wildlife welfare that is included in the process of rewilding with reinstating new or extinct species into an existing ecosystem.

All of this results in the following thesis for this project.

Thesis

A conceptual analysis of the concept's ecological conservation and rewilding

Ecological Conservation

In this section, the concept of *Ecological Conservation* will be explored. Starting out the concept and the different definitions and understandings of the concept will be explored. This will be done through general scientific literature with examples from praxis. Secondly, the ethical foundation of ecological conservation will be discussed, as it is necessary for broadening the understanding of the concept and praxis, the key elements of ecological conservation and for the development of the concept and praxis. Thirdly different value approaches to ecological conservation will be discussed to figure out on what value basis ecological conservation should be practiced. Lastly, the notion of systemic thinking will be introduced as it is an approach that is needed for both ecological conservation and rewilding, and it is the way of thinking that is the basis for this project. The goals of these chapters are to get a broad and full understanding of ecological conservation.

Defining Ecological conservation

Breaking down the ecological conservation, we can start out with breaking the two words apart. Ecological is referring to an ecosystem or the environment, where both flora and fauna are actively incorporated into a whole and not separated entities. In The Stanford Encyclopedia of Philosophy, ecology is described as the following: “The science of ecology studies interactions between individual organisms and their environments, including interactions with both conspecifics and members of other species.” (Sarkar 2016). Hereby ecology refers to the interconnectedness between species and the environment and how this can be viewed as a form of system. It is important to note in this project that ecosystem and ecology should be viewed as referring to the same thing. A system wherein the interconnectedness between flora and fauna is taken into account as well as the complex physical factors that form a complex living system, or in other words, creates a habitat that allows for the survivability of all of the organisms in this environment.

Conservation means to preserve or protect something and especially used in cases where one which to prevent exploitation, destruction, or neglect of a natural resource; this is also referred to as conservation biology (Odenbaugh 2021). Conservation biology has biodiversity at its focus and seeks to conserve the biological diversity, which in short terms can be defined as: “... the sum total of all living things—the immense richness and variation of the living world. Biodiversity can be considered at many levels of biological variation, ranging from genetic variability within a species, to the biota of some selected region of the globe, to the number of evolutionary lineages and the degree of distinctness among them, to the diversity of ecosystems and biomes on Earth.” (Groom et al. 2006: 27; Odenbaugh 2021). By this conservation or biological conservation, which is referred to in this project, seeks to protect, preserve, or conserve biodiversity.

Combining the understandings of the terms ecological and conservation introduced above, ecological conservation can, therefore, in simple terms, be described as the process of protecting or conserving ecosystems. By focusing on ecological conservation, allows for a broad understanding and conceptualization of the concept and the praxis of conserving biological diversity, as in opposition to ocean conservation, wildlife conservation, specific species conservation and so on, ecological conservation encloses all of these, which gives the opportunity for a broad conceptualization, and discussion of the protection of the biological diversity.

Examples of ecological conservation could be the giant panda bear conservation and the Galapagos giant tortoise, though, in their name, one ought to believe that they are a conservation practice for a specific species though it is as much as the species as its environment and the respective ecosystems they are a part of, that is being tried to be conserved. Therefore, it will fall under the category of ecological conservation that has been defined above.

It is clear that most conservation practices will fall under the notion of ecological conservation as any species of fauna will only exist as a part of an ecosystem. Only practices such as zoos will not fall under this category. The same can be said in relation to flora. Often this is not for specific species but areas such as the Amazon forest. The Amazon forest survival is also dependent on the balance of the ecosystem it belongs to, and all of the flora and fauna in the area play into this balance.

Ethics' place in conservation – The role of value and ethics in conservation

In the following, the role of ethics in relation to conservation will be explored. This is done both for the sake of clarifying the need of ethics and value theory in conservation practice, for the practice to be both scientifically² and ethically practiced correctly.

Originally it was Soulé who introduced conservation biology 1985 where the objective was set as the following: "provide principles and tools for preserving biological diversity" (Soulé 1985: 727) and the ethical fundament to being the following four points presented by Soulé:

- "Diversity of organisms is good.
- Ecological complexity is good.
- Evolution is good.
- Biotic diversity has intrinsic value." (Soulé 1985: 730-731)

In this original description of conservation biology, we can see the fundamental thought was to preserve biodiversity as it is good and, by extension thereof, it is only right to protect it. Further, that biotic diversity

² Scientifically is used as a description of what is in danish called 'natur videnskaber' or 'natur videnskabeligt'

has intrinsic value, meaning that biodiversity is valuable, even without any kind of instrumental value for us as humans, though it does have many (Rolston 1994: 13, 16).

It is obvious by Soulé's original description of what principles conservation should be practiced on was founded in ethics. We needed to do it because it is the right thing to do, and we have a responsibility to do so.

Since Soulé's original introduction of conservation's fundamental principles, a paradigm shift, between 1985 and 2015, has happened, where biodiversity has taken the center of the ethics instead of biota itself; however, conservation's fundamental principles have remained almost unchanged, argues Skandrani (Skandrani 2016: 541-542). Skandrani further argues that biodiversity today has become equal to and replacing 'nature' (ibid.). Though the foundation might be the same as before, the notion of biodiversity becoming equal to or replacing the concept of nature are of importance. If this statement is true, it would alter "[...] the qualifying feature that holds or is the bearer henceforth of the intrinsic value." on which conservation is practiced (Skandrani 2016: 542).

Soulé's foundation for conservation practice is heavily based on ethics in terms of what is right and wrong, good and bad, as well as what holds value. The fundamental idea of biological diversity is good, and evolution is good and ecological complexity is good, is still triumphing in the world of conservation practice, and rightfully so, as, with our increased knowledge of biodiversity importance for the world's health and our future survival, only a fool would deny these statements as being right. As Skandrani states, most of the conservation's fundamental principles have remained almost unchanged; however, one point has and still is up for debate. The debate in which, whether there is a need for ethics in conservation, and if so, what role it with fulfill is still being discussed. Specifically, value theory placement in conservation the role of value theory in conservation practice is being questioned (Baard and Ahteensuu 2019: 1-2).

It is a discussion of whether environmental ethics have a place in the discussion of conservation, especially the role of value theory, and if environmental ethics can provide something good to the topic of conservation. Baard and Ahteensuu argue environmental ethics does have a place in conservation, and not only to serve a rhetorical purpose which Baard and Ahteensuu argue are the opinion of others, particularly intrinsic and instrumental value (Baard and Ahteensuu 2019: 2), which belongs to the most common and frequently used value theory. Environmental ethics for ecological conservation is an important factor for the whole premise to work and not only for a rhetorical purpose. Value theory gives us the answer to the question of why we should conserve ecosystems; at the same time, it also instills the premises for the praxis to be based on. One should not practice ecological conservation without knowing why. The complexity of trying to preserve eco-

systems that we do not fully understand the interconnectedness of is an enormous task. At times the workers, whether it is a biologist or other practitioners, will have to choose to prioritize the protection of some species over others, methodologies and tools for the action itself. This often without knowing scientifically what the truly right choice is to make.

The doubt of the relevance of environmental and moral ethics in the discussion of the importance and how conservation ought to be done, Baard and Ahteensuu formulate as the following: "Environmental ethical discussions have little positive to contribution to make to conservation, and are therefore redundant" (Baard and Ahteensuu 2019: 1). This is referred to as the 'Redundancy Position' or 'RP' for short. The redundancy position can take multiple forms, one of which is the RP which recognizes the role of value in the discussion but reject environmental ethics relevance in providing something positive contribution. This Baard and Ahteensuu refers to as the altered RP (Baard and Ahteensuu 2019: 2). The notion of the altered RP Baard and Ahteensuu brings up, if true, is important for the effect of ethics in conservation practices. If the general position towards ethics and its role in conservation by the practitioners is of a negative character, it will have an undermining effect on what should be an essential part of the decision making.

The questions about what to preserve, why or why not, by which methods and so forth are all questions based on what we wish to preserve and what we value, which Skandrani mentions as being some of the main questions asked in the conservation debate today and further that these questions are guiding the "scientific as well as political conservation efforts and decision-making at a global scale" (Skandrani 2016: 542). These questions and decisions are based on value judgements, as Skandrani also points out (2016: 542), and these value judgments cannot simply be driven by logical reasoning, which only emphasizes the need for ethics to be an active part of the conservation practice.

One simply must have an ethical foundation that can be used to set up a system of how to approach these choices, where and when the scientific methods fail or can only give part of the answer to the question on hand, due to the severe complexity of ecosystems or when they are not capable of providing an answer. This is to ensure that these choices will not be based on internalized ideologies and preferences, which often will have a great influence in times like these.

At the same time, questions of power come to mind. Questions of who gets to decide, where and what is going to be conserved, as well as against what, for example, the amazon rain forest vs. deforestation. Often these are in the first instance political decisions, where especially economic value seems to play an essential role. As for the case of the protection of the Amazon rain forest, it is well known that the president of Brazil, Jair Bolsonaro, has and is trying to reduce the protective measures that have been put in place to protect the Amazon forest against deforestation (Wallace 2020). If he succeeds in his goals, this would be a major threat

to prevent climate change, the world's biodiversity, and also to the indigenous communities connected to the amazon forest (ibid.).

The answers to the questions of who, where and what, in other words, who has the power to decide, are ones that should also be included in ethical foundation to make sure all relevant factors and people are included in the decision process. This is to ensure the prevention of economic, political or other forms of corruption being able to dominate the decision process. At the same time, the ethical foundation should also ensure to give the minorities and most affected people, such as indigenous people, a voice and active choice in the actions that are going to happen, which are people that are often overlooked in these types of decisions. The ethical foundation should also ensure that experts in the area, such as biologists, get a voice to further ensure the true value of nature is understood before the decisions are made.

The role of ethics and specific value ethics in conservation is therefore of great importance. It is the basis for the whole practice and serves as a framework for when decisions are to be made, and can help with distributing the power fairly for who gets to have a say in the practice. Therefore, the role of ethics is not to be undermined; neither is the importance of the underlying value theory, nor is it in any way redundant as Beard and Ahteensuu states have been expressed.

The value of nature, biodiversity, and ecosystems

In the chapter above, the role of ethics and value theory in relation to ecological conservation has been discussed. It was clarified that value theory serves as an important guiding framework for the decisions that are to be made in the conservation praxis. However, one of the big questions brought forward by Beard and Ahteensuu was the question of what type of value theory needed to be used in conservation for it to be truly meaningful and serve the wished purpose.

When referring to value theory, in relation to conservation, one is asking the question of why should we protect nature? Why should we protect and conserve ecosystems or restore or recreate these ecosystems? As well as the question of who gets a say in this debate of what and why.

These types of questions refer to the question of nature's, biodiversity's, or ecosystems value. But how do nature, biodiversity and ecosystems hold value? Is it to us, to them, or in itself, it holds value?

To get into this discussion, one is to gain an understanding of the different types of value there is generally spoken about. We have already shortly been introduced to one of the three basic forms of value, intrinsic value, as it was written into the foundation of conservation biology by Soulé. "Biotic diversity has intrinsic value" (Soulé 1985: 730-731). But what does it mean that biotic diversity has intrinsic value?

Intrinsic Value

Intrinsic means to value something "without instrumental reference". This means if something has intrinsic value, it is not based on the use, need, or satisfaction we get out of that something as humans, but that it in itself has value, just for being what it is. However, according to Rolston, this leaves the question of where the value is located or placed. Is it somewhere in the object itself? Is it autonomously, meaning is it the object itself that holds the value or is it something that is given to the object by others, like humans? (Rolston 1994: 13-14). Rolston states the following about this question:

"if we try to take the term *intrinsic* seriously, this cannot refer to anything the object gains, to something *within* ('intra') the present tree or the past trilobite, for the human subject does not really place anything on or in the natural object. [...]. The *attributes* under consideration are objectively there before humans come, but the *attribution* of value is subjective" (Rolston 1994: 14-15).

This means thou it might be us as humans that come and acknowledge, for lack of a better word, the giant redwood tree's intrinsic value for simply being a magnificent tree, for example. Then the redwood tree has not changed; the intrinsic value of the redwood tree that we acknowledge and appreciate is not something new that we have given it or something that is placed upon it. It was already there as the tree itself (Rolston 1994: 15).

For biotic diversity, as Soulé states have intrinsic value, would mean biodiversity in itself holds value. We are not needed for biodiversity to have any value; biodiversity has value in itself. The idea of stating that biodiversity or biotic diversity has intrinsic value means it automatically qualifies for being worthy of protection, no matter what our opinion as humans might be. This is a reasonable value ethic to base the practice conservation on since it creates a reason for the protection of biodiversity without the reasoning be bound up on any other effect than biodiversity being good. At the same time, it also gives reason to maintain all parts of what constitutes the biotic diversity in the area, where the conservation practice is taking place since it is not specific creatures or the like that carries the value, but them all together.

The problem with intrinsic value, one that will also be explored more later, is how in its abstractness of value being in the object itself, and not being something that we can quantify in terms of money, for example, one might not be able to resonate with the decision-makers or the lay people in the area (Baard and Ahteensuu 2019: 2). A major problem that will be hard to evade no matter what value type the practice is based on.

Instrumental value

Instrumental value is a form of value that is dependent on how we as humans can see the use of that object; it is a means to an end. What can we acquire by using this object? Does it satisfy a need? Does it satisfy or

give us a certain feeling? It is all depending on how we as humans experience the thing and what it can give us (Rolston 1994: 13, 16). This means that we only see the tree as something that supplies firewood, gives oxygen and so on. The value is based on what it can give us (ibid.).

Some examples could be the tree as firewood, as mentioned before. The cow as a food resource, in terms of meat and a variety of dairy or as a resource for leather or hides, that can be used for multiple things such as clothing products. When the cow or the cow species is viewed in this way, it has its value in what we can use it for. This forms the basis for the cow farm industry.

To set it in relation to ecological conservation, one could choose to only preserve specific species in an ecosystem for its specific effect and what it means for us as humans. A real-life example of this could be the argument for conserving whales, not being that they carry intrinsic value, but an instrumental value in their ability to store huge amounts of CO² and support the growth of phytoplankton which are vital in their own as they store approximately 40% of all carbon emissions produced (Rooney 2019). To put this into a measure, much of the world functions by today, economically, then a single great whale by these abilities is worth more than 2 million dollars, and with the current population that becomes more than 1 trillion dollars (Rooney 2019).

By relating to an object's abilities to provide us as humans something we like, we give it instrumental value, whales just by their abilities of storing carbon emissions and its effect on ocean lifecycle and production of phytoplankton, we can by relating it to economic terms come to understand the importance of protecting and conserve whales, and the ecosystem they are a part of.

This approach of instrumental value in relation to ecological conservation could be favourable in relating to decision-makers, as economic value is something that is often highly prioritized. In today's world, the appeal of instrumental value is not as easy to sell, in relation to ecological conservation, to the decision-makers. The worth of the whale is not money they see, nor get or must pay if they do or do not conserve the whale. The same can be said in relation to any other form of intrinsic value one might put onto nature, and it is worth in relation to keeping up the biodiversity and its effect on fighting climate change. For a chance for this to work, it requires a specific economic framework to be set in place nationally or globally, where the economic value of nature becomes a real and tangible thing, which some also argues is a necessity for us to be able to conserve nature and fight climate change (Gomera 2018; Cohen 2017).

A framework where the worth of nature would have a price tag not compiled by the economic worth of wood as a building material, for example, but rather the worth of the trees abilities to store carbon, give shade and home to wildlife, and generally for its purposes in the ecosystem it is a part of. A framework where these factors would not serve only as a theoretical worth but instead get turned into an economic worth in which

if the tree is harmed or removed, one would have to pay that price. To use the whale as an example again, this would be a price tag of 2 million dollars for either killing or bring harm to the whale or its environment, and on the flip side, someone should also be able to gain from actively taking part in conserving the whales and protect its environment, though this would be of lesser importance.

The short comings of intrinsic and instrumental value in relation to ecological conservation

As mentioned, then conservation is originally based on biotic diversity having intrinsic value. Skandrani argues that Soulé's framework for conservation calls for the protection of ecological collectives, and by this, the intrinsic value is seated in the collective and not on each individual. By ecological collective, she is referring to populations, species, and ecosystems (Skandrani 2016: 543). The problem with the intrinsic value being in the collective and not on an individual basis is how it allows for a distinction and estranging between non-human individuals and human individuals, as the individuals in the collective are only viewed as a collective. The result of this is the conservation discipline claims it is backed by ethical axioms, where they should instead state that the decisions are based on "ecological theory and scientific claims about the ecological function of objects of conservation concern" (Skandrani 2016: 543-544). This connects with the role of what ethics and value theory have in the discussion of conservation practice, in which we have already concluded it is a necessary fundament for the practice as a whole.

A further problem with the collective approach and the current practice treating individuals as ecological collections, is how these collectives get turned into mere data, has resulted in conservation biology making non-human being ethically invisible (Skandrani 2016: 544).

The treatment of the individuals in these collectives as pure data, instead of something carrying life and value, is what allows the destruction of non-human individuals, which are performed in the thousands each year, all in the name of biodiversity and genetic diversity, which is common knowledge, according to Skandrani. By this, Skandrani points out that the same discipline created to protect and fight against the destruction of species has become the destroyer (Skandrani 2016: 544).

This eradication is not based on ethical premises but on a scientific basis, which Skandrani argues to be a problem, as scientific theories are often changing and corrected (2016: 544). An example of this could be the arguments for the eradication, such as the nativeness of a species, as multiple scientists are questioning the validity of using nativeness as an argument for eradicating invading species (ibid.).

Based on this, Skandrani sets up the following question: "Can scientific reasoning be the justification for the ethical invisibility and slaughter of non-human beings?" and further, whether we want to "practice science-based on ethical considerations or should our ethics (as in the encounters with the rest of the living) be dictated by science?" (Skandrani 2016: 544). Skandrani further gives an important point of one ought to pay

attention to possible "hidden or not necessarily conscious ideological representations" that might play a factor in the scientific theories on which conservation is performed (Skandrani 2016: 656). She here points out the human's minds desire for order and certainty in a world that's ever-changing as one of these possible ideological representations (ibid).

This point seems particularly important if the slaughters of invasive species are based on this principle of us as humans wanting order and certainty, meaning keeping things as they were when there is not a true scientific basis for this action which Skandrani states have been discussed if not proven by multiple scientists. In these cases, an unreasonable and unethical killing of 'invasive species' has taken place, with no clause for the action, as the species did not possess a danger to the ecosystem (Skandrani 2016: 545, 544). Further one is to consider if an ecosystem is truly a stable thing or if it is something that is ever-changing and therefore not predictable whether the invasive species are actually a problem for the ecosystem it is migrating to one is also in this debate to reflect on the reasoning for these species to migrate into a new ecosystem where it has not been observed before.

Another problem being, as mentioned in the section about intrinsic value, intrinsic and instrumental value "may fail to resonate with many lay-persons and decision-makers" as Baard and Ahteensuu state it (Baard and Ahteensuu 2019: 2), as well as Skandrani, who further elaborates how conservation is also deeply connected to how lay-people and not just scientist's stance towards nature. As if more than half of the people on earth do not find any reason to care about nature, we're in trouble as there will be no true backing to conservation since it is well-known that emotions are a much stronger motivating force than that of science and logistics (Skandrani 2016: 546). Therefore, a healthy human-nature coexistence and relationship are needed to be successful in conservation, the protection of non-human life and the vital biodiversity that is the fundament for life on earth (Baard and Ahteensuu 2019: 2). If instrumental and intrinsic value does fail to resonate with lay persons and decision-makers, then value ethics would indeed only serve on a rhetorical level, without having much meaning and direct effect on the actions. Instrumental value might have a lesser chance to not resonate with lay-persons and decision-makers, as it is simpler to understand the premise of, as the nature in speech only have value for what it gives us as humans and therefore be viewed as a resource. However, intrinsic value is, in lack of better words, fussy in meaning for many and therefore might have a big chance of failing to resonate. One way one might be able to address this struggle is by giving nature rights similar to human rights, as it would acknowledge its importance and value; another way could be to put a price tag on nature, in relation to different factors such as individuals in the ecosystems, its role in preventing climate change and so forth, making the price incredible high, as what most people especially decisions makers would pay attention to is the price of the destruction compared to the gains.

Skandrani argues for a more individualistic intrinsic approach to conservation practice to avoid these problems. She argues that the problem with the ethical invisibility, due to the collective approach and the uncertainty with the scientific methods, should be resolved with an individualistic approach (Skandrani 2016: 543 - 546). The idea of a more individualistic intrinsic value approach does have its advantages in relation to help avoid the ethical invisibility by each individual carrying value would mean arguments of eradication because of nativeness would be harder. However, this would only work if this value approach would be recognized by the decision-makers, professionals, and lay-people as which as Baard and Ahteensuu point out, there is a big chance it will not (Skandrani 2016: 543 – 546; Baard and Ahteensuu 2019: 2). At the same time, intrinsic as well as instrumental value only works up to a certain point of complexity, which means up to a certain point of interconnectedness.

As mentioned in 'Defining ecological conservation', it is close to impossible to separate the species or individuals out of the system in which they are a part of for the conservation practice as they all play a part in maintaining a delicate balance.

A more suitable way would be a value approach that can encompass the complexity of the ecosystems in which the species and non-human individuals partake in.

Systematic value

A type of value approach that can possibly contain the complexity of ecosystems and interconnectedness could be what Rolston describes as a systematic value approach. Systematic value is better to describe such things as more complex ecosystems and are more of a concept than a tangible thing, such as a specific species or organism. An ecosystem is, however, a system that produces, evolves and invites new forthcoming things. It is the system that produces the products that we can and do give instrumental value, and at the same time, it is the system in which the individuals or collectives which have intrinsic value exists as a part of. To this, Rolston asks: "why not say that the process is what is really value-able, able to produce these values?" (Rolston 1994:22-24). He elaborates this as "A sentient valuer is not necessary for value. Another way is for there to be a value-generating system able to generate value. If you like, that is another meaning of value-er; any x is a valuer if x is value-able, able to produce values." (Rolston 1994: 29). This means that though organisms, species, individual animals, and so on are more or less sentient and therefore able to at least have or generate intrinsic value, then being sentient is not a condition for something to have or produce value. If it, for example, an ecosystem or the earth, is capable to produce something which holds value, then it has value (Rolston 1994: 29).

What there is particularly interesting with systematic value compared to the intrinsic and instrumental value in relation to conservation, and especially ecological conservation, is the value is not based on individuals but

rather the system in which these individuals are an essential part of. In praxis, this would mean that when arguing for ecological conservation practices, the argument on what to preserve or protect does not fall on specific individuals or species but rather the whole ecosystem. This also forces one to try and get a more in-depth and full understanding of the system and its processes. This approach can also be called system thinking which will be elaborated later on.

Systematic value does not fix the ethical invisibility of solo individuals and is probably neither going to resonate with lay people or decision-makers. However, systematic value does help to give a better framework for conservation practice as it forces one to recognize that it is only in the system these individuals, flora and fauna, truly exist and have both intrinsic and instrumental value. Systematic value also recognizes flora and fauna in the specific ecosystems such as the Amazon forest, both have intrinsic value but also have instrumental value as being part of the system, which for example, produces important medicinal herbs.

Though systematic value does not fix all problems, it is a step in the right direction due to its power to contain the complexity and assign value to the ecosystems, which no matter what kind of conservation you wish to practice, is a necessity for the flora and fauna to truly continue to exist, as they are all part of a big interconnected system.

A new value approach for ecological conservation

Since neither the instrumental, intrinsic or systematic value approach seems to be able to address and contain everything that should and ought to be included in the ethical framework for ecological conservation, we ought to look elsewhere in the hopes of finding a value approach that can address the standing problems.

Relational value

A relational value approach might be an option instead of intrinsic and instrumental value as it should encompass both intrinsic and instrumental value as well as address some of the critic points of the other value approaches.

Relational value is not based in objects or, as the quote from Chan et al. states: "are not present in things but derivative of relationships and responsibilities to them" (Baard and Ahteensuu 2019: 2; Chan et al. 2018: 1462). Instead, relational value is derivative of the relationships too, in this case, nature, which people have. The idea of the use of a type of value ethics that encompasses both intrinsic and instrumental value would be very favourable in cases such as ecological conservation, as its complexity is very high. However, an approach that seems to be undermined is the systematic value approach which would give value to the system

itself instead of singular organisms or species. This would allow for it to contain at least some of the complexity of the ecological conservation praxis. However, a systematic value approach also has fall groups and critic points, such as failing to resonate with lay-persons and decision-makers and removing the importance of individuals themselves by only viewing them as a part of the system.

The relational value approach also helps with deciding who gets to decide what is going to happen, but not with what and why, since it is bound by people's relation to nature and their cultural connection to it, which determines what sense of responsibility people feel for the nature in question. It is, therefore, not the direct answer to the problems that Baard & Ahteensuu, Skandrani or I bring up. However, one ought to seek out a value approach that also takes the relational value into account, as it could help with bettering the current approach and securing the most affected or most knowledgeable people's voices to be heard.

Baard and Ahteensuu also criticizes relational and explain the problems with the relational value approach and emphasizes that there needs to be some kind of boundary and principles set so that different interests, relationships and ideas of responsibility can be weighed differently in the judgement of what is right and wrong to do (Baard and Antheenshuu 2019: 3). Baard and Ahteensuu do, however, support the idea of an approach, which moves away from intrinsic and instrumental value to a value approach that encompasses both types and can help set down the foundation to how one should decide whether one type or way of doing conservation is better than another, and who holds more rights in the decision making for what should or should not be protected.

One premise for who should get the biggest say or a way to hierarchically differentiate the influence on the conservation practice in an area should be who is going to be affected the most or are closet related to nature in the area. This would, for example, be indigenous tribes that are either still living in or by nature or have a close personal and cultural connection to nature. The hierarchy for influence should, with this premise, go from closest personal and cultural relationship to least so big corporations or states, government or the like does not block the protection of nature due to financial reasons. For this to work, however, there would have to be a law either by the local government or a cross-border political institution such as the European government. It would be preferable to be set by a cross-border political institution as it would help prevent local corruption from removing this right of nature.

A new multi-faceted value approach

Through this chapter, multiple different value approaches to conservation have been introduced and discussed. However, none of these approaches seems to truly be fitting for a framework to practice conservation on. There is no question of the flora and fauna does both have intrinsic and instrumental value, and both approaches should be taken into account as they can both help address some of the problems of how to

make sure the practice resonate with lay-people and decision-makers, as well as the ethical invisibility of individuals in the ecosystem which leads to potential mass eradication of certain species due to arguments such as nativeness.

A relational value approach also has its favourable effects, specific in addressing the human-nature relation that is needed for successful conservation practice. Relational value also has a bigger chance to resonate well with both lay people as well as the decision-makers as it is directly driven by their relation to nature. However, the relational value falls short in relation to how nature should be protected and why. At the same time, relational value focuses too much on who should get a say in the practice compared to why the practice should be done.

Systematic value encompasses many of the things sought after in relation to acknowledging that it is as a part of the system that each of the individuals in the ecosystem makes sense and has value. It also helps in relation to encompassing the complexity that are ecosystems, and that we cannot just say this one is more important than the other or carry more value, and therefore should be prioritized in relation to the conservation practice. However, systematic value still falls short in relation to addressing the problems of ethical invisibility on the basis of seeing every individual and species as being part of the system. Systematic Value will also most likely fall short in relation to resonating with lay people; only instrumental and relational value would have a potential chance to fully address this problem if the right conditions and principles get fulfilled.

This leaves us with the question of what to do then since we have already argued for why it is a necessity to have an ethical foundation in relation to ecological conservation.

To truly have the ethical foundation and value approach needed to address the complexity that is ecological conservation, a new approach is needed. A multifaceted approach that combines each of the mentioned value approaches into one.

A systemic thinking approach to the practice of ecological conservation

Both the given definition of ecological conservation in chapter xx and the value theory chapter above relates to a systemic thinking approach. A way of thinking that is a necessity to perform practices such as ecological conservation the right way.

In this short chapter, the systemic thinking approach will be elaborated, as it both relates to systemic value, ecological conservation and rewilding, which will be addressed in the next section.

Sterling et al. argues that the conservation that is currently being conducted is based on that biodiversity is a complex and dynamic phenomenon. Sterling et al. defines biodiversity as "all life on earth across all levels (genes, population, and species - including humans, assemblages, ecosystem/landscapes, and the ecosphere) and the ecological, cultural, and evolutionary processes that sustain it" (Sterling et al. 2010: 1090).

The system-based approaches or system thinking can be explained as being approaches that "identifies and analyzes linkages among system elements. Systems thinking emphasizes interrelationships, feedback loops, nonlinearities, and time delays, among other system principles" (Sterling et al. 2010: 1090). If one is familiar with fuzzy cognitive maps (FCM), one might think of system thinking in the same way as these maps function. A method that is used in complex cases of interconnectedness such as ecosystems in which it is used for livelihood vulnerability analysis. Systemic thinking is an approach that gives a better picture of the whole by "iterative analyses of a system's dynamic connections and interactions" (Sterling et al. 2010: 1090). By this, one is to get a better understanding of the components of the system in relation to each other, meaning how they impact each other, and by this also a deeper understanding of the component itself (ibid.: 1090-1091).

While going through the system approach in relation to genomic structure sterling, et al. uses research to showcase how the systemic approach can help in relation to conservation practices. One of the things they showcase is the maintaining of genetic diversity could be heavily impacted by the cultural practices surrounding the species, whether it is a plant or an animal (Sterling et al. 2010: 1092).

One of the gains from the use of a systemic approach to species and ecological processes have given us a better understanding of how food webs, an essential concept in ecology, function, and get a better understanding of individual species or groups like predators, affect the ecosystems (Sterling et al. 2010: 1092). Sterling et al. further states that "It has been determined that biodiversity conservation strategies with a focus on individual species implemented without understanding the whole system as well as the interactions between species and feedback loops can have unintended consequences." (Sterling et al. 2010: 1092). Sterling et al. further illustrate how this comes into play with the systemic approach versus the linear approach. They take their example from Palmyra Atoll National Wildlife Refuge in the Central Pacific. Here introduced

rats were considered as a significant threat to the seabird and crab population. The seabirds are vital to maintaining the native forests as they release essential nutrients to the soil while nesting. Therefore, a drop in seabirds could have a significant impact on the whole terrestrial system. As rats were considered a threat to the seabird population, poison was used to reduce the rat population. This, however, resulted in an increase in coconut palms, which seabirds will not nest in, as rats might have reduced the growth of coconut trees as they ate the seeds. Therefore, the linear cause-effect analysis of rats being the problem resulted in the conclusion that the rats needed to be removed, might have cursed what the national park was trying to avoid, a decline in seabirds which by extension meant a reduction of the native forest (Sterling et al. 2010: 1092-1093).

By this example, Sterling et al. have showcased one of the problems that conservation might run into without using a systemic approach. If we only have a small picture of the whole system, we might end up having the opposite effect on preserving nature and biodiversity. This also plays into Skandranis's suggestion of changing from an anonymous collective approach to an individual approach to non-human life as if one is to understand the system as a whole; one is also to understand the individuals in the system.

Rewilding

In the first section, we have explored the concept of ecological conservation, ethics role in conservation, as well as different value theory, approaches to make a foundational framework for the ecological conservation practice.

In this second section of this paper, we will explore the concept of rewilding. A concept that can seem similar to ecological conservation, but with one major difference. Rewilding is and will become more important to prevent the global fall in biodiversity and restore it. Therefore it is important to gain an understanding of the concept vs. ecological conservation, as well as discuss which framework and thoughts will be needed to be successful in the process that is called rewilding.

First, the concept of rewilding, or its essences, will be introduced very briefly. Secondly, the different understandings of rewilding will be discussed. Thirdly the need for and the ethical framework needed for rewilding will be discussed in relation to what was introduced in the section about ecological conservation.

The concept of rewilding

To gain an understanding of what the essences of rewilding are, it can be favourable to dissect the word itself. Rewilding is constructed from re and wild. Re is referring to restore, and wild is referring to wildlife, wilderness, something untamed and can be understood as a reference to nature. Therefore, rewilding is seeking to restore, and more specifically, restore the wild.

Comparing this to the practice of conservation or ecological conservation where rewilding differentiate, is it does not only seek to protect or conserve nature or the ecosystems, but rewilding also seeks to restore, to bring back more, reestablish, to turn back the time to when there was more nature and biological diversity (Rewilding Europe, on LinkedIn 2021). Rewilding here has a very interesting meaning attached to it. The belief of a time before was better, on which it seeks to bring back. The time narrative that is connected to this is very interesting conceptually and brings forth multiple questions which will be explored.

The term rewilding was introduced by Michael Soulé and Reed Noss in 1998. Here the term rewilding was introduced as "The scientific argument for restoring big wilderness based on the regulatory roles of large predators" (Soulé & Noss 1998: 19; Drethen 2018: 326). Soulé and Noss further argued for three key features for rewilding, which have been referred to as the three C's. They are the following: "large, strictly protected, core reserves; Connectivity; and keystone species" leading to the three C's being: "Cores, Corridors, and Carnivores" (Soulé & Noss 1998: 19; Drethen 2018: 326). The rewilding concept has been developed and redefined many times since by multiple people and faculties and does today cover many more factors and approaches than the early definition and key features than Soulé and Noss's original definition (Drethen 2018:

326). However, the development and new definitions all share the essential core of what rewilding stands for, which also is seen in Soulé and Noss's original definition. To restore nature or create more nature.

The idea of the undisturbed and time

In environmental ethics and the discussion of protection of nature, there seemingly is a focus on the 'undisturbed' nature, as the one that needs our attention and protection (Drethen 2018: 325), which both can be observed in conservation and rewilding practices. Here multiple approaches to rewilding have a notion of time built into them, that they wish to restore nature to, and most wish to turn back time to a place where humans had not affected nature. This is connected to a part of the original core of rewilding, according to Jørgensen, and is still present in many of the rewilding practices. The original core, according to Jørgensen of rewilding, was to "erase human history and involvement in the land and flora and fauna" (Jørgensen 2015: 482; Drethen 2018: 326). These approaches are, in many cases, geologically bond, according to Jørgensen (Jørgensen 2015: 483 - 485).

One of these is the 'Pleistocene mega-fauna replacement' approach. This use and approach of rewilding were introduced in 2005 by Dolan et al. In this approach, rewilding was defined as "The restoration of large wild vertebrates into North America in Preference to the "pests and weeds" (rats and dandelions) that will otherwise come to dominate the landscape" (Donlan et al. 2005: 913; Jørgensen 2014: 483). In this type of rewilding, the goal is to recreate the wilderness to as it was at the end of the Pleistocene period, where mega-fauna roamed in North America (Jørgensen 2014: 484). According to Jørgensen, the timeframe of the end of the Pleistocene as the baseline for the rewilding practice has been popular since it was introduced, as the Pleistocene was prior to the human habitation of North America (Jørgensen 2014: 484).

Another approach to rewilding with a time aspect included are Price and Brown's approaches to rewilding. Price and Brown have different views on what timeframe to use as the baseline for the rewilding praxis, where Price argues that species that have been extinct, at least in the area, for more than one human generation, does not have public support enough to be reintroduced and is therefore not an option (Price and Brown 2011, in Jørgensen 2014: 484). Brown's approach is based on when the extinction of specific species happened and does therefore not have a specific baseline but multiple (ibid.). Brown et al., according to Jørgensen, "lump all of the Holocene faunal extinctions attributable to humans together and propose reintroductions and core area conservation for a number of keystone species". Here the important parts are the 'keystone species' and 'attributable to humans' as it is this that forms the baseline for what should and should not be reintroduced, and this is, according to Jørgensen, a more holistic approach to rewilding (Jørgensen 2014: 484)

A third approach type of rewilding is 'Productive land abandonment', which takes a different approach than the replacement or reintroduction of extinct species. As per the title of this approach, this type of rewilding is based on land abandonment (Jørgensen 2014: 484). These approaches are mostly based in Europe, and the idea is to give up agricultural land or production forests so they are able to revert "to a non-cultivated state" (ibid.).

This approach was defined by Hocht et al. in 2005 and Navarro and Pereira in 2012 as "a process in which a formerly cultivated landscape develops without human control" (Hocht et al. 2005: 86) and "passive management of ecological succession with the goal of restoring natural ecosystem processes and reducing human control of landscapes" (Navarro and Pereira 2012: 904). The most noticeable about this approach is how it is not bound to a specific time as a baseline as the others but focuses on the idea of trying to revert the cultivated landscape instead. Though this does refer to the times in which the land in question was cultivated, the idea is different, as instead of trying to restore it back to a specific type of ecosystem that has been present before, the idea is to let the land itself grow wild and establish a new type of ecosystem, that is fit for the current time. Another important factor in this approach is how by leaving the land to rewild itself, there is not only a focus on the fauna but also flora, which has been failed to be included in many other types and approaches to rewilding.

The notion of 'erasing human history and involvement' is, however, both ironic and paradoxical as nature has developed with human interaction (*homo sapiens*) for over 300000 years and even longer if other hominid races are taken into account, thereby striving for 'erasing human history and involvement' would mean to try to restore nature to what it was for over 300000 years ago (Khan Academy 2021; Drethen 2018: 325). When this is said, the 'productive land abandonment' approach has, however, found a way in which the idea of time could make sense, as this approach does not seek a specific time but a specific state of land as inspiration. This approach has also gained much popularity, especially in Europe, where the organization Rewilding Europe can be mentioned as one of the big practitioners of this approach.

In relation to this idea of 'erasing human history and involvement' one is also to consider the deep cultural connection to nature many local communities in specific areas have, as they and their family has been living in and with nature, protecting and working with it for millennia, which is not to be taken lightly (Drethen 2018: 326). To this, Drethen states that one should, instead of looking to the past as some rewilding agents argue for, seek to reintroduce nature or wilderness into society instead of looking to the past as some rewilding advocates argue (Drethen 2018: 326-327). By taking this approach, rewilding would be not only a conservation strategy but also a concept where the human-nature relation needs to be fostered (Drethen

2018: 327). This idea of involving the human-nature relation we have already explored in relation to ecological conservation where it was argued it is a necessity due to how if no humans care, the success of the practice would be impossible. Further, in an ever-growing human world, where our population needs more space all the time, it is a necessity to think our relation to nature into the equation of conservation practices alike.

Defining Rewilding

Trough we have already explored the origin and the idea behind the concept of rewilding, there is still a plethora of different definitions of what rewilding is out there. In relation to this, there are also many opinions about what rewilding is or what can constitute as being rewilding and how the practice with its definitions should be done. This will be explored in the following, where two opposite ideas about how rewilding should be done and defined will be discussed. One of these is the idea of rewilding is becoming a plastic term, with the call for a specific definition for rewilding, and the other is the idea of treating rewilding as a cluster concept, where rewilding does not have a singular specific definition but allows for a variety of definitions as long as they share the same ethos.

A definition overview of rewilding

So far, we have already looked at four different definitions and approaches to rewilding.

The original by Soulé where the primary focus was to restore big wilderness via the use of large predators as a regulatory means (Soulé & Noss 1998: 19; Drethen 2018: 326). Where they include three key features fore rewilding known as the three C's, the three key features are "large, strictly protected, core reserves; Connectivity; and keystone species" (Soulé & Noss 1998: 19; Drethen 2018: 326). The original definition, however, is very narrow in its approach with focusing only on big wilderness and large predators. Especially with a broader understanding of ecosystems' function, it is well known that even the smallest individuals can have a vital role in maintaining the survival of the system.

The second approach and definition that was introduced was the 'Pleistocene mega-fauna replacement' approach. This approach of rewilding was defined as "The restoration of large wild vertebrates into North America in Preference to the "pests and weeds" (rats and dandelions) that will otherwise come to dominate the landscape" (Donlan et al. 2005: 913; Jørgensen 2014: 483). In this approach, the goal is to recreate the wilderness in the Pleistocene period (Jørgensen 2014: 484). This approach and definition of rewilding do not strive far from the original from Soulé and Noss. However, it does have a focus on wanting to restore the mega-fauna to avoid pests and weeds that might overtake the landscape. The idea of wanting to reinstate to manage other breeds could be a potential good reasoning for the reintroduction of species in an area, but

only if the other species that are already present, such as rats and dandelions in this case, if these pose a major threat to the rest of the flora and fauna in the area or humans for that matter. However, this approach is still very narrow for the practice, especially with the focus of practice rewilding on the basis to avoid other unwanted species, which might be a subjective evaluation.

The third approach introduced was Price and Brown's approach, where the focus is on reintroducing species in the wished areas, based on how they went extinct from the area. If they went extinct by natural processes, they are not to be reintroduced; however, if the species went extinct in the area due to humans' actions, there is a basis for reintroducing them. This approach does have an important factor in relating rewilding to be needed due to human interaction. However, it will be hard to determine if the extinction of a species in a specific area is caused by human mingling or not due to the previously mentioned notion of almost no areas have not been touched by human hands. What is also favourable in this approach is how one is needed to consider the previous ecosystems and consider if the species went extinct simply as a natural process, and thereby because the ecosystem could no longer sustain them, or if they went extinct due to humans, meaning that the original ecosystem was or at least had the basis to be well functioning when reintroduced again.

The fourth approach we have already been introduced to was the idea of returning to the uncultivated by land abandonment and having nature itself spread and develop in the area. A very popular approach, especially in Europe. This approach, compared to the previously stated approaches, takes a different action perspective in letting nature do what it does best, being itself, by allowing space for it to spread. This type of rewilding is defined as "a process in which a formerly cultivated landscape develops without human control" (Hochtl et al. 2005: 86) and "passive management of ecological succession with the goal of restoring natural ecosystem processes and reducing human control of landscapes" (Navarro and Pereira 2012: 904). This approach's main feature of not being developed by human hands, which the others do due to the reintroducing of extinct species, has both its positive and negative effects. For the positive and what might make this approach favourable is how when nature 'rewild' itself, the ecosystem created in that area are sustainable and can without question maintain itself as it was produced by itself. The negative, however, is how long a process this is, and in some areas, it will be favourable to reintroduce both flora and fauna, both to speed up this process but also to ensure that the biodiversity is boosted. This could, for example, be in Denmark, where wolves were released and can help maintain the deer population in Denmark, which previously have been needed to be maintained by hunting (Håkansson 2021).

In the four previously introduced definitions of rewilding, we have explored all, but one focuses on the reintroduction of extinct species. An approach that raises some ethical questions of animal welfare that will shortly be discussed later in the chapter 'Value and rewilding – the same approach as conservation?'. Further,

what all of the previously introduced definitions of rewilding share is the lack of inclusiveness of humans other than a baseline for what state of nature is sought after and strive to return to.

Including humans into the rewilding definitions

In the following two definitions of rewilding, we will explore the definitions that will relate to human action and the human nature relation to a larger degree. The notion of including human action and or the human–nature relation is an important factor to include, as it forces us to reevaluate our own practices that have to lead to this current state of loss of biological diversity and lack of nature, that is the basis for the rewilding practice.

Lorimer et al. (2015) conceptualize rewilding into being "an ambitious and optimistic agenda for conservation", with projects that share an ethos of 'maintaining, or increasing, biodiversity, while reducing the impact of present and past human intervention through the restoration of species and ecological processes' (Lorimer et al. 2015: 40 in, Gammon 2018: 333). As it can be seen in Lorimer et al.'s definition, the concept of rewilding covers all projects which share the same ethos of ecological restoration, which also reduces the impact of human intervention (ibid.).

This definition is close to the previously stated core of rewilding of referring to restore, and wild referring to the wilderness, meaning nature meaning rewilding seeks to restore the wild or wilderness. However, according to Lorimer et al.'s definition, rewilding is seeking to reduce the human impact, both past and present, that have led to the current state of nature.

Previously it has been argued how the goal of restoring nature to a time before human interaction seems ironic and paradoxical as it would be almost impossible to do, and one ought also to consider that some human interactions have been and still has a positive effect on nature. This argument stays true; however, what one ought to pay attention to, especially with Lorimer et al.'s definition, is how it only calls for reducing the impact while also including both the past and present actions of humans into the equation. The notion of only wanting to reduce the impact of human interaction means it does not strive for a before human involvement as most of the other approaches do. At the same time, it recognizes how it would be theoretically impossible to remove all human interactions – both good and bad – especially in a process that, in most cases besides the land abandonment, is driven by human interaction.

However, one ought to note that stating we ought to remove or reduce the impacts of humans on nature; one ought to specify the types of impacts, as rewilding and conservation is in itself a human impact on nature and further not all human impacts on nature can be viewed as negative. Hence, one ought to include into the definition that it is removing negative human impacts, and not just human impacts.

What especially is favourable of the Lorimer et al.'s approach to rewilding is the conceptualization of rewilding being a type of conservation or ecological restoration practices which share the same ethos as rewilding, in this case, can be used as a description for multiple methods and approaches that are needed in specific cases that all share a common goal of restoring nature or wilderness in an area. It can also be used in this way be used in the human–nature relation debate.

Another definition of rewilding is George Monbiot's, who defines rewilding as "the mass restoration of ecosystems" (Monbiot 2015; Gammon 2018: 334). Monbiot does not only mean that rewilding concerns the ecosystems or nature but also, importantly, the human lives that are involved. As an example, this could be people living in or close to the specific rewilding area (Gammon 2018: 334). As Gammon writes then Monbiot's definition of rewilding therefore has two interrelated meanings:

"(1) Rewilding, to me, is about resisting the urge to control nature and allowing it to find its own way. It involves reintroducing absent plants and animals (and in a few cases culling exotic species which cannot be contained by native wildlife), pulling down fences, blocking the drainage ditches, but otherwise stepping back. (2013: 9–10)

(2) The other definition of rewilding that interests me is the rewilding of our own lives. ... [I]f we have spaces on our doorsteps in which nature is allowed to do its own thing, in which it can be to some extent self-willed, driven by its own dynamic processes, that, I feel, is a much more exciting and thrilling ecosystem to explore and discover, and it enables us to enrich our lives, to fill them with wonder and enchantment. (in Sahn and Monbiot, 2014)" (Monbiot 2013: 9-10; Sahn & Monbiot 2014; Gammon 2018: 334).

Monbiot's definitions or view on rewilding contains an interesting aspect of involving ourselves as humans in the rewilding concept. Similar to the shared ethos aspect from Lorimer et al., Monbiot's definition allows us to question and apply the human-nature relation into the conservation and rewilding debate. Involving ourselves into the idea of rewilding, taking the stand that we ourselves also could favour being rewilded in the sense of reconnecting with nature is thought-provoking when also taking into account concepts such as the Japanese *shinrin-yoku* or, in other words, forest bathing, which has been shown to have multiple positive effects on humans, such as increasing the immune defence. Similar research on how nature and humans are more connected than often assumed has been made, where it has also been proven that without greenery of some sort leaves an extremely negative impact on humans' mental health (Bratman et al. 2019).

Another very interesting notion in Monbiot's definition of rewilding is how the rewilding practice can be taken into the everyday life of humans and into our cities. This is an approach that we have not explored before but is a relevant point in rewilding. The idea of being able to rewild cities also and bringing the rewilding process so close to our homes can be very favourable. Considering the possibility to rewild cities, with

the idea of this being a way of creating ecosystems in our cities that increase the biodiversity, could be a great prospect in relation to nature needing more space, when we have less and less space to give, due to our population expansion. Further, this idea could possibly help foster and mature the much-needed human-nature relationship that today is lacking, as nature is often viewed as something 'out there' to which we do not belong to. A thought process that has played a major role in creating our current position.

The good and the bad

In the above, we have explored six different definitions and approaches to rewilding and discussed the good and bad of each.

The first two definitions were criticized on the notion of focusing on trying to restore ecosystems to a time before human interaction altered the ecosystems and on being narrowminded in their approach of only focusing on reinstating big fauna into ecosystems. The third approach was argued to be slightly better than the first two in its approach of seeking to reinstate flora and fauna based on if or if not, they have been extinct due to human impact. However, this might be hard to truly identify and the same time, a question of how far back we ought to go.

The fourth definition was arguably the least problematic in its approach as it did not rely on actively reintroducing flora and fauna into an area, but instead giving nature space to grow and 'rewild' itself and reduce the human control of the area. It is understandable why this approach has become popular as it does not require much else than giving space to nature and believe in nature's own process.

However, this approach is criticized as both being slow in the process and for how difficult it can be to give up space when we have an ever-growing population in need of housing. At the same time, one ought to also pay attention to the fact in some place's nature have been damaged to a point where if other species are not reintroduced, the ecosystem has little chance of surviving on its own, especially in terms of wildlife regulation, in areas where big carnivores or grassers have become rare or extinct.

An overall critic of these approaches was, however, how they failed to include the human-nature relation into account. This led to the introduction of the fifth and sixth definitions.

The fifth definition, which also will be discussed in the following in relation to the idea of treating rewilding as a cluster concept, included the aspect of the human – nature relation in stating how rewilding is also seeking to reduce the past and present impact of human interaction. However, it was argued that one ought to include into this approach that not all human interactions with nature are bad or damaging, and therefore it should be specified that human impact that is sought out to be reduced are negative impacts to nature created by humans.

The particularly noticeable idea in this approach which ought to be included in every approach is the idea of

how rewilding is “an ambitious and optimistic agenda for conservation’, with projects that share an ethos of ‘maintaining, or increasing, biodiversity.” (Lorimer et al. 2015: 40 in, Gammon 2018: 333). This aspect will be further discussed in relation to the cluster concept idea that will be introduced later.

The sixth and last definition introduced contained a simple definition of rewilding as seeking to restore ecosystems; however, this specific approach further included two vital and interrelated ideas which directly connect humans and nature and foster the human – nature relationship. This approach also further opens up the option for rewilding in places like cities and not only in big areas outside of the human population.

Plastic vs. cluster approach to the rewilding concept

With the previous discussion of rewilding, we were introduced to many different approaches to rewilding and many more exist. However, what generally can be said is that rewilding encircle a specific kind of ecological restoration (Gammon 2018: 332 - 333).

A critic of rewilding is based in stating that rewilding concerns a specific kind of ecological restoration, still leaves the concept broad and able to be defined in numerous ways, as it has been illustrated above, and it can therefore be risked that the term ends up becoming ‘plastic’, and therefore lose its meaning and lead to confusion of what rewilding represents (Jørgensen 2015: 485; Gammon 2018: 333).

Jørgensen is worried about the term rewilding becoming plastic as she argues the use of a single concept such as rewilding to describe the many factors and types of ecological restoration can end up rendering the term useless in factually describing an actual process. Jørgensen does, on this basis, advises against “condensing them into a single definition” as Gammon writes (2018: 333).

However, Jørgensen is criticized for arguing for rewilding becoming plastic and for wanting to condense rewilding into a singular definition that should strictly only be used in academic and scientific circles and not by environmental activist for example, as she argues that by rewilding being adopted by environmental activists and have further developed the concept of rewilding in a harmful way (Jørgensen 2014: 485).

Plastic words or concepts are “words developed in scientific language for discrete ideas that then move into daily use and take on different meanings according to the context” (Jørgensen 2014: 485). The problem with this, according to Poerksen and Jørgensen, is that when one word is used in too many different ways, it becomes “‘contradictory, doctrinaire, and imperialistic’. When many diffuse ideas are ‘squeezed into one concept and fastend onto one name’, an institutionalized word impoverishes both language and our conceptual framework by replacing precise words (Poerksen, 1995, p.6).” (Jørgensen 2014: 485). In other words, the word losses its meaning and can both mean nothing and everything at the same time (ibid.).

As mentioned earlier, multiple people take distance from Jørgensen's critic of rewilding becoming plastic by using it in many different contexts, both in academia and non-scientific articles and papers. One of those who criticize the notion of rewilding becoming plastic is Andrea Gammon. Gammon argues opposite to Jørgensen that environmental philosophy "cannot afford to be purely academic." (Gammon 2018: 335) but that we as a discipline "must be informed by ecological science and in touch with environmental concerns, questions, and understandings of a broader public in order to remain relevant." (Gammon 2018: 335). This is due to the idea of much is to be gained from using a broader perspective than the pure academic perspective, as many ideas and questions can exist outside academia that can help clarify and make the concept more precise (Gammon 2018: 335).

The cluster concept approach

Gammon instead argues for a cluster concept approach to rewilding.

Viewing rewilding as a cluster concept allows broad use of the term rewilding as long as it shares some properties that can be argued to be a necessity conceptually for it to be called rewilding. In other words, as Gammon writes, "That is, a cluster concept is a concept that has multiple defining characteristics or aspects, none of which is necessary to the definition" (Gammon 2018: 339).

This idea is close to Lorimer et al.'s idea of a 'shared ethos' in rewilding, meaning rewilding having a shared core, so even when the goals of the rewilding project and approaches are varied, it is still all rewilding (Lorimer et al. 2015: 40 in, Gammon 2018: 333).

To further explore Gammon's idea of treating rewilding as a cluster concept, it is necessary to look at two secondary uses of rewilding, which Gammon introduces as these are closely connected to the aspects Gammon argues to be a part of the rewilding cluster concept.

The two secondary uses of rewilding are reflexive, and primitivist rewilding, which Gammon argues is crucial for getting a broader and non-academic understanding. Both include humans in rewilding in various degrees (Gammon 2018: 336-338).

Reflexive rewilding is Gorge Monbiot's version of rewilding. This approach includes both rewilding of nature, but also human life.

Primitivist rewilding. This type of rewilding is not about rewilding nature but instead humans. With this approach to rewilding, one wishes to "becoming freer and more self-sufficient, of liberating oneself from the entanglements of capitalism and domestic life and getting back not to the land but to the wild." (Gammon 2018: 337).

Though agreeing with Gammon in that much can be gained from not only using the academic understandings of rewilding, and Monbiot's approach have positive and necessary qualities that could it be relevant to include in the rewilding debate, as previously argued.

For Gammons Primitive rewilding concept, with the idea of rewilding being concerning ecological restoration and protection, it is hard to find a place for primitivist rewilding in the rewilding discussion due to its specific focus on humans and the notion of becoming freer and more self-sufficient.

The aspects of rewilding as a cluster concept

Gammon introduces eight overlapping aspects of rewilding that she argues make up for rewilding as a cluster concept. She argues that these points or characteristics, as she calls them, can both expand or shrink, as the definition and use of rewilding changes (Gammon 2018: 339-341).

The eight characteristics she introduces, in no particular order, are the following:

1. “Rewilding restores ecosystems
2. Rewilding decreases the degree of human intervention and management of ecology
3. Rewilding is defended ecologically by trophic cascade theory
4. Rewilding (re)introduces species
5. Rewilding is focused on a process
6. Rewilding is oriented towards the future
7. Rewilding involves non-human autonomy
8. Rewilding reimagines the identities of humans in relation to non-humans” (Gammon 2018: 339-341)

The first seven characteristics can arguably be recognized to various degrees as core elements in different rewilding processes, where nature is in focus if compared to the introduced definitions in ‘A definition overview of rewilding’. The second point is, however, interesting as it supports the idea of rewilding is a process of moving away from human intervention. However, there could, as argued earlier, be situations where human intervention would be needed, and at the same time, both rewilding and other conservation practices all involve human intervention one way or another. This critic does, however, not mean it has to be removed, but it is a factor to be cautious about.

The seventh point is also particularly interesting as there can be situations where the non-human autonomy would not be included. An example could be situations where one might try to rewild cities, by reintroducing

nature into the cities by green and garden roofs or the like, where non-human autonomy might not be something to divert from. In cases like this, one also ought to think the human-nature relation into rewilding, such as in Monbiot's reflexive rewilding.

Point number eight are derived from reflexive and primitivist or similar forms of rewilding, and therefore differs from the rest in the humanistic focus of the point, especially as previously discussed in the primitivist rewilding, which does not concern itself with nature, but with humans as its main focus (Gammon 2018: 337, 341). It is vital if this point is to be included in the cluster concept a more specific framework for what isn't rewilding, such as the primitivist rewilding, are included into the core principle of the cluster concept.

Plastic or cluster or a combination?

In the above, the many understandings and meanings of the concept of rewilding have been explored. On one hand, we have some that argue for a singular hard definition to ensure the rewilding practice does not become plastic. On the other hand, some argue for the many types of understandings of rewilding as being positive, which adds to the development of the concept and its core approaches. Where one approach seems to be constricting for successful rewilding, another seems too broad in its approach, so rewilding might end up losing its core of wanting to create or restore more nature and help the global fall in biodiversity.

When this is said of one of the approaches, however, is favourable, the notion of rewilding as a cluster concept. Though it has its problems, it is favourable as it provides the option for the practice to be refined and further developed while also not gatekeeping the practice itself. However, Jørgensen's notion of rewilding ending up losing its meaning and becoming plastic should be considered carefully.

When stating one ought to consider Jørgensen's point carefully, it is with the idea of what rewilding should or could become if a stable but flexible framework for what is and what is not rewilding. The framework should allow for some variation; however, it should have a set core which is a predeterminer for what is called rewilding. This core ought to ensure rewilding is staying focused on nature and biodiversity.

With the above taken in perspective to set a definition for rewilding and supporting the idea of treating rewilding as a cluster concept, Lorimer et al.'s definition and the idea of rewilding being "an ambitious and optimistic agenda for conservation", with projects that share an ethos of 'maintaining, or increasing, biodiversity' comes to mind (Lorimer et al. 2015: 40 in, Gammon 2018: 333)

The idea of rewilding having a shared ethos of maintaining or increasing biodiversity as its purpose is an attractive approach to have as a fundament for rewilding as a cluster concept, as it addresses the problem of rewilding ending up becoming to plastic or at least helps identify what should not qualify as rewilding.

By adopting this definition, one will be able to easily distinguish what is and isn't rewilding, as rewilding potentially could be anything that focuses on increasing biodiversity, and it will also make it clear the purpose of what the rewilding practice is.

However, one critic point to Lorimer et al.'s definition would be the part of either maintaining or increasing biodiversity. Here arguably, the practice of maintaining the world's biodiversity would be more befitting in relation to ecological conservation and should therefore be removed from the notion of rewilding, as rewilding is a practice that takes a step further than conservation, in seeking to restore or create ecosystems.

Value and Rewilding – the same approach as conservation?

As previously discussed, rewilding is closely related to the practice of conservation. They both seek to protect nature with the purpose of helping the biodiversity crisis that is currently going on. Rewilding does, however, add the step of restoration or creating of ecosystems.

With conservation and rewilding close relation to each other, it should come as no surprise that the value approach to rewilding would be similar to that of ecological conservation.

As argued in the 'Ethics' place in conservation – The role of value and ethics in conservation' a foundational framework based on value theory is required for the practice of ecological conservation, since it serves as a guiding framework when the scientific methods fail and force specific ethical questions to be taken into account. The same goes for the rewilding practice.

In the mentioned chapter, there is argued for the need for a new value approach which should be based on a systematic value approach and systemic thinking, but also be able to contain the other value approaches. The same argument goes for the concept of rewilding.

In relation to rewilding, it will, however, be necessary to incorporate specifically the individual intrinsic approach when an approach of reintroducing or reinstating new fauna into an area, as the question of animal welfare here, becomes an important factor (Thulin and Röcklinsberg 2020: 4-7).

The reason for the specific focus on individual intrinsic value is based on the fact that when reinstating species into a specific area, it causes distress to the animal and often, some of the reinstated population will end up dying as a result of the move or new environment. Therefore, with the focus on the individual intrinsic value approach, it will ensure a foundation in which the individuals of the population that is to be reinstated are treated in a way that causes a little distress as possible (Thulin and Röcklinsberg 2020: 4-7)

For rewilding, the need for a systemic approach is also vital as for the practice of trying to either recreate or create new self-sustaining ecosystems, one has to consider the existing ecosystem and the ecosystem which the rewilding process seeks to create. Further, in relation to reinstating animals, the systemic approach is also needed as one ought to consider whether the current ecosystem can produce the needed subsistence for the reintroduced individuals to survive and likewise if the current ecosystem will be able to sustain itself with the added pressure of new species (Thulin and Röcklinsberg 2020: 4-7).

It is also important to note both in relation to ecological conservation and rewilding; there is a major chance for potential value crashes, where the ideas a specific value approach supports will be needed to be set aside for the practice to be successful.

Conclusion

In this master thesis, many aspects of ecological conservation and rewilding have been explored and discussed, with the purpose of exploring and conceptually analyze the two concepts.

Firstly, the concept of ecological conservation was explored and defined as the process of protecting or conserving ecosystems. Further, in relation to ecological conservation, the role of ethics and value theory was discussed based on a current debate in which some argue for ethics or value theory having no place in conservation practices or only serves a rhetorical purpose.

It was here argued and proven how ethics and value theory is not only an important part of conservation but a fundamental part of the praxis at it serves as a foundation for how to act when scientific methods fail to instruct what should be done. Ethics and value theory also serve the role of making sure that questions that are needed to be asked to be able to ethically and generally be able to praxis conservation will be asked. Further value theory is also serving the role of what aspects should be taken into consideration when discussing how to perform conservation.

The same argument for ethics and value theory's role goes for the practice of rewilding as rewilding is viewed as a form of conservation with an added goal of trying to restore or recreate ecosystems.

As for the rewilding practice, the concept was thoroughly explored. Multiple definitions and approaches were discussed. One common factor for almost all the approaches was identified, as seeking to restore or create ecosystems, often with the help of reintroducing new species such as big predators or grasses to help foster the creation of a more biodiverse world.

In relation to rewilding, two specific approaches were also discussed in relation to how the concept of rewilding should be treated. One of these was Dolly Jørgensen's notion of rewilding becoming plastic, due to the use of a single concept such as rewilding to describe the many factors and types of ecological restoration can end up rendering the term useless in factually describing an actual process. This approach is specifically targeted towards the use of rewilding outside of academic circles.

On the opposite end, the approach of treating rewilding as a cluster concept was discussed. A cluster concept was defined as "a concept that has multiple defining characteristics or aspects, none of which is necessary to the definition" (Gammon 2018: 339). This approach was favoured compared to Jørgensens suggestion of creating a singular strict definition for rewilding.

The notion of rewilding being a cluster concept was discussed in relation to eight points set forward by Gammon for what should be characteristics of rewilding practices. Here specifically, the notion of the human –

nature relation was paid attention to, especially in relation to what should and should not be categorized as rewilding.

Here it was argued that with a foundation in Lorimer et al.' definition of rewilding as being "an ambitious and optimistic agenda for conservation", with projects that share an ethos of 'maintaining, or increasing, biodiversity" (Lorimer et al. 2015: 40 in, Gammon 2018: 333), was favourable as it made a clear distinction of what practices could be branded as rewilding, and which could not. This was done through the argument of sharing an ethos of maintaining or increasing biodiversity. However, it was argued that the notion of maintaining biodiversity was more altered towards conservation practices and not rewilding practices.

Different types of value theory were also explored and discussed mainly in relation to ecological conservation, due to the fact of how similar ecological conservation and rewilding is, as rewilding can be considered as a form of conservation with the extra step of seeking to not only maintain but also increase biodiversity. In the section on value theory, there was argued for the need for a new multifaceted value theory; due to the complexity of both ecological conservation and rewilding, one value approach would not be able to address the multiple problems such as resonating with lay people and decision-makers, and ethical invisibility of ecological collectives.

The new multifaceted value approach should be based on the foundation of systematic value and systemic thinking as when working with ecosystems; it is needed to treat the system as carrying value as well as having great knowledge of how the ecosystems function. Further, the new approach should contain both individual and ecological collective intrinsic value to address the ethical invisibility of ecological collectives, as well as instrumental value and relational value to, among other help connecting with decision-makers and lay-people.

Throughout the project, the human – nature relation has also been discussed both in relation to ecological conservation, rewilding and the discussion of value theory and system thinking. It is vital to take the human – nature relation into consideration when discussing these factors since it is through our relation to nature these processes are facilitated, and ultimately it will determine if the processes fail or succeed.

Lastly, there is only to note that though much work is being done in the fields of ecological conservation and rewilding, there is still a long way to go. Both in relation to protecting and increasing biodiversity but also in relation to creating concepts and practices that are easy to understand and perform with both a scientific and ethical basis in the clear. Many thoughts and adjustments are still to be made, especially in the fundamental framework for both practices, and it is my hope that this master thesis can help move these much-needed adjustments along so that we one day can reverse the global fall in biodiversity.

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