The Compromises of Rewilding
Reconciling Nature and Humans in the Wilderness

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Abstract

The purpose of this thesis is to explore how rewilding has emerged as a new alternative to classic nature conservation to reconcile humans with wild nature. The study will explore what are the compromises required for rewilding in a Swedish context. It will focus on the expectations and the processes leading to the rewilding projects and how human expectations for landscapes, animals and nature have to compromise. Most of our modern landscapes being tamed and domesticated, they correspond more to an idea of beautiful, in opposition with the sublime which can designate the wilderness, which is, in Kant's terms, untamed, wild, and sometimes ugly and terrifying. If Kant considers that the only way for humans to enjoy this sublime nature is pure disinterest, we will look at how rewilding can be a way to restore autonomy and ecological integrity to ecosystems while offering to humans an experience of the sublime nature and letting them benefit from it. This paper will look at Rewilding Lapland as a case study, it proposes to rewild a large area in Northern Sweden by supporting some keystone species like the beaver and restoring key areas of the landscape like rivers and grazing lands. The stated aim of this Rewilding Lapland is to develop a nature-based economy where entrepreneurship and economical activities are combined with nature conservation. Thus, public awareness, local communities approval and nature-based economies around rewilding will be studied as compromises between nature and people.

Keywords: Rewilding, environmental aesthetics, wilderness, animals, value of nature, Sámi

Acknowledgements

Hélas ! ai-je pensé, malgré ce grand nom d'Hommes,
Que j'ai honte de nous, débiles que nous sommes !
Comment on doit quitter la vie et tous ses maux,
C'est vous qui le savez, sublimes animaux !
A voir ce que l'on fut sur terre et ce qu'on laisse,
Seul le silence est grand; tout le reste est faiblesse.

Alfred De Vigny, La Mort du Loup

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1. Introduction

Rewilding has emerged in recent years as a post-conservation model where ecosystems are restored thanks to the reintroduction of large fauna, creating trophic cascades that change the dynamics of the environment (Pereira & Navarro, 2015; Ceaușu, et al., 2015 ; Soulé & Terborgh, 1999). Many rewilding projects have proven successful in creating areas where humans have progressively withdrawn to leave place for a thriving nature (Cossins, 2014).

Several definitions of rewilding co-exist and the practice of rewilding can be different depending on interpretations. Some of the main differences in definition stems from which scale of time should be used as a reference for restoration (Jørgensen, 2015) when back-breeding species (Marris, 2009), or if rewilding is done for human enjoyments or for the intrinsic value of nature (Hall, 2014), or how much management should be necessary in the beginning to secure the long-term success of a rewilding conservation project (Soulé & Noss, 2014 ; Ceaușu, et al., 2015)

At the essence of most definitions of rewilding is the fact of letting nature proceed in a self-managed way (Lorimer & Clemens, 2013 ; Cohen, 2014 ; Soulé & Noss, 2014), adopting to a certain extent, a hands-off approach while letting species, especially predators, regulate ecosystems. In this way, "rewilding is the passive management of ecological succession with the goal of restoring natural ecosystem processes and reducing human control of landscapes" (Pereira & Navarro, 2015). While there is a need for human intervention in the initial phase of the projects to jump-start them, this theoretical hands-off approach where nature is left "self-managed" or even "self-willed" is questioned when human intervention is actually needed to sustain rewilding projects for far longer or far more extensively – often operating as de facto shadow managers beneath the surface – than anticipated or championed in the rhetoric. The example of the rewilded beaver in England, whereby beavers who autonomously colonize unintended areas and subsequently become subject to culling (Monbiot, 2013) shows that the aim of rewilding holds a paradox in its definition. While it promotes a vision of self-managed nature where wildlife thrives and creates and delivers new ecosystem services, the actual practice of rewilding still appears as an anthropocentric concept, having human parameters for visions as well as for practical management decisions (Swales, 2014). In the area defined to be rewilded as a fit environment for the beavers, they did not thrive and chose another place to colonize where they were considered as pest (Monbiot, 2013).

There are also several interpretations when it comes to the aim of rewilding. The concept intends to rewild nature but in the end it is done by humans, and to a certain extent, *for* humans, rather than for the sake of nature or animals. One of the main thinkers of rewilding, Georges Monbiot, presents rewilding as an opportunity for humans to rewild their life, and to bring back some wilderness in their life, which also makes rewilding a project for humans to

enjoy as a form of self-actualization or nature reconciliation in modernity (Monbiot, 2013)

The place of humans in rewilding projects has been questioned and conceptualised as a central issue to future plans (Swales, 2014). Rewilding could be included in a global sustainable development agenda as a way to solve environmental issues as biodiversity extinctions, impoverishment of soils because of intensive agriculture, or as a tool for climate mitigation through carbon capture (Pereira & Navarro, 2015).

To this end, rewilding projects have different aims in their discourse. They can aim at restoring a lost nature; reconnecting humans with wilderness; or optimising abandoned farmland to deliver ecosystem services (Pereira & Navarro, 2015). In some cases human perception of how wilderness looks can be different from the result of rewilding (Hall, 2014). Especially when animals are used in rewilding projects, to serve as ecosystem engineers delivering a suite of ecosystem services, the open-endedness of such experiments means that the projects may not necessarily produce the desired outcome in the view of managers'. This, in turn, can impact upon ethical or animal welfare issues where the wildlife is culled, removed, relocated or otherwise interfered with (Jamieson, 2008; Von Essen & Allen, 2016), as demonstrated in the English beaver case.

Given these practical and conceptual problems, in this study we will explore how rewilding projects *explicitly or implicitly* compromise on different aspects in their conservation practice to reach an improved ecological state and biodiversity for nature. By compromise is meant a reciprocate promise to settle a conflict, made in a verbal agreement (Fumurescu, 2013). It aims at creating a mutual understanding of a solution based on an oral contract between parties. This is particularly so, when the compromise entails still allowing humans to make an ostensive business out of nature, "Rewilding Europe wants to make Europe a wilder place, with much more space for wildlife, wilderness and natural processes. Bringing back the variety of life for us all to enjoy and exploring new ways for people *to earn a fair living from the wild*" (Rewilding Europe, 2015)

The aim of this study is to inform the practice of rewilding in the context of Swedish Lapland. It looks at rewilding as a way to explore the sublime wilderness of nature while making it compatible with the limitations and constraints to this kind of conservation practice. Ultimately it explores how rewilding can be a way to reconcile humans with nature, but this reconciliation does not come without compromises.

In imparting these insights, the research may be said to contribute to the field of restoration ecology and most specifically to rewilding practitioners. It attempts to explore the specificities of rewilding in a Swedish context while linking environmental aesthetics to conservation. It aims at linking the issue of conservation with preservation of Sámi traditional livelihood. Finally it proposes, through the identification of the compromises of rewilding to include it in a more general sustainable development agenda, coupling conservation of nature with economic and social development.

Research questions

- What are the compromises of Rewilding a landscape such as Swedish Lapland?
- What are the implications of these compromises for the aesthetics of rewilding?

In what follows, this study will first explore the different meanings of rewilding and previous examples of rewilding practices. Having identified aesthetics as a strong component of rewilding and in order to assert the values and issues in the case study, a theoretical framework of environmental aesthetics will be developed. In the light of environmental aesthetics the case study of Rewilding Lapland will be analysed in the through themes, which will later be discussed to identify compromises of rewilding in the present case study.

2. Background

2.1. Rewilding in theory

Rewilding has emerged in the past decades as a potential 'post-conservation' model, in that it partly departs from the premises of classical conservation management (Taylor, 2005) (Swales, 2014). It is based on reintroducing keystone species and leaving nature, to a certain extent, self-managed in this predicament (Soulé & Noss, 2014 ; Cohen, 2014). It could embody an alternative or a complementary method to classic conservation practices since it creates an autonomous wilderness that, in theory will require very little management (Pereira & Navarro, 2015) while bringing back wilderness in underused, degraded or abandoned areas (Ceauşu, Hofmann, Navarro, Carver, Verburg, & Pereira, 2015). This, indeed, is the principal argument of the network Rewilding Europe in their projects across Europe (Rewilding Europe, 2015 ; Jepson, 2016). But if the concept of rewilding has gained popularity amongst scholars as well as amongst conservationists on the ground, it is in itself a concept with multiple and often contested definitions. Corlett for example distinguishes the following main definitions and usages to rewilding (Corlett, 2016): trophic rewilding which consists in reintroducing animals to create trophic cascades that modify ecosystems, pleistocene rewilding that bases rewilding on pre-human Pleistocene Baseline, passive rewilding and ecological rewilding.

One of the issues with the multiple definitions is that it brings up many questions to how a rewilding project should be done, like what ecological baseline should be used to approximate a restoration goal, should it be exploited also for economic activities, or should animals be used in the project and if so, which animals?

Soulé, to whom rewilding is generally credited together with Noss, has defined rewilding as restoration projects that have the following characteristics: "large, strictly protected, core reserves (the wild), connectivity, keystone species" (Soulé & Noss, 2014). Keystone species can either be carnivores or engineer species that modify the landscapes, such as beavers. Some also suggest the use of megaherbivores, contending that grazing activities profoundly shape the ecosystem more so than any other trophic level (Vera, 2000). Those keystone species are reintroduced in rewilding projects to influence ecosystem functions and trigger trophic cascades that modify the relations between the preexisting species, including predation and grazing behavior, in turn effecting the very vegetation of the land (Svenning, 2016). The often-cited example is how wolves 'shape rivers' in Yellowstone National Park.

Thus we can distinguish the following main definitions and usages to rewilding (Corlett, 2016): trophic rewilding which consists in reintroducing animals to create trophic cascades

that modify ecosystems, pleistocene rewilding that bases rewilding on pre-human Pleistocene Baseline, and passive rewilding where the focus is on a complete hands-off approach. Even if Rewilding is usually involving the need to reintroduce species and to go back to a certain ecological state, it is still generally turned to the future as an alternative to classic conservaiton, a way to actively bring back healthy ecosystems while not necessarily trying to recreate exact species compositions (Dobson, Bradshaw, & Baker, 1997; Choi, 2007).

But one essential aspect that is at the core of rewilding project, is the wilderness. Etymologically, wilderness implies wild animals (Oxford Dictionary, 2009). It is a term that embodies an ecological dimension but also a distinct dimension of human perception and construction (Cronon, 1995). Where wilderness invokes an area that is devoid of human presence, wildness can be defined as "the autonomy of the more-than-human world where events such as animals moving about, plants growing, and rocks falling occur largely because of their own internal self-expression" (Woods, 2005). A common critique is that rewilding is "fake nature", pretending to bring back wilderness, but posing some ethical issues since it is man made, "Just as the aesthetic value of forged artwork, even if seemingly indistinguishable from the original, is radically lower due to lack of authenticity, so re- stored nature has radically lower ecological value due to lack of naturalness" (Cohen, 2014, p. 167). Wilderness used to be perceived as some nature that had to be tamed because it was unfit for human activities. It was linked to unexplored territories and untamed wildland, that had not yet been exploited or colonised by humans (Hall, 2014). But wilderness has progressively started to be associated with nature conservation as an element that has to be protected, even enhanced or brought back following industrialisation, urbanisation and development. Protection and restoration of wilderness is linked both with ecological aspects but also aesthetics. (Ceaușu, et al., 2015)

The aesthetics of the wilderness is intrinsincly linked to humans, and the emotions that we associate with it. This emotionnal dimension to the wilderness is omnipresent in the work of Georges Monbiot in particular, where his main argument for rewilding is to bring back enchantment into our lives at a time of ecological boredom and disillusionment with modernity. "My reasons arise from my delight in the marvel of nature, its richness and its limitless capacity to surprise (…)" (Monbiot, 2013). According to Monbiot, the modern human has disrupted his links with nature and lives in some artificial landscapes shaped by agriculture practices (now becoming post-agricultural), and rewilding could be an answer to reconnect with our lost ties to nature and the wilderness. Indeed, the relevance of rewilding as means of reconciling with nature is manifest in ideas such as the nature-deficit disorder, the extinction of experience and ecological boredom on the part of increasingly urban, alienated humans. Loss of regular contact with nature can create change in well-being and health, emotions, attitudes and behaviour towards nature. (Soga & Gaston, 2016). This distance from nature makes people generally less interested in nature, and there is a shift in value system regarding nature that makes people that are less in contact with nature less likely to want to protect it (Soga & Gaston, 2016). Rewilding then becomes a way for urbanised humans to reconcile with a lost paradise through the experience of nature. As can be discerned here, it seems to at least partly depart from the lofty rhetoric around unleashing a self-willed nature for its own benefit, championed by many rewilding scholars.

It is important to note that other interpretations exist in rewilding, indeed, some rewilding projects emphasize mainly passive management and self-management of nature without any or limited human intervention, when others focus on bringing back extinct species through sophisticated genetic reverse-engineering, like back-breeding, and de-extinction technologies in laboratories. These often try to approximate the Pleistocene baseline. These rewilding ideas have been popularised amongst others by Ted Talks (TedxDeExtinction, 2013; Ted Ed, 2014), and these extinct animals are usually megafauna. They are charismatic and iconic animals like the wooly mammuth.These kinds of projects have popularized the idea of

rewilding for the mainstream public but have also made it controversial since it links rewilding with controversial practices of cloning for example. In rewilding exotic or extinct megafauna, public enthusiasm is particularly important since potential revived species are higly charismatic animals that are linked to our imagination of prehistoric times and our willingness to fund, endorse or otherwise visit such sites/projects. While the argument for de-extinction are several, like for restoring ecosystems, one of the biggest arguments is the wonder it creates, "The last benefit might be called "wonder," or, more colloquially "coolness." This may be the biggest attraction, and possibly the biggest benefit, of de-extinction. It would surely be very cool to see a living wooly mammoth." (Sherkow & Greely, 2013, p. 33)

2.2. Rewilding in practice

Major rewilding projects that have been undertaken in the past decades illustrate the different applications in practice of the concept of rewilding. In Europe Rewilding has first been put in practice by Dutch conservationist Franz Vera (2000) with the Oostvaardersplassen project (Lorimer & Clemens, 2013).

As for the United States, Yellowstone National Park has seen the reintroduction of wolves in the middle of the 1990's, which had considerable consequences on the ecosystems and the landscapes (Cossins, 2014 ; Smith & Bang, 2009). The wolf, by predating on the American Elk (Cervus Elaphus) has had consequences on all of the landscape, changing even the meandering course of a river (Foreman, 2004). When predators had been culled off in the region, it had unpredictable consequences on the landscapes of the park "Following extirpation of the wolves in Yellowstone National Park, large populations of elk over-browsed riparian vegetation in many areas. Beaver, having nothing to eat, abandoned large valleys, and beaver ponds and riparian habitat greatly diminished, impoverishing the local biodiversity." (Soulé & Noss, 2014, p. 241). Then when the wolves were reintroduced as part of a rewilding project, a trophic cascade brought the beavers back and made them occupy the land and shape it with beaver ponds. The trophic cascades created by the introduction or reintroduction of predators to an area are at the essence of rewilding projects. The example of the wolf, the elk and the beaver in Yellowstone are an illustration of it. (Dobson A. P., 2014; Ripple, 2012).

In Europe the network *Rewilding Europe* has been conducting several projects in different European countries partnering with national or local conservation organisations as well as with local businesses (Pellis & de Jong, 2016). Rewilding Europe has coined its definition of Rewilding as following:

> "Rewilding ensures natural processes and wild species to play a much
> more prominent role in the land- and seascapes, meaning that after initial
> support, nature is allowed to take more care of itself. Rewilding helps
> landscapes become wilder, whilst also providing opportunities for
> modern society to reconnect with such wilder places for the benefit of all
> life" (Rewilding Europe, 2017).

Several rewilding projects have been initiated across Europe, with a strategy of creating partnerships with major conservation actors and to base their action on three strategic pillars: conservation, communication and entrepreneurship (Rewilding Europe, 2015). Important Rewilding enterprises have been done in different parts of Europe such as in Western Iberia where large feral herbivores have been introduced such as the Maronesa /Sayaguesa cows or Garrano horses, or in the Carpathian in Romania where several releases of European bison

coming from European zoos have been done (Rewilding Europe, 2017). Importantly, the network behind these presents rewilding also as an opportunity to make a "business case for the wild" (Rewilding Europe, 2015), and to spread rewilding as a new model for conservation. This aspect of the rewilding agenda of Rewilding Europe is especially important for several reasons. Partnering with local entrepreneurs like wildlife watching activities or outdoors sports allows Rewilding Europe to offer an alternative to activities linked to the exploitation of resources, and that could be more linked to the aesthetic qualities of the areas they work with. Making a business case out of a rewilding project is also a way to promote it and to engage a broad network of actors: Sámi communities (in this case), NGOs, etc.

In practice, some rewilding projects have however raised some issues that seem important to mention, whether it is from an ethical point of view or in terms of animal welfare in some cases.

2.3. Rewilding and ethics

Regarding landscape change, rewilding can raise issues when there is a fear that rewilding could cause the loss of cultural value of landscapes, and a feeling of estrangement from a new nature (Drenthen, 2009), given many rural people associate nature with cultivated pastoral landscapes and not necessarily with wilderness. As Miller (2006) explains it, people tend to take as a baseline for what an ideal state of restoration their childhood reference, which refers, in most places in the Western World to a landscape shaped by agriculture or production forestry.

There are also uncertainties regarding the animals that are used as ecosystem engineers in Rewilding. One of the pillars of rewilding is the use of keystone species to restore ecosystems as engineers (Soulé & Noss, 2014 ; Taylor, 2005). But whether it is through complex back-breeding, capture-and-release of feral animals or species displacement, it seems that in some cases the use of animals can raise ethical issues. Animals such as carnivores or large herbivores are important for what they bring to the aesthetics of rewilding projects since they are so charismatic to the public. The rewilding agenda is based on letting nature self-willed and using animal introduction or reintroduction, but using animals as ecosystem engineers can be questionable (Jamieson, 2008). The example previously mentioned of beavers colonizing beyond their defined rewilding areas shows how it creates ethical issues to put standards on wild or feral animals while wanting them to be their wild-selves. It creates "goldilocks standards" that are impossible for animals to approximate (Von Essen & Allen, 2016). Beavers just colonized another area than the one that had been chosen to be suitable for a rewilding project, and they thrived more in their accidental place than where they were planned to be rewilded (Monbiot, 2013). It is easy to see there the unfairness of the project towards beavers that just behaved in an unexpected way, instead of following planned perimeters of the rewilding area. Regarding animal welfare, several examples pertaining to the provision of supplementary feed versus leaving wildlife to fend for itself, essentially left to natural selection with the weakest ones likely to die and not adapt to their brand-new wildness. It was the case at Oostvaardersplassen in the Netherlands, where large herbivores could be seen emaciated and starving in their newfound wildness (Lorimer & Clemens, 2013).

In the more extreme forms of rewilding practices, especially using back-breeding or controversial cloning methods, the ethical and animal welfare implications are especially pronounced (Gamborg, 2014). De-extincting the auroch, for example, has involved an extensive crossbreeding regimen that largely appears to be guided by aesthetic standards – which new breed most resembles and evokes the extinct auroch. Further, the Pyrenean ibex was the first successful candidate to de-extinction by cloning, but it took several hundreds of attempt to bring a foetus to term, which died shortly of malformations (Sherkow & Greely, 2013). In this example, rewilding appears as a questionable practice with humans wanting to "play god" with nature, indeed: "de-extinction integrates three of the paradigmatic divine roles: creation, definition of the natural, and revival of the dead." (Cohen, 2014)

2.4.   The Lapland region as a case study
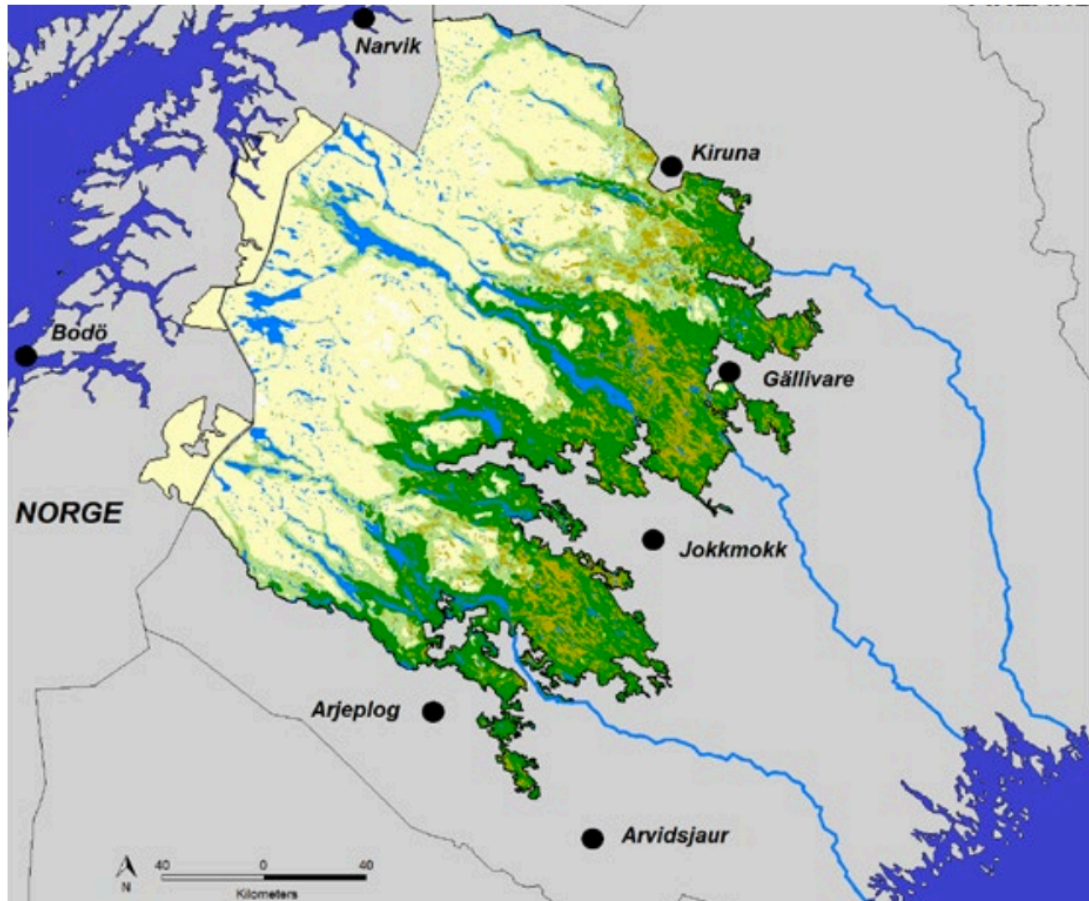
Figure 1: Map of the proposed Rewilding area for Rewilding Lapland (Rewilding Europe, 2015)

2.4.1.   Choice of case study

Rewilding will in this study be examined in a Swedish context, especially on the organisation Rewilding Europe that applies the concept and practice of rewilding in different sites in Europe. Rewilding Lapland presents a compelling case study for compromises for rewilding in practice inasmuch as it is in its early stages. It is particularly interesting to explore the compromises necessary to implement rewilding in a region with multiple stakeholders and extremely different interests at stake. In the case of our study in the light of environmental aesthetics, it is relevant to explore an area with such a high cultural value with the presence of the Sámi communities.

The area that Rewilding Lapland is planning to work with is situated in the North of Sweden, covering the Laponia region and slightly past the Norwegian border. Rewilding Europe describes it in the following terms, which are instructive in characterising the area:

> "The Rewilding Lapland area is located in northern Sweden and Norway. It stretches from the Atlantic fjords in the west over a range of mountains, vast taiga forests and marshlands, and connects with the northern part of the Baltic Sea via some of Europe's most well preserved river systems – Råne, Kalix and Pite rivers. Within a core area of more than 3 million hectares, less than 1,000 people live permanently. Only four smaller roads lead into the area from the east, making Lapland Europe's largest, non-fragmented nature area. Within this vast area, more than 15 Swedish Sámi communities have their home, some of them stretching their traditional land use also into the Norwegian side. »

(Rewilding Europe, 2015). The area also includes some of the most popular national parks in Scandinavia, Muddus, Stora Sjöfallet, Sarek and Padjelenta, as well as two national parks on the Norwegian side (Rugo and Junkerdal). The juxtaposition of different levels of protection makes it a particularly interesting region and creates a sharp contrast in between the protected areas and the ones that are not and that are usually used for less or more intensive forestry activities. In addition to the national parks the region includes 15 nature reserves, two "ekoparks" as well as some Natura 2000 sites (Rewilding Europe, 2015).

2.4.2. Sámi communities and reindeer herding

Lapland has been populated by the Sámi for several thousands years and reindeer herding is an essential component of the Sámi culture. The livelihood of the Sámi was based on nomadism following reindeer migrations and provided them with meat, clothing, tools, etc. If reindeer herding is still strongly anchored in traditional practices, the 20th century has witnessed some evolution in the way the Sámi people do it, using modern equipment, GPS, snowmobiles, helicopters, etc. But it remains an important factor when it comes to landscapes since reindeer herding activities shape them. Reindeer herding is regulated by Sámi immemorial rights that give them the possibility to let their reindeers graze in all of the Laponia area. (Nilsson Dahlström, 2009) Conflicts sometimes arise since reindeer herding is possible both on privately owned land and on state-owned land, the right of reindeer herding is independent from any contract with the property owner (Torp, 2013). The consequences of this are often conflicts between forest landowners and Sámi reindeer herders that have the same rights on natural resources that are sometimes incompatible. It is also important to note that non-reindeer herders do not have the rights over land use as the ones working with reindeer husbandry (Reimerson, 2016).

It is secondly important to note that Sámi people have a highly specific conception of landscapes stemming from their nomadic traditions and their herding practices. Reindeer herders have extensive knowledge about snow and forests and their communities are extremely sensitive to environmental change since certain conditions are required for reindeers to graze. It is illustrated in the Sámi language that has numerous words to express the snow conditions for example since it is so crucial for the Sámi reindeer herding, especially

in the winter (Roué, 2012). The area that we are looking at in this case study includes the Laponia area which is an important UNESCO World Heritage Site since 1996 and the area is since recently co-managed by Sámi communities. This model of management is the result of a long struggle for Sámi to access fair management rights over the area, and it has stood for years as the symbol of tensions and struggles between Sámi communities and the Swedish government when it comes to Sámi issues over land and governance (Green, 2009).

The specificity of the area studied due to its high cultural value makes the aesthetical dimension of nature and landscapes particularly important. Therefore it is relevant to explore Rewilding Lapland case study through environmental aesthetics and to see how it relates to the value of nature and to how people can reconnect to nature through rewilding.

3. Theoretical Framework: Environmental Aesthetics

2.1. 3.1. Environmental Aesthetics: definition

As aforementioned, a central element in the concept of rewilding is the aesthetic aspect (Brady, 2015), the beauty and enchantment it brings to the world. But rewilding having as a principle to let nature be, the result is both unexpected, and not necessarily aesthetically palatable to everyone's standards. The use of animals as agents for transformation and the relative open-endedness and unpredictability of ecosystemic interactions (Oliveira-Santos & Fernandez, 2010) contribute to an uncertain outcome of rewilding projects both in the 'success' dimension (in terms of achieving autonomy) and in the aesthetic dimension in terms of producing a landscape that satisfies preconceived aesthetic standards for wildness (Jepson, 2016 ; Svenning, 2016)

The problematisation of such dimensions can be best elucidated in the ideas of environmental aesthetics. The latter stems from modern Western philosophy and has developed throughout the 18th century and the Enlightenment period. Several concepts play an important role in the definition of the Aesthetics of nature. Kant notably developed the idea that the beauty of nature surpasses art in all its aspects and requires disinterested delight to appreciate the aesthetics of nature without having any interests linked to it. This idea is even more developed when it comes to the appreciation of the *sublime*. According to Kant, the sublime can inspire fear and dread as well as admiration of how mighty nature is. The beautiful, contrary to the sublime applies in the case of nature to more tamed, human-shaped landscape (Kant, 2007). The sublime applies more to the wilderness, and the natural phenomena that are uncontrollable and terrifying like storms, lightning, etc.

Furthermore, the classical conceptualisation of the aesthetics of nature endorsed by Kant in the 18th century gave way to different concepts of nature aesthetics. If environmental aesthetics have different interpretations, we will focus on two different views on the appreciation of nature. First, the cognitivist approach to environmental aesthetics represented amongst others by Allen Carlson (Carlson, 2010) that links environmental aesthetics and scientific knowledge and, second, the non-cognitivist approach that focuses on the emotions linked to the appreciation of nature, for example the one of Emily Brady (Brady, 2015).

Within the cognitivist approach to environmental aesthetics, Allen Carlson develops the concept of positive aesthetics that all nature is essentially beautiful (Carlson, 2010) and that it is only possible to embrace it as positively aesthetic. Even the less obviously beautiful aspects

of nature, like a rotten tree, are part of a whole, that is, in the end beautiful. The implication of this theory is that ugliness does not exist in nature because wild nature is essentially positively aesthetic. This cognitivist approach to environmental aesthetics can be extended to knowledge from indigenous traditions and folklore, and that it can be a guide to appreciating landscapes' histories and specificities (Saito, 1998). Thus, according to Saito, "the ultimate rationale for appreciating any object appropriately, that is, on its own terms, is the moral importance of recognizing and sympathetically lending our ears to the story, however unfamiliar to us, told by the other." (Saito, 1998). This theory is particularly important in the light of our current study where landscapes have been shaped by the Sámi people and give a strong identity to the area.

This vision is put in contrast with the non-cognitivist approach where the existence of some ugliness is recognized in nature but linked to emotions and engaging humans to feel intensely (Brady, 2011). Part of Brady's conception of nature appreciation is through imaginative appreciation of nature that amplifies the existing qualities of nature thanks to "ampliative imagination" (Brady, 2003)

For the purposes of the present research, then, it is interesting to consider what aesthetic values are present, to what extent they are recognised or internalised by nature managers, and how they inform the practice of rewilding on the ground, as in Swedish Lapland. As previously mentioned with Kant's definition of the aesthetical appreciation of nature, it seems that rewilding falls under the sublime, in the sense that it is unpredictable, and can show terrible and ugly "things" (Brady, 2015). And while rewilding is both unpredictable and does not necessarily produce a priori determined results, it is still presented as a conservation practice that restores the beauty of nature. Rewilding Lapland also presents rewilding projects as a way to *bring people in relation to* wilderness, through eco-tourism, fishing, etc. It is relevant to note that the perception of the aesthetics of nature can vary depending on the actors interacting with and within the rewilded areas. Aesthetics for nature have been found, for example, to follow a logic of 'generational amnesia' (Miller, 2006) in which humans tend to use the environment they grew up in as the baseline for conservation. At other times, aesthetics vary on cultural levels. They may be said to become inextricably bound also with tradition and naturalness for how things are supposed to be or look, to the extent that contemporary endorsements of certain land use practices are criticized as neo-constructed or atavistic. Giddens (Giddens, 1991) for example, has termed this phenomenon 'sham' tradition', while Hobsbawm and Ranger (1992) speak of invented traditions when people conjure claims of naturalness and custom to justify their contemporary aesthetics. Thus different visions and interests linked to nature co-exists in rewilding projects, which can create tension or require compromises, which we will look at in this report.

3.1.1. Ecological boredom, extinction of experience and biophilia

Another important element that influences our vision of nature and the aesthetical value associated to it is the decrease of human-nature interaction. As people are living more an more in urban areas and sedentary activities take over the outdoor activities, the consequence is a the loss of contact with the natural environment and wildlife. This extinction of experience has been explored as having consequences amongst other on health, wellbeing, and environmental awareness (Miller, 2006 ; Soga & Gaston, 2016). Rewilding is represented as a way to reconnect with nature and to experience it.

Encouraging people to be more out in nature by having incentives to go outdoors could be a way to awaken biophilia in people, which consists in an innate affection for living things

(Pyle, 2003 ; Wilson, 1984). This theory relates to positive aesthetics assuming that all nature is beautiful because it is natural. Wilson, that has popularized the term first, considers that all people have in them a connection to other living life forms and nature, as part of our biological roots. This theory is also based on the fact that because of technological progress and rural exodus, humans tend to be more and more disconnected from nature and less prone to be concerned with environmental degradation and species extinctions (Pyle, 2003). To some this phenomenon of disconnection from nature is correlated with the emergence of liberal capitalism, and that classic conservation is part of the economic system and has not to proven to be efficient to slow down the degradation of the environment (Igoe, Brockington, & Duffy, 2008). Marx stated that liberal capitalism and later neoliberalism has alienated people from their environment and has cut people from their ecological ties to nature (Marx, 1894). It is thus our hypothesis that Rewilding could be a way for people to reconnect with their innate biophilia and feel more prone to care about environmental degradation while offering a somewhat new model of conservation that could renew interest for the wild.

3.1.2. Commodification of nature: aesthetical economic value

In the past decade there has been an emergence of commodification of nature as a way for conservation (Keulartz, 2013). It has become clear that the value of nature could very well be monetary through commodification of ecosystem services. Ecosystem services are defined as being the benefits humans get from ecosystems. They have been explored most specifically since the Millenium Ecosystem Assessment and have proven to provide considerable gains in terms of economic development and wellbeing for humans (Millenium Ecosystem Assessment (MA), 2005). At the same time, as this study will interrogate, there is a potential danger for nature to be assessed in such terms. As (Garlick et al., 2011) ask: "What hope is there for animals whose value and importance to us does not balance our neoliberal instrumental scales?" (p. 2). Commodification of nature is particularly interesting to look at when considering conservation issues. In this case study commodification process is mostly from eco-tourism, and the value given by humans to certain landscapes and species.

Environmental aesthetics offers a relevant framework to study rewilding in this research. It allows us to explore the trade-offs and compromises of rewilding while analysing the value of nature in this case, whether it is from a social point of view with the possibility to reconnect people to nature, or the economic opportunities provided by nature.

3.2. This study: Environmental aesthetics and the ethics of rewilding

To the extent rewilding presents a way to reconnect with the sublime, and specifically for humans to feel like a part of nature and to appreciate the terrible beauty of it, this dimension also raises the ethical question of recreating a decidedly artificial or neo-constructed nature for humans to enjoy. But the vision of how nature should be and should look like depends on different stakeholders' perception of nature. In our case study for example there seems to be potentially different visions of nature between tourist operators on the one hand and the indigenous Sámi on the other hand.

Another ethical aspect to consider in the sublime aspect of rewilding is the anthropocentric vision that it implies. Indeed the concept of sublime lies in the perception and the experience *the human makes of it*, since a lot of the feelings associated with contemplating the sublime comes from the imagination (Brady, 2013). This study will explore to what extent, and with what implications, rewilding may be solely a human enterprise devised for alienated humans in modernity on the one hand, and on the other hand a project of ecological integrity that detaches from human interests and parameters to serve the needs of nature herself. To be sure, these pursuits may not be mutually exclusive, but practice reveals that they are frequently in tension with one another and that managers may fail to appreciate the human hand behind purportedly "self-willed" rewilding projects. A framework of environmental aesthetics, then, can help to (1) disentangle human cultural perceptions of landscape normativity from the purely ecological, inasmuch as this can be identified, (2) identify collisions of aesthetics and in the end help us to identify compromises necessary to this case.

4. Methods

4.1. Case Study

The case study method (Yin, 2014) was employed to explore the compromises necessary in the premises of Rewilding in the context of Swedish Lapland, and how these affect the aesthetics and the perception of nature.

The methods used in this were meant to adapt to the highly interdisciplinary context of the projects, and were first based on observatory method. Observatory method can be described as a method that involves "active looking, improving memory, informal interviewing, writing detailed field notes, and perhaps most importantly, patience" (DeWalt & DeWalt, 2011).

4.2. Field Study

A field study to Swedish Lapland to meet with the actors of Rewilding Lapland allowed me to get an overview of the different sorts of projects conducted by the Foundation Rewilding Lapland in the area. The field study was undertaken in April 2017. 7 semi-structured interviews of important stakeholders or partners were conducted with various key actors from different background within Rewillding Lapland (representants of the Sámi community, team leader, key actors in restoration, tourist operator, etc.), an overview of the seven respondents and their affiliations are provided in Table 1.

Respondents were selected according to their role or relation to Rewilding Lapland. To find respondents I asked Rewilding Lapland team leader for all the people that could be relevant to my research. In this sense, he provided a needed intermediary in the case context, but there could be limitations to this method for interviewees selection since the suggestions came from one person who is directly involved. This could represent a potential bias in the data collected, however it appeared that I interviewed all the stakeholders that had a link to Rewilding Lapland. It is important to note that the Rewilding Lapland is still in cradle and it is currently expanding its network of partners. The role of the respondents and their connection to Rewilding Lapland shaped the choice of question and wording in the interview guide. Semi-structured interviews were conducted both in English and in Swedish, which can present certain limits in terms of understanding nuances. Questions varied depending on the

person interviewed, the first step of the interview was to get an idea of the role of the interviewee in rewilding practice to then orientate the rest of the question. I tried to have elements of answers to all the following interrogations (when applicable):

- What are the challenges of rewilding? (To get an idea of where compromises would be necessary)
- What are the different interpretations of aesthetics of nature? (What are the aesthetical values associated with rewilding)
- What vision do people have of the wilderness, of the animals?

Interviews were recorded and one of them was done exclusively in a written format. Names of respondents are not mentioned but their role is since it is relevant to their responses. The interview guide (see appendix) was structured to get an understanding of the relation of the interviewee with the project as well as to get an idea of their worldviews concerning nature, animals and the wilderness. Themes were abstracted from an inductive analysis of the results and allowed us to identify recurring patterns.

I look at the interviews results in the light of a thematic analysis of the data collected. Thematic analysis seeks to "describe patterns across qualitative data" (Braun & Clarke, 2006). I have identified throughout the interviews recurring themes relevant to our research question.

To analyse the data, an inductive approach was used, which consists in analysing the existing data without trying to fit it in a pre-existing coding frame (Braun & Clarke, 2006). This bottom-up approach allows us to identify the recurring themes in our interviews and to analyse them further.

4.2.1. List of Interviews (Table 1)

Interview N°	Role in Relation to Rewilding Lapland	Date, Place of the Interview	Comments
1	Interim Executive Director of Rewilding Lapland Foundation	2017/03/22, Trelleborg, Sweden	
2	Project Manager at Dalvvadis Ek (Economic association representing reindeer activities in Jokkmokk), Rewilding Lapland partner	2017/04/05, Jokkmokk	Interview in Swedish
3	Chairman at Degerselsbygdens Samfällighetsförening, Project manager for river restoration of Abramsån (Tributary of the Råne River)	2017/04/04	Written Interview in Swedish
4	Rewilding Lapland Team leader	2017/04/07, Sörbyn	
5	Manager at Sörbyn Turism, Rewilding Lapland partner	2017/04/07, Sörbyn	Interview in both English and Swedish
6	Piteälv Ekonomisk Förening, project manager for Pite River restoration project		Interview in Swedish via Skype
7	Director of the Sámi Museum of Jokkmokk, Ájtte	2017/04/06	Interview in Swedish

5. Results

Throughout our interviews and informal talks with actors of Rewilding Lapland recurring themes have been identified.

5.1. Lapland Cultural landscape before wilderness

The first observation that was made during our research in Swedish Lapland is that this rewilding area differs greatly from other areas where Rewilding Europe has done projects. This difference lies in the fact that the area concerned has little to no farmland. Other Rewilding Europe projects are using or wishing to use abandoned farmland and turn them into rewilded areas while making the most of land abandonment linked to intensification of agriculture (interview 1). In this case the area is an important Sámi territory since it is a large-scale migration area for reindeer. Wilderness is an important component of rewilding, and through our interviews it appeared clearly that the area is not per se a wilderness area. It is not considered so by Sámi people since it has been an inhabited cultural landscape "I have difficulty using the concept of "wild nature" here in Norrbotten. This so-called wilderness is a cultural landscape that has been used by the Sámi for millennia" (interview 2). This dichotomy between the vision an external visitor can have and Sámi people on the area is important in the way the landscape is considered. It seems therefore that the area falls under the definition of wildness (Woods, 2005) rather than wilderness.

This important element that the area is a millennial Sámi territory implies Rewilding Lapland has to come in particularly cautiously to achieve projects in harmony with the activities that Sámi are living on. A word that repeatedly came up during the interviews was "humble" (interview 1) while describing the importance of showing humility in conducting projects with Rewilding Lapland while respecting Sámi livelihood and customs. In practice Rewilding Lapland actors have attempted to gradually build trust with Sámi communities and to lay foundations for multi-actor cooperation. Interviewees emphasized on not coming into the area and imposing knowledge or practices on local communities in a top-down approach: "I think it's wrong to come in from the outside and dictate and tell people you shouldn't do this and that." (Interview 1)

5.1.1. Reindeer territory

Reindeer herding is an extremely important component of Sámi culture and livelihood. Rewilding Lapland is aware of the significance of reindeer in the area, and that the Sámi have a "special situation" regarding the use of landscapes (Interview 1). Reindeer herding depends largely on natural systems and especially old growth forest. One of the aspect that Rewilding Lapland would like to focus on is the shared interests in conserving old growth forest that are diminishing with the intensive forestry activities (Interview 1). Conservation of old-growth forest is an area where the Sámi, especially the ones practicing reindeer herding, share the same objectives as Rewilding Lapland. Conserving as much old growth forest as possible, where reindeers can eat the hanging lichen (hänglav) off trees is key to a sustainable reindeer husbandry where reindeers do not need supplementary feeding especially in winter (interview 2). But it seemed from the interviews that cooperation and shared interests was crucial for the successful activities of Rewilding Lapland, and that there was a potential for conflict, especially linked to how predators are considered: "It 's a huge challenge, it puts a lot of demands on the people who work with it so they really use the right methods to get people together." (Interview 5)

5.2.   Predators as a potential source of tension

Predators are a key aspect in rewilding practice as we have seen earlier in this paper. Nowadays, many Sámi have other activities, but reindeer herding is still deeply anchored in the culture. Since the reindeer are roaming free, it is crucial for Sámi herders to have predator numbers under control or to have sufficient compensation for the loss of animals since predators can cause considerable damage (Interview 2).

Reintroducing predators is not in the agenda of Rewilding Lapland "…we are not introducing wolves up here. If you are going into the Rewilding Europe website you can get an idea that we are doing the same thing as they are doing in Holland[1] here but there is a big difference in what rewilding means depending on what land we are talking about" (interview 4). But Rewilding Lapland is still attempting to create a better acceptance for predators. They occupy a central role in regulating ecosystems "If you want to maintain some of those semi-open systems which we had before man started to farm nature in Europe, then you need to bring back some wildlife that keeps those systems half open. But then in a way you also need to, you need some carnivores to regulate the systems and if people don't accept that you probably need some kind of hunting or so." (Interview 1).

When talking to Sámi people, it appeared that the carnivores were the only aspect they were reluctant with Rewilding Lapland activities (interview 2). Indeed, many Sámi reindeer herders consider that the compensation[2] mechanisms for new predators (for example wolverines) is not enough compared to the current market value of reindeers. Rewilding Lapland actors are aware of the important disruptions that predators cause to reindeer herding,

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[1] Predators are not used in rewilding projects in the Netherlands, large herbivores are used as keystone species (Lorimer & Clemens, 2013)

[2] Sámi villages (Samebyarna) get compensation when predators are born or living in the area. The Sámi village is compensated for every documented birth of lynx and wolverine SEK 200,000. Regular occurrence is compensated with
    SEK 70,000 while temporary incidence is compensated with SEK 35,000 (Sametinget) 2016).

and that actually reintroducing predators could cause hostile reactions from Sámi local communities. Solutions are however suggested to combine maintaining healthy levels of predators with Sámi livelihoods, as for example developing more wildlife watching operations for Sámi or using bait to keep predators away from calving areas. (Interview 4). Predators were described as problematic and too numerous by our Sámi interviewees (Interview 2, 7). While they still agreed on their ecological role, most of our interviewees considered some sort of predator regulation as necessary such as hunting. Whether it was from Sámi respondent or not, interviewees thought existing compensation mechanisms for the Sámi were insufficient, "that system is not tuned in to today's prices so we need to work really hard with the government to increase the fees for those calves that get killed by the predators" (Interview 4)

Thus we have identified predators as a potential point of tension in the premises of rewilding in this case that has required so far a considerable amount of work building relationships and trust with Sámi.

5.3. Aesthetics, nature and animals

One of the reasons that Rewilding Lapland ascribes importance top predators, outside of the ecological benefits they bring, is for what they bring aesthetically to the area. Animals, and in particular predators, as landscape engineers and as charismatic creatures bring a lot of aesthetical value to the landscape: As Rewilding Lapland's team leader observes, "if we don't have those fantastic animals, predators as well as other animals then no one will come here. So that's a travel reason for many people to come up here." (Interview 4). This connects to a common refrain in rewilding termed the 'field of dreams' approach, referring to a belief in if you establish the right premises; the rest will follow, whether this is the right sorts of mesoherbivores or trophic cascades (Hilderbrand et al., 2011). In the area, animals, predators as well as others, have an extremely important role. They are ecosystem engineers that shape the nature and they are one of the reasons for the abundant tourism activity in the region. This was confirmed by a tourism partner to the initiative, who states: "It's all about the animals! You can't have a sustainable nature if you don't have the animals who are also involved in the ecosystem. I mean for me, the humans, we are the ones who cause all the damage." (Interview 5) When talking with interviewees, it appeared that the beauty of nature and the charisma of the animals living in the area were at the heart of what rewilding is about. People are aware that their area of Lapland is quite preserved compared to the rest of Europe and that rewilding can be a way to protect what is left since so much nature has been destroyed in Europe (Interview 7).

From our informal talks and interviews, it transpired that in this case rewilding definitely had a romantic dimension of reconnecting to the nature, the wild and the animals. It echoes Emily Brady's approach to environmental aesthetics with the emotional link to nature it includes. "it's not much about rewilding nature as such, although you need to do some rewilding, but it's more to rewild people's concept" 5 (interview 1). Interviewees also pointed out that people nowadays were living further away from nature and that there was a general tendency to move to bigger cities in Sweden, where they had no direct contact with nature anymore. (Interview 7)

But it appeared that another approach to environmental aesthetics arose from our interview that was linked to a more cognitivist approach. Indeed for several of the interviewees, rewilding could be a way to reconnect people with nature in a way so that they would gain more knowledge on nature and therefore have more will to protect it. This idea of linking cognitivist approach to environmental protection transpired in the fact that some of our interviewees believed that by reconnecting people with nature and making them familiar with issues and particularities of it, you would generate an incentive for more sustainable activities in the long term: "efforts can be made to restore relationships between man and nature in order to work sustainably and in the long term and to create respect for nature and not just mining, chopping down and consuming important habitats for animals and humans" (Interview 2).

5.4. Commodification of nature

5.4.1. Tourism

Another reason that aesthetics are central in Rewilding Lapland is that tourism is a pillar for the development of their activities. Whether it is wildlife watching or outdoor activities, they are largely dependent on the aesthetics of nature: "It (aesthetics) is super important because the tourism industry is one of the biggest industries here, if we are counting how many people are employed and how much money they are making. It's bigger than most traditional big industries up here." (Interview 4)

This tourism component fits into a more general idea of commodification of nature and what it has to offer. Nature becomes a "product" for visitors to enjoy: "all the products are here, we do not need to do anything. In fact, we only need to take people out and show them, let them experience. Thus, the product, nature, with all that it has, already exists so we just need to be very careful when using it" (Interview 5)

Making a business out of nature is also a way to make the area more dynamic and to reverse the current trend of people moving to larger cities. As Rewilding Lapland's team leader explained: "if we can create green economy, such as catch and release fishing, nature guiding tours, canoeing, water sports such as river rafting and that kind of stuff that will be something that can make the area better for different types of uses, both environmental and business wise as well. We can make people stay up here in villages. Such an enterprise", he argues, means "they don't need to move down to the big towns and coastal towns". (Interview 4)

5.4.2. Rewilding vs. Business as usual

Rewilding Lapland's ambition is therefore to create a win-win situation with nature restoration coupled with local and entrepreneurship and value creation. This model aims at creating new opportunities for local communities living in rural area when there is a tendency for them to moving to bigger cities or closer to the coast "It is an effective way to protect our

nature in the long term while providing local people with opportunities for employment. It makes it economically and ecologically worthwhile (Interview 3).

This ambition of coupling entrepreneurship with nature conservation was seen by our interviewees as both an opportunity and a challenge. It appeared to them that rewilding could offer a great alternative to the traditional industries existing in the area. Whether it is forestry or hydropower activities, interviewees agreed that those activities were often harmful for the environment and unsustainable, especially when talking about intensive forestry and clear-cutting of trees. "I was a bit shocked to see how rough and unecological the forestry is in the North, (…) below a certain line, the cultivation line, the forestry has more or less free hands". (Interview 1)

The river restoration projects that Rewilding Lapland is partnering with are the restoration of the Pite River (Pite Älv Ekonomisk Förening) and the Råne River (Degerselsbygdens Samfällighetsförening) base their restoration projects on going back a healthy ecological state for these rivers, with healthier fish populations and meandering. In the case of these rivers it means going back to a state from over 100 years ago since they had been used for timber transportation since the 19th century. : "There have been log driving in these rivers since the late 19th century. So we have been working on environmental restoration from the log driving times from over 100 years back in the last 15 to 20 years. We have done great actions bringing back water environments that are more like the original ones." (Interview 6). One aspect that was emphasized was the timeframe for environmental restoration projects of that kind of scale.

5.4.3. Uncertainty and funding

One of the challenges that was raised with rewilding activities, is that, like restoring in general, the time frame and the outcome can be uncertain and the results of restoration projects can take a long time and not appear as a good investment when it comes to nature: " It is one of our main challenges that people understand that it takes time and do not believe that next summer, so it will be all good, but it may take 5.6.8.10 years before we get a real impact". (Interview 6) Our interviewee stressed that ecological processes are slow and that the visible result of the restoration, the "real" impact that people will actually witness, can take several years, in this case, the restoration of good ecological state for Pite Älv.

Another aspect stemming from the commodification of nature is that rewilding can become dependent on funding to function as an organisation and has to adapt its communications and strategy to fit potential investors' expectation. This indeed is a problem that faces many Non-Governmental Organisations and has been referred to as compromising (Mercer, 2002). Funding was raised as a challenge by most interviewees. Getting funded by the private sector can put extra demands on projects when, as said previously those projects can have an unexpected result or timeframe.

Regarding commodification of landscapes and nature, during an informal conversation with a rewilding practitioner, a point has been raised that rewilding is hard to do in a market economy. Our interlocutor was talking about rewilding in general and was relating the issue to the trade-off between rewilding and agricultural land. His input was that it would always be more profitable for farmers to keep their land for agricultural purpose rather than for restoration activities such as rewilding, even the land with low-yield, since the benefits from ecosystem services are most of the time not as immediate and perceptible as with agricultural land. Thus there should be European agricultural subsidies to create an incentive for farmers

to rewild. There already exists this type of mechanisms in Sweden for wetland creation on agricultural land (Jordbruksverket, 2017), but what is seen as necessary would be a real economic incentive to leave areas of nature self-managed. This statement emphasized the importance of economic value of the environment as an important factor in rewilding projects. It also underlined the very specific case of Rewilding Lapland compared to other rewilding areas, the area being not at all exploited for agriculture.

6.   Discussion

6.1.   The virtues of compromise

Throughout our analysis of the results we have identified compromises that are necessary for rewilding to be possible and compatible with the context of Swedish Lapland. This following chapter aims at showing the basic features and relevance of compromises in nature conservation and most specifically in Rewilding. It aims at exploring the legitimacy of compromising for reaching common agreement, and to see whether it is worth it to compromise to reconnect people with nature and their landscapes.

Returning to the concept of compromise aforementioned, compromising designates reciprocal promise to settle a conflict; it originally designated a verbal contract between two parties aiming at avoiding a trial and settling a dispute thanks to a verbal understanding (Fumurescu, 2013). Compromising has been since widely used in different contexts, especially in political theory where there are strong normative or concrete interests at play. The concept of compromise has been shaped historically by the meaning it was taking in political theory, for example through theories of social contract like Hobbes or Rousseau. In the case of Hobbes and the *Leviathan*, a citizen renounces some of his personal freedom for the safety provided by the State (Hobbes, 1651). In the case of rewilding Lapland, the compromise may pertain more to giving up some integrity around project goals for practical implementation that satisfies local interests around cultural preservation, livelihood and ecotourism. Compromises in nature conservation in general have been described as a way to find the "least worst" option to conserve nature while satisfying as many stakeholders as possible. (MacDonald & Willis, 2013). In practice, research shows that wildlife organisations and nature conservations are sometimes unwilling to make compromises (Bisi & Kurki, 2008). This search for compromise can be hindered by democratic processes involving many actors without possibilities to move forward efficiently and make decisions (Nie, 2002). Therefore, conflicts that involve predators and which expressly seek 'compromise' become inflamed and prolonged (Lundmark & Matti, 2014).

6.2. Collision of Aesthetics the experience of wilderness/ cultural landscapes

When talking to different actors it appeared that the area of Lapland was different to any previous rewilding projects since it is so extended, and not densely populated. At the same time we have witnessed that there is a romantic idea of getting back to nature which is present and that is one of the reasons for tourists to visit. This collective imagination is omnipresent and is one of the elements Rewilding Lapland bases its work on. The concept calls out to an imaginary wilderness that is coupled with nostalgia and evokes reconnecting with nature. But as said before people tend to take for baseline for an ideal of nature what they remember, creating shifting baseline for what the restoration work should aim for (Miller, 2006). In this case the restoration projects of rivers use for baseline the ecological state of the 19th century, and before the area was intensively used for natural resources. It appears that even if the area is a place where Sámi live, their livelihood is close to nature and contrasts sharply with the activities of forestry and hydropower for example. In this case the wilderness of the area is thus going to be coupled with traditional livelihoods that are put in opposition with large companies' activities. Therefore one of the pillars of Rewilding Lapland is to encourage Sámi to be as involved as possible.

From our results we have observed that there were differences in perception of the area in terms of aesthetics and landscape. While to an undiscerning eye the area is full of wilderness, it is without a doubt an inhabited area for the Sámi. If large parts of the area are used for natural resources such as forestry, there is still quite extended areas of old growth forest with rich biodiversity. Thus the first compromise we have identified from our study lies in the difference of aesthetic experiences of landscapes. The activities that Rewilding Lapland would like to focus on are linked to the experience of the wilderness through outdoor activities, and wildlife watching, while Sámi communities have a very different use of the landscapes, with a focus on reindeer herding. As for the model proposed by Rewilding Lapland, it is based on restoration of some natural elements like rivers, and on the valorisation of the existing natural richness of the area. Thus the existing differences in perception of landscapes are an important aspect to discuss. While 44% (Roturier & Roué, 2009) of the Northern part of Sweden is covered by productive forestland, it is crucial to include that in the projects of Rewilding Lapland as a factor of Landscape change. In our case, in reference to our theoretical framework, I argue like Allen Carlson that an understanding of ecological processes is necessary to apprehend the beauty of landscape, but that in our case it should include ecological knowledge detained by the Sámi people. In his Natural Environmental Model (Carlson, 2000) Carlson argues that the appreciation of the aesthetics of natural elements come from its relationship with the environment and our knowledge of the processes and the scientific characteristics of it. This scientific knowledge gives way to aesthetical appreciation because scientific knowledge lets us appreciate the different facets of a natural object and it's intrinsic aesthetical value (Carlson, 2000).

Using this cognitivist theory of aesthetical appreciation, it seems that in our case, aesthetical appreciation goes through understanding of Sámi point of view on natural processes. This echoes Saito's theory on indigenous knowledge as part of the necessary appreciation of aesthetics (Saito, 1998). Indeed it appeared to us that Lapland landscapes are shaped by the millennial Sámi presence, and that the landscapes get aesthetical value from understanding of Sámi complex landscape perception. As Roué suggests through her studies of Sámi landscapes "Instead of understanding landscape as a virgin space that is objective rather than subjective, we must grasp its significance as a place, somebody's place, a place that can only be understood through that person's own experiences and memory." (Roué, 2012) She analyses the concept of cultural landscape in a Sámi context. Sámi herders have a tradition of

nomadism following the reindeer migration to find the adequate food depending on the seasons, and they have extensive knowledge of snow conditions. There is for example a word to describe fresh snow where reindeers can dig to find moss and lichen, *Oppas*, and another word designating an area of snow that has been dug and trampled on by reindeers (Roué, 2012). The richness of the ecological knowledge specific to Sámi use of landscape seems to be an outstandingly important element for Rewilding Lapland to focus on, especially when it comes to tourism.

It would appear that encouraging Sámi communities in tourism operation is one way to couple the wilderness with the deep cultural meaning of the area, and to do wilderness tourism on the terms of the Sámi, since from our interviews we took away that Sámi communities were rather against intensive tourism. Going back to a vision of nature through positive aesthetics it seems that this gap between the Sámi vision of the area and the one that can be perceived by an external visitor can be bridged through the involvement of Sámi community in the project. As Allen Carlson explains it, just like a work of art can be better perceived when knowing the technique behind it, a landscape or a natural element can be better appreciated when made aware of the knowledge or history behind it, or indeed biographical information about its author(s) (Carlson, 2010). The historicity aspect is admittedly conceded by rewilding managers when they appeal to ecological baselines of yesteryear and ancient species compositions (Hilderbrand, Watts, & Randle, 2005), but the risk with rewilding projects that have a historical baseline is the erasure of a cultural history of landscape in implementing a 'blank slate' on which nature can be unleashed. There could potentially be an attachment from the local population to the landscapes as they are in reference to a "rurality frame" that could create reluctance to restoration projects with a historical baseline (Buijs, 2009). It is an element of rewilding that "abandons history and shifts focus to future" (Keulartz, 2016).

For that it seems that partnering with Sámi community is the way to proceed. In this perspective, who better that the immemorial inhabitants of the area are able to show and make others experience the complexity of the natural systems at stake in the area? From the reindeer migrations to the rivers systems and the remote old growth forest it seems that the success of rewilding Lapland lies in its cooperation potential with the Sámi community. From my observation going to Lapland, and most specifically to Jokkmokk, it seemed that the Ájtte museum of Sámi culture could play a central role to bring Sámi knowledge into eco-tourism operations. The museum has the particularity to combine extensive display of cultural and natural aspects of the Sámi traditions. I believe this type of institution combined with eco-tourism could be an effective way to bring Sámi communities in relation to Rewilding Lapland. But this means integrating a decidedly human component in rewilding: ecotourism. Inasmuch as rewilding may be said to often be about either 'injecting nature' (into degraded environments) or 'extracting culture' (phasing human involvement out of landscapes) (Hall, 2014), the integration of ecotourism may not conform directly to either approach. Instead, it is about *co-creating* ecosystems alongside of nature.

It appeared that Rewilding Lapland was focusing in its strategy on what interests Sámi communities and them have in common. Those common goals include the preservation of old growth forest and natural systems of forest. The reindeers depend completely on the state of the ground for feeding, and clear cutting forestry activities affect considerably the state of the soils (Roturier & Roué, 2009).

The as yet seemingly humble attitude displayed by Rewilding Lapland consisting of a bottom-up approach of partnering with local projects and involving as much as possible Sámi communities seems to be an opportunity to achieve this compromise. However it can get challenging when some "traditional" elements of rewilding collide with Sámi livelihoods. The main element we identified was the predator presence.

6.3. Compromise 2: reindeer not wolf

As results previously showed, predators embody a potential element of tension between Rewilding Lapland and the Sámi community especially that requires some compromises. First of all, it seems that as long as compensation mechanisms for birth of new predators is considered insufficient by the Sámi community, predators is an aspect of rewilding that has to be put on hold. Rewilding Lapland is conscious of how much disruption is caused by predators on reindeer herding, when conditions are already challenging because of intense forestry activities and degraded environment. In the case of Rewilding Lapland, it seems that the most important factor of success is community support for projects, and that can be achieved only with support from Sámi communities most specifically. But the question is then how to make rewilding without charismatic predators as part of the equation.

It seems that in our case the charismatic animal could be the reindeer instead of the predator – with some caveats. By the fact that they shape landscapes and influence their surroundings, reindeers could be considered also as a keystone species – in an alternative appreciation. There is different definitions of what a keystone species is exactly, but it mostly refers to a species that stands out from the majority of other species in their effects on ecosystems (Mills, Soulé, & Doak, 1993), or "one whose impact is large, and disproportionately large relative to its abundance" (Power, Tilman, Estes, Menge, Bond, & Scott Mils, 1996, p. 609). Therefore it seems that regional specificity resides in letting them be the ones to shape landscapes instead of more traditionally the predators in other rewilding areas. This compromise in rewilding practice may be understood as a way to gain public support and community approval while still benefitting from ecosystem services provided by a keystone species. The reindeers are roaming freely and shape landscapes by foraging, eating, and trampling on the ground. They tend to use the same migratory routes and river crossing paths. Considering the reindeer as a keystone species could be legitimate as a baseline for rewilding since reindeer and reindeer herders have been living together since the end of the last Ice Age, when the inland ice melted humans arrived probably at the same time as wild reindeer and started to hunt and later domesticate them (Suominen & Olofsson, 2000). It seems however that reindeer has a positive impact on landscapes if it remains extensive, since intensive reindeer grazing can cause depletion of certain plants, most specifically reindeer lichens. (Olofsson, Rautiainen, Stark, & Oksanen, 2001)

But as previously mentioned, the intensification of forestry activities coupled with construction of dams for hydropower and mining exploitation has deteriorated some of the landscapes where reindeers roam. These pressures have particularly affected migration routes, calving grounds and pastures with propitious ground for feeding (Horstkotte, 2013).

Interviewees as well as literature agree on the fact that there is to a certain extent, a conflict between some powerful economic actors and reindeer husbandry practices (Widmark, 2006). The diverging interests when it comes to the use of forest between Sámi herders and forestry companies have been discussed in consultations for many years, but it appears that the outcome is usually favouring forestry companies over reindeer herders while settling issues (ibid). Thus it seems that the current trend tends to show that landscapes are becoming less favourable for reindeer husbandry (Kivinen, Berg, Moen, Östlund, & Olofsson, 2012). Using reindeer as a keystone species could put more value on the ecosystem services the reindeers are providing and could create an incentive to keep as much as possible the right conditions for reindeer herding, but clearly faces challenges in going forward.

On the one hand, the use of reindeer as keystone species is a way to add a cultural component to the area. Rather than 'extracting' culture, then, this approach will inject culture into rewilding (Hall, 2014), which may strike some as idiosyncratic or too great a compromise. At

the same time, in Rewilding Lapland's strategic objective of attracting ecotourism and nature-related entrepreneurs, making a keystone animal out of reindeer seems a relevant and minimally respectful compromise to make. It paves the way for a better understanding of Sámi customs and practices of reindeer herding. In the end it could be a way to connect people, local inhabitants as well as visitors, with Sámi culture and vision of nature. Moreover, the reindeer is quite a charismatic animal, which is important in rewilding (Jones, 2014). Reindeer is a symbol of Christmas and a widely appreciated animal, as we can see for example in the extremely popular Walt Disney movie *Frozen*, where Sven the reindeer is depicted as a strong and beautiful animal and a loyal friend (Walt Disney Pictures, 2013).

Rewilding Lapland puts significant emphasis on communications of their partner projects, both for potential investors and for the public. Valorising the reindeer can be a way to cast a light on the animal that is at the heart of Sámi livelihood and potentially represent an incentive for tourists to visit the area. Other regions of the world with reindeer herding, such as Cairngorn in Scotland for example (The Cairngorn Reindeer, 2015), offer opportunities to virtually adopt a reindeer, where people can sponsor a specific reindeer, get a picture of their newly adopted reindeer as well as a certificate of adoption and a small reindeer-shaped souvenir like a plush toy, while supporting traditional herding.

It is however important to point out that rewilding usually emphasize wild animals and that reindeer are semi domesticated and have lost some of their wildness since they depend quite much on humans for their survival (complementary feeding, breeding grounds, care, etc.). Nevertheless, researchers routinely charge the charismatic and allegedly 'wild' keystone species, like the wolf, for being de facto domesticated and managed to a great extent to day (Beach, 2004 ; von Essen & Allen, 2016). In fact, the wolf is sometimes described as the 'most managed animal' in Sweden today if mainly on a conceptual level, but also through hands-on management interventions. Tønnessen discusses this as the Nordic wolf being dispositionally wild (in contrast to the reindeer, which allow some human handling), while constitutively domesticated (Tønnessen, 2010).

On the other hand it would appear exceedingly important to explore solutions and alternatives considering the presence of predators in the area since they are valuable both as ecosystem engineers and as charismatic animals in a flagship capacity. Rewilding Lapland could represent an opportunity for cooperation with the Sámi people in their common interests of preserving old forests and natural systems while questioning current methods of forestry. Rewilding Lapland having as a priority to have as good relations as possible with the Sámi communities, they are extremely careful when it comes to the topic of predators and their place in rewilding and favour open communication about it. Without considering introducing new predators, making the current amount of predators acceptable to the Sámi herders could be an issue in which Rewilding Lapland could play a role. Encouraging more Sámi people to have wildlife watching operations for example is a proposition that seems like a step in the right direction.

This relates to the last compromise we have identified in our case study, where we look at the compromises of commodifying nature.

6.4. Compromise 3: conservation with business

The last compromise that we have identified in order to make rewilding possible in our case is to combine nature conservation with business opportunities. This compromise goes through finding a business model that is compatible with nature conservation. In addition to restoring good ecological functions in the area through restoration of rivers for example, Rewilding Lapland aims at offering an alternative to traditional industries in Lapland like forestry or hydropower activities, by finding ways to make an honest living out of nature.

There are several reasons to why this compromise seems necessary in our case. First of all it seems that Rewilding Lapland does not have a choice but to try to offer an alternative to the existing businesses in Lapland, thereby competing on a market level. This alternative to traditional businesses of natural resources exploitation allows using the existing aesthetics of the nature and landscape to create economic value in modernity. But using market-based mechanisms in the field of conservation has certain implications (Keulartz, 2013 ; Ericsson & Hammer, 2006). This kind of conservation idea can create a win-win situation where people thrive economically thanks to the resources of nature while nature is protected but we can suspect that unfortunately traditional industries like forestry and hydropower will always have more economic appeal in the short term. Therefore using economic mechanisms, as an ambition for conservation is risky since nature provides the ecosystem services, but it intrinsically does not aim at pleasing humans, therefore it seems profoundly difficult to compete with productivist activities at a basic level. Besides, another characteristic of the activities Rewilding Lapland is conducting are uncertain when it comes to their timeframe. As shown in the results, nature restoration projects that are parts of Rewilding Lapland agenda can take time and do not embody a sure investment, but more a long term, rather uncertain one. When thinking in terms of commodification of nature, it can be difficult for example to consider a river restoration as a sure investment like it can be with natural resources exploitation, since the benefits of it will only come after 5, maybe 10 years, with wildlife come back and activities like fishing.

Rewilding Lapland presents in its model a way to reconnect people with nature while being an economic development for the area. But as said earlier, nature in this case seems to fall under the sublime, unpredictable nature, which makes its commodification a complex process. Moreover the expectation for the aesthetics can vary depending on different stakeholders' perceptions. For example if Sámi people consider that the most important in a landscape is the preservation of old growth forest for the ecosystem services if offers, amongst other for the reindeers, others like tourist operators could consider that predators are a central element to the aesthetics of the landscape. But that is when the notion of compromise comes in as an important element to for successful rewilding projects because of their complexity and the multiplicity of actors and interests at stake.

6.5. It is all worth it ultimately?

The compromises that I have discussed have been identified and presented because they embody potential points of tension in rewilding practice as we have been studying it. But I have tried to identify them in the first place because I believe Rewilding could very well embody a future for conservation and a hope for people to reconnect with nature. I also believe that by reconnecting people with nature, wildness, and in this case, indigenous nature management practices, it could create a virtuous circle of interest for nature and a real incentive to care about environmental issues.

The nature deficit disorder referred to earlier makes people less aware of environmental issues and less prone to protecting nature, and therefore developing eco-tourism related to nature seems like a first step of making people feel connected and appreciate the aesthetics of it while being encouraged to learn about nature.

Rewilding could also have only new just the name and be first and foremost a way to regild conservation and make it attractive in order to make it popular and eventually bring more people to reconnect with a sublime nature.

Conclusion

This paper has attempted to explore the unique context of Swedish Lapland as a ground for the conceptual and practical premises of the new rewilding conservation paradigm. The uniqueness of this rewilding enterprise in comparison to previous European projects is that the area was not a former agricultural area but has a strong cultural identity with the presence of the Sámi communities and in particular reindeer herders. The ambition of Rewilding Lapland to create a self-managed nature with improved ecological processes in such a context does not come without certain necessary compromises. As discussed, compromising seems to be a fair way to find the least bad option to satisfy stakeholders. In this case compromises lie in adapting to the different aesthetical perceptions that give way to different conceptions of landscapes, as well as adapting to the cultural specificity of the area. As for compromising between nature conservation and business, it now seems inevitable to ensure the very feasibility of rewilding projects, and to create an interest and an incentive to do so. But accepting these compromises could be a way to make rewilding an efficient way to combine nature conservation with sustainable development by creating a model of conservation where humans are involved. Ultimately it offers a possibility to reconcile people with nature by regilding nature conservation and creating an increased interest for environmental protection while offering a new paradigm of relationship between humans and nature.

Following this study it would be relevant to do further research on how compromises are both necessary but risky in nature conservation in general as well as in the practice of rewilding. If we go back to our original definition of the compromise (Fumurescu, 2013), it emphasizes on verbal contract, and implies therefore that stakeholders are aware that they are making a compromise. In the case of nature conservation, stakeholders are many and nature's interests are hard to define and defend when it comes to finding the least bad option. Further research would be relevant in exploring how nature as an entity can be included as a stakeholder in a compromise. For that I find it interesting to try to explore alternatives to the classic dichotomy nature/culture, as Bruno Latour conceptualizes "Gaïa" (Latour, 2015) designating nature not as a whole but as a multitude of heteroclite elements standing for their power to act. Following this, Latour's idea is to give a voice to nature by giving them direct representation in political instances. Linking that to the compromises of rewilding, it would be interesting to explore on what terms nature could be a stakeholder in the compromises of rewilding, and how this participation could make rewilding even more relevant in the practice of nature conservation.

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Appendix

Interview guide (in English)

(1) The premises of rewilding

1. What has been your role in rewilding practice and most specifically within Rewilding Lapland?
2. What is according to you the main idea behind rewilding?
3. In your words could you describe the main benefit of rewilding?
4. Who do you rewild for? (Human / animal), (nature conservation / business opportunity)
5. What do you think of other examples of Rewilding?
6. Why is it growing in popularity?

(2) Rewilding in practice

1. How do you compare Rewilding Lapland in comparison to other rewilding projects?
2. What are the lessons learned from other rewilding projects, what you think were the successes and flaws?
3. What do you think of the more "extreme" rewilding practices? Those linked to engineered species for example

(3) Premise to practice

1. What do you anticipate to be the biggest challenges?
2. What are the obstacles you have encountered so far/ you expect to encounter?
3. What is the role of predators?
4. What are the most important elements you think will make RL a success? (Community involvement, ecosystem services, wildlife abundance, attractivity for entrepreneurship and tourism, etc)

(4) The influence of values and aesthetics on nature conservation generally and in rewilding particularly

1. How important is the aesthetical aspect in rewilding and in Rewilding Lapland?
2. What are the implications of Rewilding Lapland being in Sámi territory?
3. Do you see rewilding/this project as a way to reconcile people with nature by letting

them experience the wild? Or to reconcile them with Sámi culture?
4. What are the implications/consequences of making a business case out of nature?
5. How important is it to have "attractive" / charismatic animals?
6. How about the less scenic/aesthetic aspects of rewilding? Fallen rotting trees, dead animals, "damage" done by animals, etc.

(5) Future visions

1. How do you imagine the future of RL, and how do you imagine the future of rewilding? (on the website: rewilding 1 million hectares of land by 2022), making Europe a wilder place
2. What could be improved in the future ? How it be scalable to other continents/settings ?

Interview guide (in Swedish)

Vad har du jobbat med inom rewilding, och framförallt vilken har varit din roll inom Rewildning Lapland?

Kan du beskriva den huvudsakliga nyttan med rewilding med dina egna ord?

För vem och varför praktiserar man rewilding? (människa/djur, bevara naturen/affärsmöjligheter)

Vad tycker du om den model som rewilding Lappland föreslår?
Gynna lokalt entreprnörskap och ekoturism medans man ger naturen mera utrymme att sköta sig själv.

Vilka utmaningar har ni stött på än så länge? Vilka tror du att ni kommer att stöta på i framtiden?

Hur viktig är den "aesthetical" (sv. estetiska) aspekten av rewilding i ert projekt?

Hur viktigt är det för detta projekt att ha allmänhetens stöd/godkännande?

Ser du rewilding som ett sätt att återförena människor med naturen genom att låta dem uppleva vildmarken igen?

Hur påverkas samer av Rewilding Lappland?/ Hur relaterar Rewilding Lapland till samer?

Hur är rewilding Lapplands syn på nature jämfört med hur samer ser på nature?

Hur kommer Rewilding Lapland påverka renskötseln? (t.ex. project där älvar restaureras)