Wageningen University

Human-dog-wildlife relationships in an era of divides and conflict: Is cohabitation possible?

The case of human-dog-wildlife interactions in the Sysselt, the Veluwe, the Netherlands

Arna Danklof
25-02-2018

Human-dog-wildlife relationships in an era of divides and conflict: Is cohabitation possible?

The case of human-dog-wildlife interactions in the Sysselt, the Veluwe, the Netherlands

A thesis written by Arna Danklof
MSc student Development and Rural Innovation
February 2018

For questions or remarks regarding this thesis, please contact me via:
arnadanklof@gmail.com

Supervised by:
Sociology and Anthropology of Development (SADE)
Robert Fletcher - Sociology of Development and Change (SDC)

Esther Turnhout - Forest and Nature Conservation Policy (FNP)

Wageningen University

Course code: SDC-80430
Student no.: 940919172050

Abstract

The purpose of this research is to gain understanding in the complex dynamics of human-dog-wildlife interactions and relationships. Relatively little is known about human-dog-wildlife interactions in relation to conservation. Therefore, gaining insight in these interactions and relationships is crucial in the light of increasing numbers, and the severity of human-wildlife conflicts (HWC) and to look for the possibilities for coexistence. I draw on the case of the Sysselt, an area for both leisure and conservation to illustrate this. I draw from participant observations and interviews with visitors, park rangers and wildlife ecologists to examine the implications of interactions on relationships and conservation practices. I looked at how these different research subjects shape the area and its conservation policy. The case shows that informants have different interpretations of space. They are in favour of either sharing space, making separations in space, or space as a self-serving commodity. These views may be influenced by perceived risk, control, awareness and responsibility. Different styles of control are used by different subjects. Most of these forms of control over dogs and wild animals are implicit. Henceforth, visitors may or may not adapt their behaviour according to their different interpretations in the forms of avoiding human-wildlife-dog interactions altogether or to distract from these. Conservation policy is adjusted accordingly to visitor's and dog's behaviours to avoid them from interacting with wildlife, resulting in a protectionist approach to wildlife conservation. These findings shed light on the complexity of human-dog-wildlife interactions and relationships which are shaped by people's different perceptions of space, nature and wildlife, and power relations. Unfortunately, this case shows that aiming for coexistence of humans, dogs, and wildlife will be challenging when looking at human perceptions of wildlife and space. Hence, we must look for ways to foster positive interactions between humans, dogs and wildlife to sustain coexistence.

Key words: human-wildlife conflict (HWC), cohabitation, wildlife conservation, human-animal interactions, human-animal relationships

Table of Contents

Acknowledgements

This thesis would not have been possible without the supervision of Robert Fletcher from the Sociology of Development and Change (SDC) chair group, and Esther Turnhout from the Forest and Nature Conservation Policy (FNP) chair group. I am especially grateful for the freedom I have been given by the Development and Rural Innovation program to develop and shape my own thesis topic. Special thanks goes out to Susan Boonman-Berson (FNP) for helping me find this research opportunity within the scope of her PhD research.

I am especially grateful to all those people and dogs that supported me in plenty of positive ways during my thesis project. I realized that this thesis project has been made possible by the love I bear for animals and nature, which has been emulated by my close family, my mother and little sister. I would like to thank my mother for all those times we went to the forest together to gather data. I express my gratitude to my little sister, Simone, for letting me 'borrow' her dog Dalton to be my research assistant. I would like to thank my friends for their support. Special thanks go out to Mirte, whom I could always speak to whenever I was feeling stressed or insecure about my progress. Lastly, I wish to thank my loving and supporting partner, Jeroen, for his critical outlook and feedback. Your critical, yet very supportive outlook on my thesis process has given me the strength to complete this more than challenging task.

1. Introduction

1.1 Conservation and wildlife management in the Netherlands

This is a MSc thesis in which I explore the possibilities for cohabitation of humans, dogs, and wild animals in nature areas in the Netherlands by researching the interactions that take place among them. These interactions can be a tricky subject in an age in which humans get more and more alienated from nature[1], and wildlife. Natuurmonumenten, the Dutch foundation for natural monuments, identifies the 'connectedness crisis' as one of the main challenges for sustainable Dutch nature conservation. Natuurmonumenten puts blame for the decline of public interest in nature on the changing character of nature conservation (policy), the past economic crisis and urbanisation. Natuurmonumenten demands more participation to ensure the effectiveness of nature conservation. Many other nature conservation organisations, on the other hand, plea for a more flexible policy for managing wildlife (Spek, 2014; Guldemond, Dijkman, & Keuper, 2015). Faunabeheer (wildlife management). Gelderland has, for example, started a pilot with more flexible management of the wild boar in National Park De Hoge Veluwe. They argue that wildlife is part of the 'experience' of the Veluwe and that it is therefore an important aspect of the 'experience-economy' (Spek, 2014). In 2000, the Province of Gelderland presented a plan - Veluwe 2010 - which aims at removing the fences and borders between humans and wildlife. The Province aims at connecting nature areas via 'ecological gates', which would result in bringing isolated populations together and thereby enhancing genetical diversity. Moreover, the Province expresses their desire for more sustainable financial support for the area by looking for public-private partnerships (Adviescollege Grenzeloze Veluwe, 2002). Furthermore, Natuurmonumenten has developed a vision and strategy for 2040. The year 2040 is more of a symbolic number rather than a due date as Natuurmonumenten wants it to symbolise a long-term conservation vision (Natuurmonumenten, 2012).

The views on nature conservation and conservation policy have been through some drastic changes in the 20th century as a result of changing academic and societal insights (Piek & Van Tooren, 2005). From 1905 up to about 1930, organisations like Natuurmonumenten start commoditizing nature areas. This changed in the run-up to the second World War, as there were no resources to buy and maintain nature areas anymore. The period after the war, up to around 1960, signifies an experimental phase of Dutch nature conservation in which conservationists actively looked for a scientific basis to conservation. The period from 1960 to 1970 is characterised by the stark contrasts between conservation and agriculture, and the desire to put conservation first. The period thereafter, from 1970 to 1990, is defined by testing out (new) technologies and broadening conservation for leisure. Conservation was formalized from 1990's to around 2005 in which strict plans like the Ecologische Hoofdstructuur (EHS) are implemented. This period also signifies the increasing societal implications of conservation policy (Piek & Van Tooren, 2005). In the current era, citizens have lost their connection with nature (Van Slobbe, 2013), while the appreciation for nature in the Netherlands is growing again (Reest, Schipper, Verstrael, & Schimmel, 2013). Citizens are not engaged with nature conservation and this is threatening the sustainability of conservation (Reest et al., 2013), and connection with nature. This timeline of changing

[1] I will use the terms nature and nonhumans more-or-less interchangeably throughout this thesis, although I am aware of the academic debate surrounding the term 'nature'. Among other reasons, I will use 'nature' as a term to illustrate several dualisms later on in the report.

conservation paradigms in Dutch conservation signifies the commoditization of nature and control over it. A more flexible conservation and wildlife management strategy that includes coexistence also demands humans to adapt to nature and vice versa, and may foster more positive human-nonhuman relationships with involvement in conservation.

Next to the issue of alienation from nature, there are humans having conflicts with nature and wildlife. Humans and wild animals increasingly cross into each other's spaces in their search for resources (Boonman-Berson, Turnhout, & Carolan, 2016). Conservation policies that are placed around flexible living together of species rather than strict separations between them can contribute to increasing amounts of interactions between humans and wildlife, and thereby possibly foster more positive human-nature relationships. However, these increasing interactions can also result in dangerous and harmful situations in which wild animals come (too) close to humans and thereby threatening humans or causing damages. This can also happen the other way around in which humans come (too) close to wild animals and thereby devastate habitats and threatening species (Boonman-Berson et al., 2016). As the human population continues to increase and wildlife habitats continue to decline, conflicts between humans and wild animals are growing in number and size worldwide (WWF, 2017; Boonman-Berson, 2016). Therefore, the peacefully living together of humans, dogs and wild animals is crucial in an era of increasing human-wildlife conflicts (HWCs).

HWC is a reoccurring issue in Dutch conservation, especially concerning the number of ungulates. The - apparent large - number of ungulates, especially wild boars, is a yearly phenomenon in Dutch media. Their numbers should be drastically decreased, because these animals are a cause of disturbances and damages according to the media (Bade, Enzerink, Middendorp, & Smid, 2010), like damages to gardens, agricultural land, and traffic accidents (Groot Bruinderink, Lammertsma, Pouwels, Eupen, Spek, & Van Oord, 2011). The past years, a particular kind of interaction has been of growing attention in the media; interactions (and encounters) between humans, dogs, and wild animals. Dog owners must walk their dogs on a leash in most protected nature areas. Natuurmonumenten has reported that unleashed dogs are the most common violation in nature areas. Hence, Natuurmonumenten turned some large nature areas into no-leash areas. It seems to be an effective measure to ensure that dog owners do not let their dog off-leash in leash areas. (Van Tooren, Van der Ploeg, & Dirks, 2007). Dog owners are responsible for their dogs in both leash and no-leash areas (Winkel, 2017). Regardless of the area (leash or no-leash), the safety of dogs and wild animals - like the roe deer - cannot be guaranteed. There are reports of numerous attacks on dogs by wildlife, mostly wild boars, in both leash and no-leash areas. Wild boars, for example, can be very aggressive during mating season. Boar families (mothers and young) lie in shelters made of leaves and dry hay. Their shelters are most often located close by streams, swamp forests, in tall grass or in shrub thickets (Baskin & Danell, 2003). This makes the boars quite hard to spot and therefore one can have an encounter with a wild boar before realising one is near one. There are also reports on killings of (roe) deer by dogs that were not on a leash in a leash area from across the country. Forest rangers are tired of dog owners saying: "My dog would never harm a wild animal" (AD, 2017). Dog owners seemingly have a double-edged relationship with nature and the wild animals that live there. They have a responsibility towards their dogs to take good care of them, but are also responsible for the actions of their dogs. This ties in with the debate around public safety which has been the centre of many HWCs in the Netherlands, especially with the wild boar, roe deer and red deer. Roe deer might cause dangerous situations when they flee as

a result of a dog attack, this can result in traffic accidents. Moreover, it can be shocking for humans to witness a wounded animal in the forest (AD, 2017). To illustrate these increasing interactions, I will explore them in the case of nature area the Sysselt in Ede, described in the following paragraph.

1.2 The Case

The Veluwe is one of the largest conservation areas of Europe and home to red deer, wild boars, roe deer, and many more. The Veluwe is the name of the entire Veluwe area, which consists of National Park De Hoge Veluwe, Kroondomein Het Loo, National Park Veluwezoom, and many more. The area has a long history concerning nature conservation. The Veluwe was covered with drift-sand around 1850, but then the Scotch pine [*Pinus sylvestris]* was introduced to keep the sand together. Large parts of the Veluwe were rasterised between 1895 and 1932, mainly because land owners had a desire to hunt. Numbers of wildlife populations were incredibly low during that time. Therefore, several species were imported and released into the area and fences were put all-around to contain the wildlife in the Veluwe. The wild boar especially has had a difficult position within nature conservation strategies in the Veluwe. Wild boars were almost completely extinct because of hunting in the 17th and 18th century. Prince Hendrik, husband of former queen Wilhelmina, reintroduced the wild boar again in the Veluwe by bringing them over from Poland (De Boo, 2012). The reintroduction of the wild boar caused anger among the common the people, as the boars can cause damages to crops, roads, and so on. Since the start of the 20th century, Dutch nature conservationists have discussed questions how nature has to be protected and what counts as important nature (Van der Windt, 1995). Nature conservation in the Netherlands has always been a debate among different social groups, such as biologists, ecologists, citizens, farmers, policy-makers etc. (Van der Windt, 1995). Nature became valorized by several nature preservation organizations - like Natuurmonumenten - buying plots of land for conservation. In the 1980's and 1990's, several Dutch conservation organisations opted for more-or-less human-free ecosystems because of nature's intrinsic value or for reasons of extensive recreation (Van der Windt, Swart, & Keulartz, 2006). From 1985 onwards, the functionality of nature became central to conservation policy, when a debate on conservation versus agriculture sparked again (Van der Windt et al., 2006). However, at the same time policy arose that was centered around restoring large ecological systems by turning agricultural areas into reserves (Van der Windt et al., 2006). The past years have also been turbulent in terms of population management of wildlife at De Veluwe. Natuurmonumenten, the Dutch society of the preservation of nature monuments, argues that the public interest in nature increased in the 1990's, but is currently decreasing again (Natuurmonumenten, 2012). In several European countries, conservation debates have intensified as a result to establish networks of large nature areas (Bennett, 2008). These plans are often efforts to minimize human impact on the selected areas and to strengthen natural ecosystems by stimulating ecological processes such as flooding, grazing or erosion (Van der Windt et al., 2006).

The researched human-animal interactions and relationships will be illustrated according to the case of the Sysselt. Figure 1 shows a map of the the Sysselt. The Sysselt is close to the Ginkelse Heide, which is situated at the borders of the Veluwe. The Ginkelse Heide has been closed for motorised vehicles in 1990. Thereby making the area quieter. Wild animals such as the wild boar

Figure 1: Map of Ede, pointing out The Sysselt [Source: Google Maps]

and roe deer profited from this more tranquil environment and have flourished in the area. Fences and grids were put into place in order to prevent the wild boar from walking into Ede and damaging gardens (Geldersch Landschap & Kastelen, 2013). The Sysselt is a 350 hectares forest area at the border of Ede, and at the border of the Veluwe. It was planted to serve as a so-called 'production forest'; a forest that served to produce wood. Several exotic plant species were planted there for experimentation and these species prosper in the Sysselt according to forest rangers. GLK is now transforming the Sysselt from production forest to a more integrated forest in which wood production, recreation and nature can be combined. This policy to change the Sysselt from a solely production forest to a more inclusive, integrated forest for hiking and enjoying nature has been in place for some 30 years. About 40 hectares is designated to no-leash dog walking. This no-leash dog walking area was introduced some 25 years ago. GLK had to make a trade-off between integration or separation. They decided to incorporate dog walking in the area, because the Sysselt was growing in number of visitors and their desire for an inclusive forest. Therefore, GLK chose to enforce the rules in the Sysselt, instead of keeping humans (and dogs) out. The Sysselt is open for visitors and is used as an area for hiking, dog walking, mountain biking, educational activities, lumber harvesting, etc. These past years, there have been multiple reports in the media of multiple dogs that were attacked by wild boars, and dogs attacking wildlife. The municipality has been building houses at the edges of Ede, The Sysselt as well. This might aggravate the conflict between humans and wild animals that have to compete in this space.

To summarize this introduction, the increasing interactions between humans, dogs and wild animals creates tensions and possibly conflicts. This conflict raises many questions, like how to solve it, whether the ways humans deal with nature in this sense is ethical, and why the relationships between different domestic and wild animals seem to vary so greatly. Hence, in this thesis I work towards understanding the relationships between humans, dogs and wildlife. I will study what effective conservation looks like from the perspective of human-animal relationships and how these relationships come about through interactions. I will explore this with the case of the Sysselt which is located in the Veluwe area in the Netherlands. Moreover, to illustrate my case from a political ecology perspective, I will make use of concepts like nature/culture dualism, human-wildlife conflict (HWC) and ethical conservation in relation to biopower.

Chapter 2. Theoretical framework

This thesis research will be written from a political ecology perspective, examining the relationship between human and nonhuman agents and their environment. Hence, in this theoretical framework I delve deeper into the concept of human-nature relationships. Within this concept, I will touch upon conservation paradigms, nature/society dualism, HWC, and ethics and biopower.

2.1 Dualisms within conservation

Conservation has a long history and has taken on many different forms around the globe. Conservation has shifted from protectionism to efforts to integrate conservation and development. The term 'conservation' came into common use in the late 19th century and referred to resource management for economic reasons. Conservation has traditionally focused on individual species of biological organisation (Soulé and Wilcox, 1980), and biotic conservation is only one of various goals that has influenced the preservation and management of natural areas and resources (Pickett, Parker, & Fiedler, 1992). Resource management goals have mostly been commercial, such as wildlife, forest, and fisheries management (Pickett et al., 1992). Resource ethics have grown out of a need through direct relations with nature. The notion of economic interests versus protecting the environment caused friction. Scholars have been engaged in a heated debate on the notions of 'land sharing' and 'land sparing' (Fisher, Abson, Butsic, Chappell, Ekroos, Hanspach, Kuemmerle, Smith, & Von Wehrden, 2013). Integration ('land sharing') and separation ('land sparing') of conservation and production are at the core of this thinking (Kremen, 2015; Fisher et al., 2013). We can draw interesting parallels to this thesis, although its focus is not food production. The debate on separating versus integrating conservation with human needs is nothing new. For example, protectionism, or so-called 'fortress conservation', is a model based on the belief that biodiversity protection is attained by creating protected areas where ecosystems can function in separated from humans (Doolittle, 2007). This period of critique on separating also signified the emergence of buzzwords like 'sustainability' and 'sustainable development' and the bringing together of development and conservation (Pyhälä, 2003). Conservation and development had long been viewed as direct opposites in most parts of the 20th century, rather than possibly similar development strategies (Folke, 2006). The popularity of Integrated Conservation and Development Projects (ICDPs) and Community-Based Conservation (CBC) rose at the end of the 20th century. The main goal of joining development and conservation was to boost the effectiveness of both, as both failed to succeed on its own (Alpert, 1996). ICDPs distinguish themselves from other approaches by integrating both human development and biological conservation. The aim of CBC was to "shift conservation projects from their traditional role as exogenous structures imposed on local people to endogenous to ones that sustain themselves (geared to social sustainability)" (Mulder & Copollilo, 2005). In general, scholars agree that these more integrative approaches benefit both conservation and development. However, the degree of participation of locals in these projects vary greatly (Mulder & Copollilo, 2005). This shift from focussing on individual aspects towards more integrative approaches have shaped development and conservation to what they are today.

This dichotomy is also reflected in academic debates about the relation between nature and culture. It signifies the tensions between culture and nature by treating them as two separate entities rather than them having a continuous biotic relationship. Modern societies have used this separation to

distinguish themselves from non-modern i.e. primitive societies which often view nature and culture as overlapping concepts. Peterson, Hansen, Peterson & Peterson (2011) acknowledge the nature/society divide in modernism by arguing that modernity has objectified and separated nature from humans. They argue that neoliberal economic systems have provided us with a nature that is presumed to be measurable and controllable (Peterson et al. 2011; Latour, 2004; Elling, 2008; Giddens & Pierson, 1998). Sociologists and anthropologists have acknowledged the issues with the nature/society divide. Decades ago, environmental sociologists made the call for paradigmatic shift in the field of sociology (Goldman & Schurman, 2000). They called for - among other things - the recognition of the inseparability of nature and society. This nature/society divide - or nature-society dualism - refers to the view that the world consists of two fundamental entities, such as humans and nonhumans. Various scientists (Gerber, 1997; Goldman & Schurman, 2000) plead for dissolving the dualism between the nature and society, and various other dualisms that are deeply engrained in our so-called 'enlightened' thinking such as reason/emotion. Goldman and Schurman (2000) emphasise the inseparability of nature and society. However, the pleas for (re)joining nature and society have all come from the field of science, which itself is often seen as a contradiction to society. The divide between nature and society shows the self-interest of humans to place themselves above nature and to be able to control it.

For example, Soulé, a conservationist biologist, criticizes humanity for their self-interest. Modernism has pushed modern society towards anthropocentrism; a self-centred dogma engrained in neoliberal economic theory and institutions (Washington, 2013). Miller et al. (2014) argues that this anthropogenic thinking will only make the separation between humans and nature bigger and that this separation does not signify anything good for humans as the environmental crisis worsens. It raises ethical questions on whether it is right for humans to view themselves as above nature and being able to control it (also see paragraph 2.4). Marvier (2014) argues that protected areas alone are not enough for conservation. Moreover, there are serious efforts around the world to downscale protected areas, as they get in the way of resource mining (e.g. oil, mining, timber, etc.) and have negative effects on local populations, as they cannot access resources anymore (Marvier, 2014). Marvier (2014) argues that conservation must benefit the poorest (and most vulnerable) not just because it is the right thing to do, but because it is crucial for the effectiveness of conservation. Marvier (2014) mostly argues this from a development standpoint. However, some have proposed that the future of conservation lies in managing nature for human benefit (Kareiva & Marvier, 2007; Kareiva, Watte, McDonald, & Boucher, 2007; Nordhaus & Shellenberger, 2007; Marris, 2011; Kareiva, Lalasz & Marvier, 2012; Duncan, 2013). Some species are protected, because they provide economic profit. Other species can be let die, because they are not profitable (Miller et al., 2014). Washington (2013) argues that by viewing nature as inferior to humans, or even more radically, formed by us, humans pretend we can exploit nature without consequence. This attitude towards nature has caused separation between humans and nature (Miller et al., 2014). Therefore, Miller et al. (2014) propose to take an 'eco-centric grounding', a new conservational paradigm which respects the right of nature to exist with or without direct value to humans. Humans evolved in nature and needed to respect it to survive. Alternatively, conservationist might accept that some amount of human self-interest is a given and to work with that reality, rather than going against that grain (Marvier, 2014).

Interactions with nature is of great importance with regard to human development (Kellert, 2012). However, these interactions have decreased and weakened in modern times. Many view (human)

progress as the essence of civilization (Van Slobbe, 2013). Progress, in these terms, can be seen as conquering, controlling and/or subjugating nature to human needs (Kellert, 2012; Van Slobbe, 2013). What then remains of nature, is nature as a mere economic good; nature in relation to living, tourism, relaxation, health and -if possible - economy (Van Slobbe, 2013). Moreover, due to this economic value of nature, Van Slobbe (2013) argues that this results in 'unnatural' nature for humans to relax in (instead of actual nature). Hence, he argues that nature will become more important in modern lifestyles. Nature will then become part of values such as health, friendship, safety and well-being. Furthermore, having a self-serving view may result in conflict with other users. Gompper (2013) argues that humans view dogs through their own 'utilitarian' lens and that humans therefore sometimes fail to recognize other 'players' - i.e. agents, actors, or individuals - that exist in the lifeworlds of humans and dogs alike. It is possible to repair and restore this connection through deliberate design (Kellert, 2012). This development can be categorized as one of the many great divides (Latour) like nature/culture, development/conservation, and rural/urban. Therefore, several terms have been developed over the years to move away from the nature/society divide - such as 'natureculture' (Haraway, 1997; Latour 1993), and 'nature regimes' (Escobar, 1999) - to bring across the sense that nature is "humanly produced and that it therefore partakes, but without being entirely, of the human" (Richardson & Weszkalnys, 2014).

As we have seen in this paragraph, the separation from nature and society is deeply engrained in 'modern' thinking towards nature. Luckily, the academic debate surrounding nature/culture is moving towards ways to (re)integrate the two again. To illustrate this further, I will make use of several concepts in the following paragraphs to link with this academic debate. I will link nature/culture to concepts like HWC, human-animal relationships, and biopower to further examine the critique on nature/culture dichotomy and to propose ways to move away from it.

2.2 Human-Wildlife Conflict

HWC is commonly described as conflict that occurs between people and wildlife (Woodroffe, Thirgood, & Rabinowitz, 2005); actions by humans or wildlife that have a negative impact on the other (Conover, 2001); threats by wildlife to human life, economic security and/or recreation (Treves and Karanth, 2003); or the perception that wildlife threatens human safety, health, food and/or property (Peterson et al., 2011). "HWC escalates when (local) people feel the needs of wildlife are given priority over their own needs" (Madden, 2004). Numerous scholars emphasize that HWCs also entails conflict among humans about wildlife and not only conflict between humans and wildlife (e.g. Woodroffe et al., 2005; Peterson et al., 2011; Madden, 2004; Redpath, Bhatia, &Young, 2015). Human interactions with wildlife can be either positive or negative (Nyhus, 2016; Miller, Ritchie, & Weston, 2014), depending on the subject (dog, human, or wild animal) (Miller et al., 2014). Nyhus (2016) argues that ungulates commonly come into conflict with humans because they can trample, directly consume, and otherwise damage vegetation of ecological and socioeconomic importance (Estes, Terborgh, Brashares, Power, Berger, Bond, & Marquis, 2011). Human-wildlife conflict has emerged as a central term for cases that require balance between resource demands of humans and wildlife (Peterson et al., 2009) and is therefore already an established relationship between humans and wildlife. Human-wildlife conflict is a problematic term, given the traditional definitions of conflict, it places wild animals as conscious human antagonists (Peterson et al., 2009). However, human interactions with wildlife are also a

defining (positive) experience of human existence (Nyhus, 2016). Due to these issues, there is a growing recognition of both the positive and negative implications of human-wildlife interactions (Woodroffe et al., 2005; Peterson et al., 2011; Redpath et al., 2015; Madden, 2004). However, current conservation strategies are often based around drawing static boundaries which ignores the request to go beyond the boundaries of humans versus wildlife (Cassidy & Mills, 2012; Hinchliffe, Kearnes, Degen, & Whatmore, 2005; Hinchliffe & Whatmore, 2006; Lorimer, 2006, 2008; Noske, 1997) by using flexible, dynamic boundaries (Boonman-Berson, 2016). However, this does not suggest that boundaries between humans and wildlife are unnecessary as some boundaries may be needed to protect both humans and wildlife (Boonman-Berson, 2016). For example, protecting wildlife territories may be needed to safeguard resources so these are not depleted by human interventions such as agriculture (Boonman-Berson, 2016). I would like to think of boundaries as going beyond just spatial boundaries. Certain limitations or boundaries must be put into place for human behaviour as well. For example, having your dog under control in nature areas so you make sure it does not chase wildlife.

Boonman-Berson et al. (2016) uses cohabitation as a concept to highlight the spatial interactions between humans and wild animals by exploring how these interactions shape the landscape in which they are situated. Although Boonman-Berson et al. (2016) use the term to mainly emphasize the role of wild animals as a co-constructive participant in cohabitation practices, dogs cannot be excluded in the case of the Sysselt. Cohabitation, in this sense, conveys the belief that humans and wild animals should (peacefully) share the same space (Hinchliffe, 2007). Moreover, it is argued that mutual adjustment (from all actors) will resolve the conflict (Hinchliffe, 2007; Boonman-Berson et al., 2016). I view cohabitation as a means to manage, and perhaps overcome, HWC. Humans, dogs and wildlife must all be taken into consideration as participants that shape the Sysselt in order to create an effective management policy for the area. Recognition of the differences between humans and animals is important for cohabitation. Therefore, Boonman-Berson et al. (2016) use 'multi-sensory writing and reading' to offer a symmetrical perspective on HWC and cohabitation. They speak of 'creating microgeographies of cohabitation' in which humans and animals shape space. I will mostly address the perspectives and actions of humans regarding the shaping of the Sysselt and how humans view dogs and wildlife within this space. This does create an asymmetrical perspective, but does offer opportunities for analysis being linked to human-animal relationships, management ethics, and biopower.

2.3 Human-animal interactions and relationships

As HWCs, as part of conservation vocabulary, is already a defining relationship between humans and wildlife, establishing wildlife as antagonists (Peterson et al., 2009), we can see the vast differences between the ways dogs and wildlife are managed. Wildlife is more-or-less anonymous to humans, while dogs are most often loved by their owners. Human perceptions of animals range from an animal being a loved one to one being an object to being a victim or a threat (Galvin & Herzog, 1992). For example, wildlife is oftentimes treated as a collective responsibility of society i.e. society as a whole is held responsible if an action of a wild animal has negative consequences for society (Boonman-Berson, 2016). While, on the other hand, dog owners are held responsible for the actions of their dogs (Boonman-Berson, 2016). Drawing on the work of Haraway (2008), she argues in the context of dogs as companion species, that dogs have become a commodity in

modern society. This status of dogs being a tradeable, and arguably neglectable, good fosters a slave-master type of relationship among humans and dogs. Moreover, concerning behaviour, wildlife is encouraged to display their natural behaviour (Groot Bruinderink & Lammertsma, 2002) while dogs should often behave in a way their owners (and society) deem fit (Haraway, 2008). Regardless, it is widely accepted that people have an emotional need to connect with animals, which translates itself in, for example, caring for the environment (Vining, 2003). Serpell (1996) argues that humans have evolved "distancing devices" that help them to escape or lessen guilt association with exploitation. Serpell finally argues that these different treatments are most likely driven by conflicting emotional (affection and sympathy) and financial (utilitarian) considerations.

Hosey and Melfi (2014, p. 117) argue that "the study of human-animal interactions (HAI), and the resulting human-animal relationships and bonds (HABs) which are set up as a consequence, is currently a topical issue in comparative psychology". The field is explained to explore the spaces in which animals reside in human social and cultural worlds and the interactions humans have with them (De Mello, 2012). I derive the basic definitions of 'interaction' and 'relationship' from behavioural ecologist and zoologist Robert Hinde (1976). He defines 'interaction' - in the context of both humans and nonhumans - as: "An interaction involves two or more individuals and one or more types of behaviour. It can be characterised in such terms as 'A does X to B' or 'A does X to B and B responds with Y'" (p. 4). He also mentions that nonhuman behaviour is often characterised by certain types of behaviour, like aggressive, friendly, submissive, etc. Hinde then defines 'relationship' as: [a relationship involves] "a series of interactions in time between two individuals known to each other. Because the individuals are known to each other, the nature and course of each interaction is influenced by the history of past interactions between the individuals concerned, and perhaps also by their expectations for interactions in the future" (p. 5). Although the interactions that take place in The Sysselt most often concern individual agents, these interactions and thereafter relationships can most likely be generalised to species-level to a large extent in the case of wild animals. Wild animals are more-or-less anonymous, while individual dogs and humans have personality ascribed to them.

Dogs, as companion animals, are a central part of this study. Dogs can be an opportunity to appreciate nature and to experience wildlife (Holbrook, Stephens, Day, Holbrook, & Strazar, 2001). Dogs frequently accompany recreationists to protected areas and can be the most common carnivore in these areas (Butler, Du Toit, & Bingham, 2004). Outdoor recreation is growing in popularity which has many different impacts on wildlife (Knight and Cole, 1995). Dogs are considered to be a major factor in these impacts, especially when they are present in high densities (Fish, Parks Jacobs & Lyon, 1999). Dogs are inefficient hunters, but avid chasers, unlike wild canids (Serpell, 1995). Lenth, Knight and Brennan (2008) continue by arguing that most dogs in protected areas that are pets have their food requirements met at home, giving them plenty of energy to interact with wildlife. Predictable activities, such as recreation confined to trails, may allow wildlife to adapt to those activities (Whittaker & Knight, 1999). Wildlife is generally reluctant to encounter humans; they avoid humans and react to human encounters by fleeing (Knight, 2009). Wildlife that are sensitive to (recreational) disturbances are generally sensitive to unpredictable spatial and temporal patterns of disturbances (Knight and Cole, 1995). The spatial behaviour of dogs off-leash is unpredictable; when dogs travel off-trail they are more likely to evoke a fleeing response from deer, even if the dogs do not chase it (Miller, Knight & Miller,

2001). Thus, companion animals, such as dogs, play an important role in men's relationship with nature. Moreover, people's (past) experiences, among others, frame their perceptions (Dingwall, 2002; Lewicki, Gray, & Elliot, 2003). These frames influence what is important and shape people's interpretation of reality (Peterson, Birckhead, Leong, Peterson & Peterson, 2010). The current pressure which conservation is under and the lack of knowledge on domesticated dogs in protected areas makes it crucial to examine the issue further.

Miller et al. (2014) speak of 'human dimensions of dog-wildlife interactions' as they state that these interactions are far less commonly studied than the diverse human-dog relationships. Human dimensions in wildlife management can be described as 'how people value wildlife, how they want wildlife to be managed, and how they affect or are affected by wildlife management decisions' (Riley, Decker, Carpenter, Organ, Siemer, Mattfeld, &Parsons, 2002). It is concerned with increasing participation and representation, and thereby influencing decision-making, policy and management (Loker, Decker, & Chase, 1998). The human dimensions of dog-wildlife interactions are often described as human-wildlife conflict (Manfredo & Dayer, 2004). It is also argued that: "Despite the diversity of the situations and species that spawn HWC, there is one common thread: the thoughts and actions of humans ultimately determine the course and resolution of the conflict" (Manfredo & Dayer, 2004, p. 317). However, we do not fully understand the interactions and conflicts between humans, dogs and wildlife yet (Miller et al., 2014). Miller et al. (2014, p. 287) have outlined the benefits and costs of human-dog-wildlife interactions to biodiversity in figure 2. The table summarizes the positive and negative interactions that take place among humans, dogs, and wildlife. The interactions listed in the table are not intended to be exhaustive. Moreover, perceptions of what constructs positive interactions versus negative ones may vary (Miller et al., 2014).

Human–dog interactions	Human–dog–wildlife interactions	Dog–wildlife interactions
Positive interactions: human–dog bond; companion animals; working dogs (guard dogs, guide dogs, herding dogs, hunting dogs, etc.)	**Positive interactions**: dog walking facilitates human connections with nature	**Positive interactions:** dogs can work as guardians for vulnerable wildlife populations (e.g., Maremma dogs protecting penguins against fox predation)
Negative interactions: threats (perceived and actual) posed by feral dogs (e.g., to humans, livestock, pets); dogs acting as vectors for disease	**Negative interactions:** large carnivores can prey on dogs and this can lead to various human–wildlife conflicts (for example, threats to human safety)	**Negative interactions:** hybridization between dogs and wild canids; dogs directly or indirectly impact wildlife

Figure 2: Positive and negative human-dog-wildlife interactions (Miller et al., 2014, p. 287)

Human perspectives are at the centre of this study. These are dominant in the discourse around wildlife management. Wildlife management issues almost always emerge because of competing human interests and values (Miller et al., 2014). Current wildlife population densities are relatively high. These large wildlife populations make that wildlife becomes more visible to society, and that people more frequently encounter wild animals than before (Groot Bruinderink et al., 2011). People, on the one hand, do not want damages to gardens and agricultural land or (traffic) accidents. People do want to see, encounter, and experience wild animals, which is facilitated by relatively high population numbers of wildlife (Groot Bruinderink et al., 2011; Bade, Enzerink,

Middendorp, & Smid, 2010). It is therefore of great importance to study these human dimensions, because, too often, wildlife management decisions are based on untested assumptions about people's views and their reaction to wildlife management (Enck & Decker, 1997). This can possibly result in ineffective management and ongoing HWCs (Miller, 2009). Looking at this analysis of human-animal relationships, it has become clear that there seems to be a same kind of dualism we have seen throughout this thesis; domesticated/wild animals. The way animals should be managed depends on whether they are domesticated or wild. Hence, the nature/culture dichotomy as a whole seems to have its impacts on the way we view animals and, most importantly for this thesis, conservation management.

2.4 Conservation, ethics and biopower

The views regarding (wild) animals have changed over the past decades. This is reflected in conservation paradigms and HARs. Ethics play (and have played) an important role in managing wild animals in the Netherlands. The government and the animal protection agency (Dierenbescherming Nederland) started using the term 'intrinsic value' in 1981 in their policy (Groot Bruinderink & Lammertsma, 2002). The intrinsic value and welfare of animals have been part of (government) policy ever since. According to Groot Bruinderink and Lammertsma (2002), acknowledging the intrinsic value of animals means that humans have a moral duty to treat animals with respect and that animals have rights without being of (economic) value and interest to humans. This means that wild animals - such as the wild boar, roe deer, and red deer - have the right to their species-specific behaviours and the right to self-reliance (Groot Bruinderink & Lammertsma, 2002). However, Groot Bruinderink and Lammertsma only speak of wild animals and not of domestic animals. Hence, an interesting question emerges why intrinsic value only applies to wild animals and not to domestic animals. According to the ethical guidelines of the National Forest Conservation Agency (Staatsbosbeheer), there is a need for conservation managers to take preventive measures concerning wild population control. However, there still is a large (public) debate on ethical methods to do so (Groot Bruinderink & Lammertsma, 2002).

This debate ties in with the notions of Foucault's biopower and biopolitics. Foucault studied the shift from sovereign power to biopower in human realms, and has drawn upon examples from 18th century France. Modes of power changed after sovereigns across Europe lost their power. Violence and killing remained complementary to the task of fostering and managing life (Srinivasan, 2011). What changed was its justification: violence was not only a defence of the sovereign, but also on 'behalf of behalf of the existence of everyone … in the name of life necessity' (Foucault, 2008, p. 136) (Srinivasan, 2011). For example, culling can be viewed as (preventive) measures the government takes to protect its citizens. Although Foucault studied biopower in human realms, biopower has been extended to look at human–environment relations (e.g. Holloway et al., 2009). However, this extension has not been without problems. The concept of self-governing subjects which is central to Foucauldian work on biopower has not translated easily to human relations with the non-human world (Youatt, 2008). Rabinow & Rose (2006, p. 195) suggest that biopower entails 'one or more truth discourses about the "vital" character of living human beings; an array of authorities considered competent to speak that truth; strategies for intervention upon collective existence in the name of life and health; and modes of subjectification, in which individuals work on themselves in the name of individual or collective life or health'. The exercise of biopower is

for the sake of protecting humans, others have extended Foucault's analysis to explaining how the actions in defence of nonhumans are often justified in similar biopolitical terms (e.g. Luke, 1999; Youatt, 2008; Cavanagh, 2014). Biopower has many different implications with the right to animal welfare. Srinivasan (2011) phrases this as 'live well or die' with regards to dogs. Humans have power over the lives of their pets. However, this can also be extended to the lives of wild animals. Take the public debate around the Oostvaardersplassen, a large protected area in the heart of the Netherlands. Some wild animals, such as red deer, wild horses and wild cows, die during the winter because of food shortages, and the public generally dislikes this. Thus, a debate arose about either culling or letting nature be. Hence, the state creation and enforcement of protected areas for biodiversity preservation can be explained as a classic form of biopower performed in the interest of preserving forms of nonhuman life that states also regard as their domain of protection (Youatt, 2008; Fletcher, 2010). This complex extension of biopower to nonhuman realms makes it very relevant to debates around (ethical) conservation.

Cresswell (2005) speaks about 'moral geographies', a key concept in cultural geography which conveys the idea that certain things, people and practices belong in certain spaces, places and landscapes and not in others. Matless (1994) discusses the concept in the case of the English Broadlands. The region is described as one of attractive landscape with different visions of which animals are deemed 'rightful occupants' and which ones are 'invaders' (Matless, 1994). The concept of moral geographies goes against the idea of cohabitation, but is still present today. For example, some native species of the Veluwe (e.g. wild boar) are under heavy criticism because of their natural behaviour, while several other species of large herbivores (e.g. bison, wisent, mouflon) are non-native to the area and have been introduced nevertheless. Boonman-Berson (2016) argues that a clear distinction between domesticated and wild animals is made in policy regulations which impact the management of human-wild animal interaction. In the case of wild animals, no one is deemed responsible - in legal or social terms - responsible for wild animals. The responsibility for the acts of these animals are (debatably) a collective public issue, or a wildlife manager (e.g. forest ranger) or the human involved in an attack/encounter with a wild animal (Boonman-Berson, 2016). In the case of domesticated animals, such as dogs, the owner is assumed to be responsible for the actions of the animal. Boonman-Berson (2016) argues that this attributed responsibility is a delicate issue in the implementation of wildlife management strategies, especially when potential economic losses play a role.

Many scientific debates on animal ethics have been taking place as well. Based on the works of Descola, Latour, and others, Kohn (2015) argues that animism has become "an extension of social relationality to nonhumans that imply a set of ontological assumptions distinct from the one with which anthropology normally works" (p. 317). Similarly, in the context of wildlife management, Boonman-Berson et al. (2016) argue that wildlife management should no longer focus on the sole agency of humans, but must also take into account the agency of animals and the influence of the landscape in which interactions take place. At the most basic level, 'agency' refers to "the faculty of an agent, or of acting; action" (OED online), and this is a well-accepted understanding of animal agency (Carter & Charles, 2013). Overall, it is striking that the relationship between humans and nature (and wild animals) has been widely studied in the conservational and environmental psychology, but not in the field of environmental anthropology or multispecies ethnography. This more-or-less reinforces anthropocentric thinking.

Chapter 3. Research design

3.1 Research objective and research questions

The increasing interactions between humans, dogs, and wild animals creates tensions and arguably human-wildlife conflicts. Current Dutch conservation policies seem to aim for separating humans and their dogs from wildlife. This is problematic in an age in which people get more-and-more alienated from nature. I will use the nature/culture dichotomy throughout this thesis to highlight the severity and importance of these divides to illustrate the main issues with current conservation in the case of the Sysselt. In order to overcome these issues of conflict and alienation, I will use the concept of cohabitation which emphasizes the ability of human and nonhuman participants to co-shape a landscape. However, as human perspectives are at the centre of this study, I will use ethics and biopower to highlight the power differences, and arguably inequalities, among humans, dogs, and wildlife. Ultimately, I will study the interactions that take place among humans, dogs, and wildlife to unravel the relationships between them. Understanding these relationships is crucial for recognizing the potential for cohabitation, as the interactions and relationships ultimately influence conservation policy and vice versa. The following research questions have been formulated according to the objective:

GRQ: What are the possibilities for cohabitation of humans, dogs, and wild animals in The Sysselt in Ede, the Netherlands?

The following are sub-questions that support the GRQ:

1. What (inter)actions take place between humans, dogs and wild animals in The Sysselt?
    - Human-human interactions
    - Human-animal interactions
    - Animal-animal interactions
    - Interactions of actors with the space
2. How do these (inter)actions shape the relationship between different subjects?
3. How do humans and animals co-shape space in The Sysselt?

3.2 Study design

This thesis has been written from a political ecology perspective and its methods have been chosen accordingly. The case study has an exploratory, qualitative design. Semi-structured interviews, (unobtrusive) participant observations and informal conversations are the main research methods of this study. This thesis can be considered an ethnographic research on human attitudes on wildlife and nature. Humans were the main data source during this thesis, followed by dogs and wildlife. These were mostly studied through human informants. This data was complimented with observations - unobtrusive, obtrusive and participant observations. Observations is used here in the broadest sense of the word. I used (my own sense of) smell, hearing and seeing, and the observations of my companion Dalton. I needed 10 weeks for data collection.

I conducted (unobtrusive) participant observations and informal interviews at the Sysselt during the first phase of field work. I walked there with or without dog and had informal conversations

with people there. This helped me establish a general view of the Sysselt and guided me in creating interview questions. It, moreover, helped me experience the Sysselt and reflect on this. I 'borrowed' my sister's dog, Dalton, to be my research companion. I recorded my experiences in a diary.

In the second phase, I started planning semi-structured interviews with people from four groups. I established the following groups; hikers, dog owners, ecologists, and forest managers. These four groups were selected to get an overview of both the micro and macro environment. I.e. the case of the Sysselt (dog owners and hikers) was studied within the broader concept of (Dutch) nature conservation (ecologists and forest managers). I often refer to hikers and dog owners as visitors, and to ecologists and forest managers as experts throughout this report. Hikers and dog owners were chosen over other users, like bikers, because of the similarities in their activities. In this sense, the importance and differences in experiences could be measured because of having a/no dog. The interviews with dog owners and hikers ranged from 5 to 15 minutes. The expert interviews were generally longer ranger from 30 to 90 minutes in total. The objective of the visitor interviews was to retrieve information about interactions and how humans perceive and describe those interactions. I interviewed forest managers (one former, one current) for their experiences and perceptions of human-wildlife interactions, and the policy of GLK. These forest managers are specialised in fauna management. As there normally is only one fauna specialist at a time, I chose to only interview the current and former wildlife manager of the Sysselt. The interviews with ecologists provided insight in conservation paradigms, societal changes and their perspectives. Words with negative connotations, like 'conflict', 'problem', and 'attack', were avoided during the interviews with visitors and wildlife managers. The different interview formats can be found in annex 1. I also continued observing during the second phase next to the interviews. I reported my field notes in a diary that I kept.

In the third phase, I transcribed and analysed the collected data. I cross-checked the data with different methods and sources. I used the transcriptions to derive patterns in the data. The patterns in the data were developed into themes. This was done instead of reporting per method or source because of the ambiguity in the data. Furthermore, I also reflected on the study during the third and final phase. Therefore, it was decided to expand the number of interviews with visitors from the Sysselt.

3.3 Study sample

The interviews with the experts, ecologists and forest managers, were planned and either conducted at their offices or at the Sysselt. The interviewees at the Sysselt with visitors, hikers and dog owners, were randomly selected. I visited the Sysselt regularly, at least twice a week, especially on days with nice weather. This, mostly because there are no/fewer visitors when the weather is bad and people are less likely to have an interview with bad weather. I interviewed a total of ten dog owners and four hikers. I aimed to interview more hikers as well. However, there were not that many hikers in the Sysselt during autumn and winter. Furthermore, many hikers walk in larger groups, e.g. hiking clubs. Multiple duo interviews have been conducted. It was chosen to have a maximum of two interviewees per interview to maintain overview regarding data analysis.

I interviewed two forest managers and three wildlife ecologists. I walked in the Sysselt and asked every visitor I encountered whether they were interested in answering a couple of questions about the area. I did not choose to wait on one location, because the Sysselt is a large area and the chances of meeting multiple people is higher when walking around. Walking around is also more in-line with 'going with the flow' of the area, instead of 'statically' waiting in one place. It, moreover, helped me to do observations there.

At the start of this thesis, I aimed to interview five dog owners, five hikers, four ecologists and four forest managers. However, the ecologists all provided similar information so a fourth was not interviewed. Forest managers can be divided into different specialisations. One of these are the wildlife experts. There is only one wildlife manager per region. Hence, I interviewed the current wildlife manager of the Sysselt and the former one. After doing nine interviews with visitors, it was decided to expand those interviews and aim for a total of twenty visitor interviews. This allowed the study to get a more solid basis on which the results are based. Eventually, a total of fourteen visitors have been interviewed due to previously described reasons. Hence, most results are based on visitor's views instead of only dog owners or hikers, unless clearly indicated.

3.4 Interviews

All conducted interviews had open-ended questions. Different interview formats were developed for ecologists, hikers, dog owners, and forest managers. The interview formats for visitors were designed in an open way. I chose to not introduce (any type of) the topic of conflict, although HWC was at the centre of this study. I tried to let interviewees speak their minds and therefore interrupted as few as possible. This ensured that the interviews reflected what is deemed important by the interviewee. This interview style also resulted in patterns throughout the interviews. It also made the contradictions between hikers and dog owners very clear. It made the most important things that were on visitor's minds clear. The interviews with ecologists served to reflect the case of the Sysselt to nature conservation in the Netherlands. Furthermore, the interviews with the forest managers served as a contrast to the visitors. Moreover, the forest managers are the executors of the general policy. Hence, they could also provide information of the macro environment next to the micro environment.

3.5 Ethical considerations

As mentioned earlier, research subjects that were observed and informally interviewed were not informed that they were being studied. Research subjects were not informed to prevent the Hawthorne effect from occurring. Furthermore, it is easier to access subjects by using unobtrusive observation rather than using other methods. Moreover, the personal details of visitors of the Sysselt were not saved. They were labelled according to date and time. They were also labelled either 'hiker' or 'dog owner' with what number interviewee they were. For example, the second dog owners I interviewed was labelled [D2 dd-mm-yyyy time]. Not collecting personal data made visitors less hesitant to participate in the study. Moreover, any visitor traits other than owning a dog or not were not deemed important enough to report on (e.g. gender, age, etc.).

Chapter 4. Findings

The interactions and relationships between humans, dogs and wildlife were studied during this thesis research. Interactions between humans (and dogs) and wildlife were taken as a starting point. These interactions - or rather the realities and interpretations connected to these - resulted in four themes. These themes were distilled from the interviews and observations. Thus, it were not the informants that categorized the themes themselves, but rather the topics that were present throughout the data. Paragraph 4.1; *Interpretations of Space* is centred around the questions who behaves in what way and who should behave in what way? In other words; what interactions take place and how do these shape the framing of nature? Paragraph 4.2; *Risk and Awareness* is a theme that emerged from the way the different groups interpret the Sysselt and its wildlife and visitors. Paragraph 4.3; *Control and Responsibility* is a theme that follows up to the spatial interpretations discussed in the first paragraph and the perception of safety explained in the second chapter. It explains the different views on this theme among the different groups. The fourth and final paragraph; *Adapting to living together* closes this section. It focusses on what changes humans and wildlife have made to adapt to coexisting. All results are supported with quotes from interviews, and fieldnotes in the form of footnotes.

4.1 Interpretations of Space

With many different actors involved, there come many different interpretations of the Sysselt as a space. Who behaves in what way in the Sysselt, and what are the (possible) underlying reasons for that? Is this behaviour ideal or should behaviour be changed? It is important to note that these interpretations mainly reflect human realities rather than those of (wild) animals. Many of these different views showcase human's dualistic nature. Furthermore, it shows stark contrasts between the different groups.

Let us first examine interactions before turning to interpretations. Many different types of interactions occur in the Sysselt. The majority of the interactions occur among people and dogs. Dogs are, in this regard, conversation starters as they make contact with other dogs before people start to make contact[2].

> *"Leuke gesprekken kan je hebben hier. Dat is natuurlijk altijd zoiets, dieren en baby's zijn openbaar bezit. Zodra je een hond hebt en je loopt ermee of een kinderwagen met kleine kinderen, dan heb je meteen contact."*
>
> "You can have really nice conversations here. That definitely is something; babies and animals are public property. Whenever you have a dog which you walk or a buggy with young children, you immediately make contact"- D3, 28-11-2017

[2]26-10-2017: Walking with Dalton and my mother
13-11-2017: Walking with Dalton
14-11-2017: Walking with Dalton

Dog owners mention that they generally like having a dog because it is easier to connect with other people in the Sysselt. Dog owners seem to get to know each other through dogs. Therefore, dog owners seem to have more chats in the Sysselt than hikers do.

> *"Nou, mijn vriendin zei: 'als jij een hond neemt, dan gaat er een wereld voor je open!'. En dat, dat is eigenlijk in een zin gezegd, dat is waar. Ik vind de mensen die hier allemaal zo begaan zijn met hun eigen hond."*
>
> "Well, a friend of mine told me: 'when you take a dog, it's like the world opens up!' And that is basically it, it's so true. I find all the people here so commited to their dogs" - D1, 25-11-2017

Overall, all visitors I spoke in the Sysselt frame the contact between humans in a positive way. Visitors greet one-another and then may or may not engage in conversation. Interactions between wildlife and people, on the other hand, seem to be rare. Arrangements have been made to facilitate encounters between the two. For example, the wildlife observation post where people can spot wildlife. A typical encounter with wild boar is characterised by the two parties 'freezing' and eventually running away. Roe deer generally will run away or try not to get spotted.

Many visitors thought of the Sysselt view the Sysselt as an inclusive area for nature and leisure. However, when being asked what the most important function of the Sysselt is, many answered leisure over nature. Strikingly, the same visitors also acknowledged that they are visitors to the habitat of the wildlife there.

> *"Ik vind het voornamelijk een natuurgebied waar je heel goed met de honden kan lopen en recreeeren. (...) Ik vind vooral dat er veel en veel teveel zwijnen zitten. Ze komen steeds dichterbij. (...) Maar moet je eens kijken wat ze doen, ze woelen het hele gebied om. Het zijn er echt veel teveel."*
>
> "I think it mainly is a nature area in which one can walk dogs and do other leisurely activities as well. (...) I think there are way too many wild boars in the area. They keep getting closer. (...) Look at what they [boars] do, they dig around in the entire area. There truly are way too many."- D5, 29-11-2017

Furthermore, the majority of the dog owners answered that it is both an area for leisure and nature or that the specific use of the area depends on your location. In this, humans make (more) differentiations in space than wildlife does according to several visitors. Forest rangers have mentioned that there is plenty of food available in the entire Sysselt. Therefore, wildlife is not restricted to certain areas. The two wildlife managers have also mentioned that the population numbers are not necessarily high, but the population density is.

Ecologists are very strict with the function that has been given to an area. Most of them did question why dogs are allowed into an area with wild boar and roe deer. Many ecologists called

upon nature/culture divide to illustrate that humans do not know how to act in nature anymore. Moreover, that introducing humans to confined nature areas only worsens nature/culture divide. They argue that inclusive areas only reinforce the dogma that humans and nature are separate. By doing so, humans and their perception of superiority over nature, decide how to act in nature. Furthermore, ecologists almost seem to vilify visitors. They blame visitors for their (sometimes) irresponsible behaviour:

> *"De meeste problemen komen uit dommigheid voort.".*
>
> "Most problems are a result of stupidity" - Interview with Sip van Wieren, wildlife ecologist (30-09-2017, Gaia), Van Wieren refers to problems within nature conservation and possible accidents that occur with wildlife.

The forest managers I spoke agreed that the Sysselt is an inclusive nature area with many different uses. Visitors should obey the rules, mainly for the sake of the wildlife there. However, the wildlife managers decide what is best for the wildlife. The two forest managers had different views on wildlife. Both were very much in favour of wildlife. However, one viewed wildlife as free-willed and powerful. The other ranger viewed wildlife as dependent on humans. He mentioned that humans have shaped their entire existence and therefore wildlife follows the will of humans. Although the two rangers seemingly have different views on the matter, it is clear that both of them imply some nature/society divide.

Although the area is seen by many as an inclusive area with many different uses, including nature conservation, many visitors believe that the wild boar populations has grown - or is growing - too numerous. Especially dog owners experience (a feeling of) unsafety regarding the boar. These views contradict heavily with the statements that visitors should respect nature and let it be. It does, however, reinforce the idea that humans have control over wildlife, and nature in general. Giving favour the leisure over nature suggests that humans control nature. Thus, it seems that wildlife is subject to humans in the Sysselt.

4.2 Risk & Awareness

Risks and awareness is another theme that occurred in many conversations and interviews with all groups. Ecologists and forest rangers mention that walking in areas with large wildlife brings along risks. Moreover, people walking in such areas more-or-less accept the risks that come along with it by walking there according to the experts I spoke.

Furthermore, especially dog owners seem aware of wildlife. Many acknowledge that their dogs are more aware of wildlife than humans are. Dogs mainly notice wildlife through smell. Dog owners seem choose words that express concern regarding the wild boar rather than aggressive or blaming.

"Ik houd haar aan de lijn. (...) Ik wil niet dat ze erachter [wild] aan gaat. En die reeën, of ze schieten weg of ze staan heel stil. Die zwijnen... ja, je moet natuurlijk geen confrontatie hebben, maar die zijn ook best wel afwachtend. En als jij zomaar gewoon doorloopt, dan... tenzij ze jongen hebben, maar dan gebeurt er eigenlijk ook weinig. Kijk, mijn hond jaagt niet. Maar als je een hond hebt jaagt... dan kunnen er ongelukken gebeuren."

"I keep her on a leash. (...) I don't want her to go after [wildlife]. Those roe deer, they either run away or stand completely still. Those boars... Well, you musn't have confrontations with them, but they are actually pretty biding. And if you would just walk along... unless they have young, but even not a lot would happen then. Look, my dog doesn't hunt. However, if you have a dog that does hunt... Accidents can occur". - D8, 20-12-2017

The past 20 years, the wild boar has emerged in the Sysselt according to wildlife managers. Other wildlife species that are present in the area are roe deer, red deer, foxes, badgers, and many types of birds. Dogs and humans most commonly interact with the wild boar and roe deer. The majority of these interactions can be described as friendly. However, sometimes these interactions go wrong and have negative consequences for the humans and animals involved. One of the most common ways these interactions go wrong is that wild boars have negative interactions with dogs, which can be either described as 'the boar defending themselves' or 'the boar attacking a dog'. The other common way these interactions go wrong is when a dog chases a deer, which can end in disturbances in the forest, exhaustion of the deer, or even death of the deer by exhaustion, stress, or dog bites[3].

During autumn, the boar tracks especially raise awareness among visitors of their presence. The majority of dog owners reported having encountered wild boar and deer.

"Niemand is weg van de wilde zwijnen om die tegen te komen. Iedereen die heeft zoiets van 'ohjee', want ja, als je een jachthond hebt, die gaat erop af. En, je wilt gewoon geen confrontatie met een wild zwijn. En dat risico zit er met honden natuurlijk wel in."

"Nobody truly likes encountering wild boars. Everybody is like 'oh dear', because if you own a hunting dog it will go at it. And you just don't want to have a confrontation with a wild boar. And that's a risk you have with dogs" - D7, 19-12-2017

However, awareness does not always result in acting upon it. For example, I spoke with a dog owner with a small boomer dog; a small mix between two breeds. The dog was not on a leash. She mentioned the following:

[3] Derived from the interviews with Remco Oosterkamp and Robert-Jan Dunselman

"Als hij een ree ziet, dan gaat hij erachteraan. (...) Maar hij ziet ze meestal niet. De reeën blijven gewoon heel stil staan. Echt heel stil. Dan kunnen ze vlakbij je zijn, maar dan zie je ze gewoon niet."

"When he sees a roe deer, he'll go after it. (...) But he normally doesn't see them. The roe deer will just stand very still. Very, very still. In that case, they can be really close, but you simply don't see them." - D3, 28-11-2017 at the Sysselt

Miscommunication or misunderstandings seem to play a role in the behaviour of humans, dogs and wildlife. There are, for example, reports of dog owners that their dog is very playful or likes to track/hunt. Such dogs track wildlife down or want to play with them when encountered. Wild boars could view this as a threat and attack. Many visitors of the Sysselt seem to view boars as scary, aggressive and dangerous. However, ecologists and rangers have mentioned that boars will only attack when provoked. It seems more-or-less normal that beings from different species have difficulties communicating.

4.3 Control & Responsibility

Control is one of the major aspects that has come forward during this research with all methods and all sources. Dog owners, hikers, ecologists and forest rangers all spoke very differently and distinctively about controlling the behaviour of dogs and humans. Dog owners generally said that they have their dog under control and that they know their dogs. I.e. dog owners react to their dog's behaviour. Although this might be true to a certain extent, mostly humans taking preventive measures, observations showed that dog owners did not always have their dog under control. This showed in dogs running off to other dogs or humans, or not returning to their owner when being called. For example, I was interviewing a couple who owned a small dog which they claimed to listen quite well

"We houden onze hond ook altijd goed bij ons. Hij luistert, uiteindelijk, goed.".

"We always keep our dog with us. He listens well, eventually". - Interview with D3, 28-11-2017

The owners made this statement while their dog ran off only minutes before to a much bigger dog that was on a leash. The small dog wanted to play and the owner of the bigger dog had to restrain her dog. This shows that the reality of dog owners does not always match the reality of others. Furthermore, some dogs were kept under control by using toys or treats, mainly to prevent or distract them of not listening. The reality of the hikers was in stark contrast to that of most dog owners. Most hikers mentioned that dog owners are to blame for their dog's behaviour. According to hikers, dog owners do not oblige to the rules of the Sysselt. Dog owners for example let their dogs walk off-leash in areas that are labelled leash-area.

During my interviews with hikers I found the following. Hikers generally dislike the 'intimidation' of dogs and their owners. For example, when dogs run towards hikers and/or jump towards a person. Hikers generally feel like it is the owners' responsibility to have the dog under control. For example, I had an interview with two hikers that mentioned that they had experienced dogs jumping up. One of them said the following about it:

> *"Het bos is van iedereen. En je hond moet je onder controle houden."*
>
> "The forest belongs to all. And you must keep your dog under control" - H3, 29-11-2017 in the Sysselt.

In a different interview with 2 hikers (nr. 2), one of the hikers expressed the following:

> *"(...) Als ze de hond allemaal maar bij zich houden vind ik het geen punt. Maar honden die op mij afkomen, daar heb ik een hekel aan."*
>
> "(...) If they [dog owners] keep their dogs close, I don't mind them. However, dogs that run towards me, I dislike that." H2, 25-11-2017, in the Sysselt

Experts expressed two major points. Firstly, forest rangers and ecologists are in favour of information services. Forest rangers, for example, mention that the signs in the area imply that people should have their dog under control. Forest rangers also always check where incidents with wildlife occur. Dog owners are responsible when dog-wildlife interactions occur off-trail. Dogs are not held accountable for their actions. Their owners are, however, held accountable. Control is implied through the signs and the way the rules are phrased.

> *"Honden mogen los op wegen en paden. Dus we gaan er vanuit dat mensen de honden onder appèl hebben en inderdaad de honden op wegen en paden houden"*
>
> "Dogs are allowed to walk without a leash on the roads and paths. Hence, we assume that people have dogs under control and do keep the dogs on roads and paths" - Robert-Jan Dunselman, forest ranger of the Sysselt

Secondly, forest rangers call upon the responsibility of dog owners to keep their dogs under control. They did not blame dogs in any way for their behaviour. They do connect the dogs' behaviour to the owners'.

> *"Ik begrijp ook wel dat een hond niet snapt, dat hij geen borden kan lezen. Maar dan kom je weer bij die baas uit"*
>
> "I do understand that a dog just doesn't understand, that it cannot read signs. However, then you get to the owner once again." - Remco Oosterkamp, former forest ranger of the Sysselt

If a dog owner were to lack control over their dog, measures should be taken. However, as experienced in the Sysselt, most owners have the perception that their dogs obey. This might not always be the case. Ecologists demand visitors to take responsibility. This can be encouraged through information provisioning.

> *"Het gaat ook om voorlichting natuurlijk. Dat speelt een rol. Maar in dit geval, met het component hond en die is wat onvoorspelbaarder. Dat is dan weer het punt. Heb je je hond niet goed onder controle, houdt hem dan aan de lijn."*
>
> "It's also about information provisioning. That plays a role. However, in this case, with the component 'dog', that one is a bit unpredictable. That's the point again. Don't you have your dog under control, keep it on a leash." - Interview with Dennis Lammertsma, wildlife ecologist (07-11-2017, Lumen).

The experts I interviewed generally call upon the responsibility of visitors of nature areas, and therefore dog owners as well. Ecologists and wildlife managers mention that humans are responsible for their own behaviour and those of their dogs:

> *"[Wilde dieren] mag je niet verstoren. En een hond die jou toebehoord daar ben jij verantwoordelijk voor. Maar een hoop mensen die realiseren zich dat niet hoor."*
>
> "One is not allowed to disturb [wild animals]. And a dog that belongs to you, you're responsible for it. But many people don't realise this though."- Interview with Robert-Jan Dunselman (07-12-2017, the Sysselt)

> *"Honden, daar zit dat controle gedeelte heel erg bij in. Wilde dieren laten hun gedrag zien. Een hond mag dat niet. Dat mag ie dus kennelijk ook niet in zo'n losloopgebied. Of tot op zekere hoogte. En dat is interessant omdat dan die hond onder de invloed van de mens, geldt ook voor ons dus, beperkt vrij mag zijn. Net als kindertjes, je moet je ze gewoon als kindertjes behandelen. Ze horen gewoon hond te zijn als ze niet aan de lijn zitten. Maar ze mogen niet net als kindertjes, slaan of vanalles mogen ze niet."*
>
> "Dogs, they have control embedded in them. Wild animals show their behaviour. A dog is not allowed to do so, apparently not even in a no-leash area. Or to a certain extent at least. And that's interesting because a dog is under influence of humans, and this also goes for us, and therefore be limited free. Just like children, you should treat them like children. Dogs should be able to be dogs when they're not on a leash. However, they cannot, just like children, hit others. They're not allowed to do lots of things." - Interview with Sip van Wieren, wildlife ecologist (30-09-2017, Gaia).

GLK is currently assigning strict uses in different parts of the forest. They keep these parts strictly separated by information signs. They recently expended the wildlife sanctuary area. Moreover, wildlife ranger Robert-Jan Dunselman regularly writes tickets for offenders. These offends mainly include dogs walking without a leash outside the no-leash area. The idea behind these separations is to reduce the number of unexpected encounters between humans and wildlife. Instead, GLK aims to have more controlled encounters at designated wildlife areas, like wildakkers (wildlife fields) and the wildlife observation post. As GLK is responsible for the area, some visitors seem to hold them responsible for the behaviour of wildlife. Remco Oosterkamp, former forest ranger of the Sysselt told me that he was held responsible for a boar attack:

> *"'Jouw wild zwijn heeft mijn hond aangevallen'. Het wild zwijn is niet van mij, het is van iedereen. Ik vind het ook een eigen stukje verantwoording, want officieel; honden mogen los, maar alleen op wegen en paden. Ik zei: 'waar was uw hond?'. 'in het vak', ik zeg: 'nou ja, dan kan ik er ook niks aan doen'. Dat klinkt misschien een beetje lullig, maar het is wel zo."*
>
> "'Your wild boar attacked my dog'. The wild boar isn't mine, it's everyone's. I think it's a part responsibility as well. Because dogs can walk off-leash officially speaking, but only on roads and trails. I said: 'where was your dog?'. 'in the forest', then I say: 'well, then I can't help it either'. That may sound a bit stupid, but it's reality." - Remco Oosterkamp, former forest ranger of the Sysselt

In summary, dog owners feel like they have their dog under control. However, this is not always the case as I have experienced myself as well several times[4]. Hikers often feel like dog owners do not have their dog(s) under control. They, moreover, feel like dog owners have no regard for the other users of the Sysselt. Ecologists call generally upon the responsibility of humans to act conscientiously. Ecologists also call for more information provisioning to play into responsibility and awareness. Lastly, forest rangers attempt to control humans and wildlife through their policy. Furthermore, they also call upon the responsibility of humans. It is striking that no one held the dog responsible for their behaviour, but instead held the owner responsible. All these general views are summarised in table 1.

Table 1: Overview of Control & Responsibility among the different groups in the Sysselt

Group	***General statement(s)***
Dog owners	"I have my dog under control"
Hikers	"Dog owners do not have their dog under control"
	"There should be more control/enforcement of the rules in the Sysselt"

[4] Field notes 12-12-2017: I walked at the edge of the Paradijs when I noticed a dog that was walking at about 15 meters away from its owner. The owner repeatedly called the dog and was walking with some other dogs. I kept on walking calmly, but the dog was standing in the way of the path. I continued walking and the dog suddenly started growling and showing its teeth. The owner continued to call the dog, but it did not respond. The dog walked up behind me and kept growling. I kept walking, but was scared that the dog would bite me from behind.

Ecologists	"We should control human behaviour through information services" "People think they have their dog under control, but don't"
Forest rangers	"Dog owners should have their dog under control" "People should act responsibly in nature areas"

Control and responsibility also link with ethics. Ethics are applicable to several themes in this thesis. I encountered many different views on (conservation) ethics among the different groups. Most of the visitors of the Sysselt were in favour of the animals being there. This changed when people were feeling unsafe because of the presence of mainly the wild boar. Most visitors acknowledged that the animals had no other place to go but the forest. However, visitors did not seem to allow their presence when human or companion animal safety was at stake.

One dog owner mentioned (after I was done recording) that she was a vegetarian and hated animal suffering[5]. However, she also asked me the question whether it was that bad when dogs attack or kill a wild animal (because their numbers are plenty). She felt like the population numbers were too high and animals were suffering because of it (lack of food, diseases, etc.). When I asked a forest ranger about this statement, he said:

> *"Ik jaag en ik heb dierenwelzijn verschrikkelijk hoog in het vaandel. Of een ree nou verscheurd wordt door een hond, of gebarsten is gelopen tegen een hek of onder een auto is gekomen... of hij krijgt de kogel en hij heeft de kogel niet eens gehoord en hij valt neer. Dat is wel een verschil he."*
>
> "I hunt and value animal welfare greatly. Whether a roe deer gets ripped apart by a dog, or ran into a fence, or was ran over by a car... or it is shot, hasn't even heard the bullet and falls down. That's quite the difference. - Robert-Jan Dunselman, wildlife manager of the Sysselt

People from different groups, hence, have different ideas about what constitutes responsible and ethical behaviour.

4.4 Adapting to living together

Awareness, risk (perception), responsibility and control may or may not result in adaptation. Adaptation is the process of making (something) suitable for a new use or purpose i.e. modify, or becoming adjusted to new conditions (Oxford dictionary, n.d.). Such (more-or-less) new conditions in the Sysselt are mainly characterised by the growing numbers of both wildlife, humans and their companion animals in the area. Although it is very hard to make solid statements about adaptation in this relatively short-term research, some findings suggest that humans and wildlife are adapting to the environment and each other. It is important to note that these findings are based on human perspectives. Observations and interviews were used to come to these findings.

[5] Fieldnotes combined with interview D3, 28-11-2017

Visitors of the Sysselt seem to be aware of the wildlife that lives there. The majority of the visitors stated that several wildlife species are present in the area. Hence, some visitors stated that they adapt their behaviour. Especially dog owners seem to take preventive measures towards wildlife. They put their dog on leash in areas where their dog is allowed off-leash[6]. This is not always done, but most often when there are reports of (dangerous) wildlife in the area.

> *"Als ik [de aanwezigheid van zwijnen] weet dan pak ik 'm [hond] altijd aan de lijn. Dat risico neem ik niet."*
>
> "If I know [boars are near], then I always put him [dog] on a leash. That's a risk I'm not taking." - D10, 20-12-2017

Furthermore, some dog owners avoid certain routes or parts of the forest to prevent encountering wildlife, especially wild boar. Taking preventive routes mostly signify the fear of dog owners for encountering wildlife that may harm their dog. Moreover, most visitors of the Sysselt - either dog owner or hiker - mentioned that whenever they encounter a boar they turn around and take a different route. This is not the case with roe deer, as these mostly flee themselves already.

> *"Dan lijn ik hem [hond] als de sodemieter aan. Trouwens, ik maak toch rechtsomkeer als ik ze [zwijnen] zie hoor."*
>
> "I'll get him the hell on a leash. By the way, I'll turn around when I see wild boar anyways." - D7, 19-12-2017

Some dogs are always on a leash as they can be aggressive or unpredictable towards other dogs or wild animals. A final measure some dog owners take is distracting their dog by playing ball or treats.

> *"Zij [vrouwtje bouvier] spoort wilde zwijnen op. Vandaar dat we ook aan het ballen zijn. Zonder bal, dan is ze avontuurlijk en gaat ze zwerven. Want ze weet precies waar ze zitten en dan loopt ze er zo naar toe."*
>
> "She [a female bouvier] tracks down wild boars. That's why we're playing ball. Without ball she'll get adventurous and she'll start to wander. Because she knows exactly where they [wild boars] are and she'll walk right to them." - Interview dog owner 6, 19-12-2017, the Sysselt

However, awareness does not always result in adapting. For example, some dog owners mentioned that their dog has a hunting instinct and that whenever it notices the presence of wildlife it will

[6] Fieldnotes 05-11-2017: "(…) That's why he [owner of Golden Retriever] preventively puts his dog on a leash. He often encounters wild boars. The boars are harmless according to the owner, unless they have young.
Fieldnotes 05-11-2017: "She [dog owner] preventively puts her dog [a mutt] on a leash. If the dog starts chasing something, the owner throws the leash towards her (which makes a sound) so her dog will get a bit startled. Hence, distracting the dog from chasing.

chase it. None of those dog owners kept their dog on a leash. This is striking, as dog owners admitted they (can possibly) lose control over their dog when they encounter wildlife.

Dog owners seem especially aware to keep their dog in sight. Owners report that dogs that have had a negative encounter with wildlife are generally more cautious than the ones that have not had any encounters. Dog owners report their dogs being either scared of wildlife or curious towards it. Next to dogs, wildlife also seems to adapt their behaviour. Wild boar and roe deer differ quite a lot in their behaviour towards humans. Wild boars, on the one hand, are often described as 'opportunists'. Many ecologists and wildlife managers acknowledge that boars are smart animals and can learn (and adapt):

> *"(...) Zwijnen... Dat zijn toch echte opportunisten. Aan de ene kant worden ze natuurlijk ongelofelijk op de huid gezeten, en dat zal de komende winter ook wel weer gebeuren want er liggen heel veel eikels dus het gaat erg goed met die zwijnen. Terwijl aan de andere kant, misschien komt dat dan ook door hun opportunistische gedrag en de grote dichtheden, daardoor gaan ze bewegen."*
>
> "Wild boars... Those are real opportunists. On the one hand, they're being tremendously chased, and that'll happen again coming winter because there are many acorns so the boar is doing very well. While on the other side, maybe that's because of their opportunistic behaviours and large densities, that therefore they start moving" - Sip van Wieren, wildlife ecologist of WUR

> *"Varkens zijn slimme beesten. Toch altijd weer een poging wagen om aan de andere kant van het hek te komen. Dat kunnen ze al kroelend over het wildrooster doen, of ze springen eroverheen. Dan nemen ze een aanloop en beuken ze het gaas en laten ze dat zo omrollen. Als eentje dat doet, dan doen ze dat allemaal. Dus wat dat betreft moeten wij... Dat is met de rasters ook, ophogen, omdat de varkens zo slim worden."*
>
> "Pigs are smart animals. They'll try getting on the other side of the fence. They can do that while crawling over a grid, or they'll jump over it. They take a running start and bash the fence and they'll make the fence curl up. If one of them does it, they will all do it. So, concerning that we should... Same goes for the grids, raise them, because the pigs are getting smarter" - Remco Oosterkamp, forest manager

Both boar and deer seem to run away or stand still when encountering humans. Standing still seems to be especially advantageous for deer. (Some) dogs are playful and likely to respond to (sudden) movements. There is a chance that a dog will chase a deer when it runs away. Boars have a third option which they only seem to choose when running away is not an option anymore. Boars can choose to attack i.e. defend themselves. A boar will attack when there is no other option left according to ecologists and forest managers. Boars are unpredictable in the sense that it is possible for them to suddenly turn around and defend themselves when being chased. Many hikers and dog owners seem to interpret boars as dangerous and scary because of this. Roe deer will always choose to run away.

Visitors mentioned that the deeper you go into the forest, the more wildlife you will encounter. However, wild boars and deer do not seem to disappear from areas where dogs and humans go. Wild boars are, again, in this sense quite opportunistic. Wild boars eat dog feces, especially during times when food is scarce. Moreover, humans visiting the area also creates opportunities for retrieving food. There are no bins at the Sysselt, and (organic) waste seems to be common like orange peels[7]. The threat of humans and dogs does not seem to be pressing enough for both species to stay away from areas where humans go. There are sufficient food sources in the Sysselt according to forest rangers. Therefore, the animals are not restricted to certain areas.

Furthermore, the environment in the Sysselt is changing rapidly. *Wildakkers* (wildlife fields) were put into place by the forest management. They enable wildlife to eat at these fields for two main reasons. The first reason being that most wildlife species have nutrient deficiencies and need to make up for those. The second reason being that wildlife is easier to hunt down when they visit these fields regularly. Ethics play a large role in this. Both reasons for having the *wildakkers* is for the wildlife to have healthy lives in which they do not starve or get sick. Furthermore, GLK started to change the spatial planning of the Sysselt. More parts have been solely designated to wildlife as of last year. This has mainly been done because of the expected growth in visitor numbers.

"Voor in het bos proberen we de meeste recreatieve dingen plaats te laten vinden, dus honden uitlaten moet daar allemaal kunnen. Achter in het bos (...) proberen we het rustig te houden. (...) Daarnaast hebben we ook een aantal wegen afgesloten voor publiek door middel van hekken en borden met 'rustgebied'. Dit is relatief nieuw."

"We try to have most leisure related activities in the front of the forest, so walking dogs should be allowed there. We try to keep calm in the back of the forest. Besides, we have also blocked some paths for the public by placing fences and signs with 'sanctuary' on them. This is relatively new." - Robert-Jan Dunselman, forest manager

[7] Field notes 14-11-2017

Chapter 5. Discussion

5.1 Exploring the literature

The case described above demonstrated the human-wildlife-dog interactions that take place in the Sysselt and henceforth, the different relationships that have formed between these species. Human-dog-wildlife interactions are very rare, especially during autumn and winter. The most common interactions that take place are those among humans and dogs. These interactions are mostly positive, but some also negative. However, perceptions of what constructs positive interactions versus negative ones may vary (Miller et al., 2014) and informants often had mixed - both positive and negative - feelings about human-dog-wildlife and dog-wildlife interactions. These interactions do have repercussions for conservation policy in the Sysselt. Forest management GLK seems to mainly choose for strategies of confinement, rather than alignment which may or may not aggravate conflict. This strategy seems to be a reproduction of protectionist approaches to conservation.

There have been many contrasting findings on HAIs and HARs in the Sysselt. There are many different views on both wildlife and dogs in the area. The interactions that occur between humans and animals seem to influence the relationship between the two. In this discussion, I will explore the most important linkages of the findings to the literature. Informants had many different, often contradicting, realities on the different themes. Moreover, informants had conflicting realties within the themes. These dualisms will be discussed in this section. In this section, I will analyse these views and perceptions and look for its contribution the conservation debate.

Conservation management debates and dualisms

Many different interpretations of the Sysselt were found during this thesis among its visitors. These different understandings of space can be described as: *sharing of space*, *separations in space*, or *self-serving space*. These views reflect the various literature on (human perspectives on) wildlife management and HWC. The view that consists of the notion that space should be shared between humans and non-humans - both flora and fauna - is characterised by a strong sense of appreciation. Especially dog-owners were very thankful for the area and its wildlife, and the opportunity for walking their dogs there. Dogs can be an opportunity to appreciate nature and to experience wildlife (Holbrook et al., 2001). However, sharing of space is not unconditionally. It became clear that measures should be taken once (public) safety became a (perceived) issue (e.g. culling aggressive wild boars or law enforcement of free-roaming dogs). In a sense, sharing of space relates to the concept of cohabitation; peacefully sharing and co-shaping space (Boonman-Berson, 2016). Another major view that could be identified is the view of making separations in space. The people that share this view acknowledged the wildlife that is present in the area, but also identified recreationists as important users of the area. Hence, they argued that the area is rasterized and therefore, humans, dogs and wildlife are all confined to certain areas. Encounters with one-another are avoided this way. Although some boundaries may be needed to protect humans, dogs and wildlife (Boonman-Berson, 2016), drawing static boundaries ignores requests to go beyond the borders of humans versus wildlife and to co-exist with wildlife instead (Cassidy & Mills 2012; Hinchliffe et al. 2005; Hinchliffe et al. 2006; Lorimer, 2006; Noske 1997) by using flexible, dynamic boundaries (Boonman-Berson, 2016). This view can be linked to Bruno Latour's (1993) Great Divide between nature and culture, humans and wild animals, or domesticated and wild

animals even. A third and final interpretation of space is the idea of self-serving space. Self-serving, in this sense, refers to space as serving to one's own interests and hence, putting one's own needs before others'. The people that share this view acknowledged their use of the area, hiking or dog-walking, as the most important use. The people that share this view were generally very pragmatic about nature, wildlife and other users. Users that pose a threat should be dealt with. As we have seen throughout the (Dutch) history of conservation, human development is closely tied with control of nature (Van Slobbe, 2013). What then remains of nature, is nature as a mere economic good; nature in relation to living, tourism, relaxation, health and - if possible - economy (Van Slobbe, 2013). Nature will then become part of values such as health, friendship, safety and well-being. Having a self-serving view may result in conflict with other users. For example, dog owners may have a disregard for other users because they sometimes fail to recognize other 'players' that exist in the lifeworlds of humans and dogs alike (Gommper, 2013). Dogs in the Sysselt are being used for the experience of nature. However, dogs are not always under control and may be the centre of conflict. This view has overlaps with anthropocentric thinking. This last view reflects mainly on the utility of nature and wildlife, rather than making (often) unconscious separations between nature and culture. However, people with a self-serving view do not necessarily have a disregard for nature and wildlife, but rather deem leisure more important than nature. This view also does not imply people not appreciating nature.

The debate around 'land sharing' and 'land sparing' is centred around conservation versus agriculture. However, a parallel can be drawn between this case and these concepts. Land sharing versus land sparing is its essence based around human interests versus nature's interests, or socioeconomic versus natural concerns. This can be extended to conservation and leisure, as can be seen throughout the different interpretations of space. This also raises thought-provoking questions like what is deemed right or wrong in this sense. Land sharing implies sharing of and coexisting in space, potentially closing the nature/culture divide. However, land sharing also means all agents need to adapt to one another to coexist. Land sparing more-or-less reinforces nature/culture divide by literally separating nature from society, but also seems to protect humans, dogs and wildlife by avoiding interactions among them. Moreover, we can connect Cresswell's (2005) moral geographies to these different interpretations of space. These three interpretations of space show that people have different ideas about where certain people, animals and practices belong in places, spaces and landscape. Some people allow people, animals - either dogs or wild animals, to exist together and some people make stricter separations. To speak in Matless' (1994) terminology; Although wildlife is often deemed as the 'rightful occupants', but many people do not view themselves as 'invaders'. Moreover, ecologists ask themselves why dogs are allowed in protected areas, as they could pose a threat to wildlife. This raises fascinating questions on why we believe in such moral geographies. It would be of great use and interest to pose the question how these moral geographies around protected areas, or nature areas in general, are formed. This could also assist in incorporating society's views into policy development.

We can see dualisms throughout these three different understandings of space. There seems to be a stark contrast between the notion of sharing space and making separations in space. This can be tied together with previous debates concerning conservation like land sharing versus land sparing, and protectionism versus integrated, inclusive conservation practices. Dualisms can also be found within the different interpretations of space. The view that consists of making separations in space shows these dualisms quite literally; human/nonhuman, nature/society, and domestic/wild. Sharing

of space also has a contrasting side to it, which entails that sharing of space is only allowed when human safety is secured. Lastly, space as a self-serving commodity has a dualistic side in the sense that the people that share this view do not necessarily have a disregard for nature. These three different views all have different implications for nature conservation. The views translate in terms of (using strategies of) confinement or alignment (Boonman-Berson, 2016), separations or cohabitation. Upholding views that include separations or self-service could pose a threat to coexistence. These views picture nature as separate from society, which is likely to lead to alienation from nature. Fostering sharing of space, on the other hand, is crucial for cohabitation. This view has the possibility to support the idea that nature and culture are not separate entities, but should rather be treated as integrated parts. It can also foster familiarity with nature and wildlife, and therefore knowing how to behave in nature. Hence, gaining more insight in how these views are formed, shaped, and changed is crucial for conservation. Therefore, the main contribution of this study to the academic debate is showing the nature/culture dichotomy in human-nonhuman relationships, and moreover how these different perceptions of space and wildlife are influenced and motivated by protectionism and power.

Power relations

Power and control are implicitly present within the different interpretations of space; *sharing of space*, *separating in space*, or *self-serving space*. Humans have the (sovereign) power to decide over the lives of animals, either dogs or wildlife. Furthermore, humans can exert biopower over these animals in order for them to behave in certain - approved - ways. (Human) safety and risk perception, again, seem to play a large role in enforcement and exerting power over wildlife. This can be seen in the ways dog owners keep their dogs under control, and the ways forest management responds to human-dog-wildlife interactions. GLK, for example, is exerting biopower through correcting and adjusting visitor's behaviour through information provisioning and fines. Srinivasan (2011) argues, with regards to domesticated dogs, that neutering, euthanasia and breeding can be viewed - in some cases - as exercises of sovereign power in which humans, for their self-interest, fiddle with animal lives without consequence. However, many environmental interventions, such as culling individual animals in order to protect the population or ecosystem, are not based on purely human interests (Srinivasan, 2011). For example, the wildlife observation post is used to feed wildlife in times when the availability of food is low. It is also an opportunity for visitors to spot wildlife with (a feeling of) control and minimum risk. Moreover, we can extent these power relations to the notion of agency. Although this thesis was mainly focused on human perceptions of nonhumans, it has become evident that animals play a vital role in shaping landscapes by exerting agency. We have seen that both dogs and wild animals shape the ways humans behave and view the Sysselt due to their presence and behaviour. This reinforces the belief that wildlife management should no longer focus solely on the agency of humans, but must also take into account the agency of animals and the influence of the landscape in which interactions take place (Boonman-Berson et al., 2016).

Human perceptions of wildlife

The case illustrated that interactions, especially negative ones, do not occur often and can be considered rare. However, the case, also demonstrates that (perceived) risks and awareness influence visitor's behaviour. Many visitors could not explain why they perceived the boar as

frightening. Perhaps, the unpredictable nature of human-wildlife interactions plays a role. Human encountering wildlife can be described as unpredictable, intermittent, and fleeting (Knight, 2009). Furthermore, some claim that risk perception is socially constructed (Dake, 1992) and therefore, ordinary interactions with family, friends, and colleagues influence risk perception (Douglas & Wildavsky, 1982; Schwarz & Thompson, 1990). Lastly, the media frames the incidents in terms of boars 'attacking' dogs and/or humans. Most of the visitors of the Sysselt also spoke in terms of attacks and aggressiveness, few spoke of self-defence from the boar's side. Hence, it seems like people's everyday interactions and media input shape their risk perception rather than their own experiences. Culture provides socially constructed untruths about nature-systems of belief that are reshaped and internalized by individuals, becoming a part of their realities i.e. worldviews and influencing their interpretation of natural phenomena (Dake, 1992). Dualisms can be seen throughout risk perception. On the one hand, people want wild animals to have a good and healthy live, and for them to not suffer harm. On the other hand, people seemingly speak lightly about culling wild boars. The need to protect oneself, or one's dog, is greater than the notion of coexistence, or right to exist even. The perception of risk (and safety) seems to play a larger role than the actual amount of risk in people's views and behaviours. Hence, human-dog-wildlife relationships are based around protecting humans, and dogs from wildlife - especially the wild boar. Thereby 'villainising' wildlife and justifying management methods such as confinement or culling.

Human-dog-wildlife interactions

There are different signs of taking the environment and its inhabitants and visitors into account among visitors, wildlife and forest management. The three most commonly used strategies used to behave with wildlife by dog-owners are: *avoiding* interactions between humans, wildlife and dogs, *distracting* dogs from their surroundings and *controlling* dogs. Avoiding interactions between the groups is mostly expressed by taking alternative routes. Dog-owners inform each other when wild animals have been spotted in certain parts of the area. Moreover, they reduce the chance of an interaction between them and wild animals, and thereby the risk of a negative interaction. However, taking alternative routes does not guarantee complete avoidance of interactions. It does, however, contribute to risk perception of dog-owners. Risk perceptions are explained in terms of how these perceptions support a particular way of life (Pratkanis, Breckler, & Greenwald, 1989), the regular activity of dog-walking in this case. Another common strategy to minimize risks of an interaction of to distract one's dog with treats or toys. This strategy was often used by dog-owners with playful or instinctive dogs (i.e. dogs that like to hunt/track). Dog-owners take away the attention from possible wildlife to themselves, instead (of attempting) to remove wild animals from the picture to reduce the chance of interaction. A third, and final, strategy used by dog owners is control by putting the dog on a leash. This strategy is most commonly used with dogs that are sensitive to wildlife and owners that lose control when wildlife is encountered. Dog are put on a leash in areas in which they can (legally speaking) walk without a leash. These three strategies are centred around avoiding (negative) interactions and keeping control of the situation. It, furthermore, shows expressions of power over dogs. Dog-owners use the different strategies, not restricted to only one, according to what best suits them and their dog(s). Dog-owners use a different strategy when a dog-human-wildlife interaction does occur. Normally, all parties 'freeze' for a moment. Strikingly, hikers sometimes also freeze when they encounter a free-roaming dog, to minimize the risk of getting hurt (e.g. run over, jumped on, etc.).

I have not had the opportunity to study how dogs and wildlife adapt and/or co-shape the Sysselt as a landscape unfortunately. Hence, more research is needed on the spatial behaviour (and interactions) of dogs and wildlife understand their adaptation.

5.2 Strengths and limitations

The major strength of this case study is that it provided detailed information to explain the complex issues at the Sysselt. Moreover, multiple methods and data sources were used. Triangulation namely is a powerful tool to strengthen qualitative studies. Using multiple methods and sources has enhanced the reliability and validity of results, as the different data can be checked multiple times. Furthermore, both obtrusive and unobtrusive methods have been used. The conflict at the Sysselt is a sensitive subject for many people. However, the topic became easier to address by (unobtrusively) observing and having (informal) conversations with recreationists. This also provided the opportunity to see whether the answers of interviews matched the observations and/or informal conversations. Using unobtrusive methods also avoided the Hawthorne effect from occurring, as people are prone to adjusting their behaviour (and answers) when they know they are being researched. Another major strength of this study is the inclusion of multiple human realities. The Sysselt is an area with many different users and uses, thus including these different users is crucial for sustainable management. Wild animals and dogs were represented through human perceptions, in which dog owners mostly spoke on behalf of dogs, and park rangers and ecologists spoke on behalf of wildlife. Furthermore, time and change (over time) have also been taken into account to an extent. For example, the former forest ranger of the Sysselt has been interviewed, and I have spoken with several dog day-care services that do not walk in the Sysselt anymore. However, the focus of the study was studying the current (and possible future) situation at the Sysselt.

On the other hand, this study has some limitations. One of the limitations of this study is the overall anthropocentric methods and sources. Wild animals in the Sysselt, like the wild boar and roe deer, were not directly studied. Instead, they have been indirectly included through their general presence, tracks, and via the way humans spoke about them. To propagate management strategies that draw on flexible, dynamic boundaries in their goal for cohabitation, both detailed knowledge about both animal and human behaviour, and their interactions is needed (Boonman-Berson, 2016). Furthermore, this thesis generally included people that do not walk in the Sysselt anymore. It was decided not to look for people that do not walk there anymore because of time constraints and the scope of this study. Perhaps if the people that share this view were included more data on HWC was retrieved. However, some dog-day care services were contacted to get a small perspective of the people that do not go there anymore. Moreover, this thesis was done at a time when (relatively) few (negative) interactions take place between humans and wildlife. Most negative interactions seem to take place during spring, as many wildlife species have young then. Wildlife, especially wild boar, generally is fiercely protective over their young, and young are more vulnerable to getting attacked by dogs. This could also affect human safety (Miller et al., 2014) besides the safety of dogs and wildlife. Dogs could also, directly or indirectly, impact wildlife (Miller et al., 2014). It might be that people have different or stronger opinions on wildlife (management) during that time of year.

5.3 Future research and recommendations

This thesis research has contributed to gaining insight in human-animal interactions and relationships. Therefore, it provided findings that may contribute in gaining more understanding of (solving) HWC. Although its focus was on human realities and the human-dog relationship, it has provided for an opening for future research. The case provided very detailed, specific information which can assist in understanding the Sysselt better, also in the context of changing conservation. However, the interactions - and possible conflicts - that take place are related to the species in the area. Hence, conflicts and situations in areas with different wildlife and companion species (e.g. horses) will be very different from the Sysselt. Hence, there is an opening for future research for looking at interactions and relationships between different species. Furthermore, this case could be explored through the natural sciences as well using a multi-sensory approach. As Boonman-Berson et al. (2016) argues, recognition of the differences between humans and animals is key to coexistence between them. Hence, they argue, focusing on both animals and humans through a multi-sensory approach offers a symmetrical perspective.

This thesis sheds light on an intriguing case, but pressing questions arose in doing so also. For example, what constitutes ethical (human) behaviour and ethical conservation? Moreover, more research should be conducted on how interpretations of nature areas are formed, and possibly how these are influenced. Furthermore, a species-specific approach would also allow for deeper understanding of human-animal relationships, as we have seen that people's relation with the wild boar seems to differ from the one with roe deer. Most importantly, research should look into wild animals and dogs' behaviour in nature areas to enable true cohabitation. Although humans are a dominant force in conservation, the perspectives of wildlife and dogs should also be considered. What makes this thesis unique is that it combines many different (mainly human) perspectives on cohabitation. It, therefore, asks for more practical recommendations next to recommendations for future research. Certain boundaries and behaviours are needed to make cohabitation a reality. Therefore, it is deemed of great importance for forest management to convey this to their public. Visitors should be (re)informed about behaving in nature, as humans are such a dominant factor for making or breaking conservation practises. More research is needed to address such pressing questions.

5.4 Conclusion

We have seen that interactions between humans, dogs and wildlife are rather rare. However, the anticipation and risk of such interactions shapes people's views on nature and wildlife. Furthermore, the plentiful interactions that take place among humans and dogs frame people's views on dogs and wildlife as well as they create awareness of wildlife, and risk perception. The different interpretations of space that I have outlined in this thesis are *sharing of space*, *making separations in space*, and *space as a self-serving entity*. These views all have different implications for the possibilities of cohabitation. Fostering sharing seems to be vital for cohabitation, as the other views signify alienation from nature. Humans, dogs and wildlife do seem to draw upon each other's presence. Furthermore, wildlife contributes to visitor's experience of the area. Moreover, dogs play a vital role in the experience of nature for both dog owners and hikers. They should,

therefore, be considered as an agent in conservation alongside humans and wildlife. Control is implicit and draws upon people's responsibility to act morally and rationally in nature areas. Dogs are currently held under control by using strategies of distraction or avoidance of dog-wildlife interactions.

The specific case of the Sysselt does not foretell cohabitation of humans, dogs and wildlife. It rather forecasts alienation and artificiality, and a propagation of protectionism. HWC is likely to aggravate because of the current wildlife management policy that aims at cutting-off the interactions among humans, dogs and wildlife altogether. As we have seen, the interactions among humans, dogs and wildlife shape the relationships and perceptions among them. Hence, preventing any interactions from occurring at all will also result in a disconnect among them. This is likely to play into the current trend of alienation from nature in all the divides I have mentioned during this research. Strategies of alignment are needed next to the currently used strategies of confinement. Moreover, the stark contrasts between urban/rural, human/nonhuman, nature/culture, and domesticated/wild should be reduced to push towards coexistence. However, boundaries do need to be put into place for humans and their dogs to act in nature areas for the protection of humans, dogs and wild animals. Humans, and dogs, should be exposed more to nature and wildlife in order to 'relearn' how to act in these nature areas.

In conclusion, examining human-animal interactions and relationships is crucial for fostering positive human-animal relationships and closing many great divides in an era of dualisms and alienation from nature. The scientific and public debate on conservation and wildlife management is crucial in keeping these topics current and relevant. However, unfortunately, the current discourse in conservation policy does not signify cohabitation, but rather a stronger alienation from nature. Hence, more research on human-animal interactions and human-animal relationships, which also includes dogs and wildlife as agents, needs to be conducted to address these majorly important issues.

References

Adviescollege Grenzeloze Veluwe. (2002). Een Goede Raad voor de Veluwe. Retrieved from: http://edepot.wur.nl/334026

Alpert, P. (1996). Integrated conservation and development projects. BioScience, 46(11), 845-855.

Bade, T., Enzerink, R., van Middendorp, B., & Smid, G. (2010). Wild van de Economie. *KNNV Uitgeverij, Zeist*.

Baskin, L., & Danell, K. (2003). *Ecology of ungulates: a handbook of species in Eastern Europe and Northern and Central Asia*. Springer Science & Business Media.

Batavia, C., & Nelson, M. P. (2017). For goodness sake! What is intrinsic value and why should we care?. Biological Conservation, 209, 366-376.

Bennett, G. (2008). Interaction between Policy concerning spatial Planning and ecological Networks in Europe. Overview Report. Online unter: http://www. ecnc. org/download/normal/ProjectManagement/89/SPEN% 20Overview% 20Report. pdf (Zugriff am 08.03. 2009).

Boonman-Berson, S. (2016). Blurred Boundaries in Wildlife Management Practices. In Animal Ethics in the Age of Humans (pp. 203-223). Springer International Publishing.

Boonman-Berson, S., Turnhout, E., & Carolan, M. (2016). Common sensing: Human-black bear cohabitation practices in Colorado. *Geoforum*, *74*, 192-201.

Butler, J. R. A., Du Toit, J. T., & Bingham, J. (2004). Free-ranging domestic dogs (Canis familiaris) as predators and prey in rural Zimbabwe: threats of competition and disease to large wild carnivores. Biological conservation, 115(3), 369-378.

Carter, B., & Charles, N. (2013). Animals, agency and resistance. Journal for the Theory of Social Behaviour, 43(3), 322-340.

Cassidy, A., & Mills, B. (2012). "Fox Tots Attack Shock": Urban foxes, mass media and boundary-breaching. Environmental Communication: A Journal of Nature and Culture, 6(4), 494-511.

Conover, M. R. (2001). Resolving human-wildlife conflicts: the science of wildlife damage management. CRC press.

Cresswell, T. (2005). Moral geographies. Cultural geography: a critical dictionary of key concepts, 128-134.

Dake, K. (1992). Myths of nature: Culture and the social construction of risk. Journal of Social issues, 48(4), 21-37.

De Boo, M. (2012, May 5). Half varken, half zwijn. NRC.nl. Retrieved from: https://www.nrc.nl/nieuws/2012/05/05/half-varken-half-zwijn-1100840-a1156845

De Mello, M. (2012). Animals and society: an introduction to human-animal studies. Columbia University Press.

Dingwall, R. (2002). What makes conflict resolution possible?. Negotiation Journal, 18(4), 321-326.

Doolittle, A. A. (2007). Fortress conservation. Encyclopedia of Environment and Society.

Douglas, M., & Wildavsky, A. (1982). How can we know the risks we face? Why risk selection is a social process. Risk analysis, 2(2), 49-58.

Duncan, E. 2013. The Economist Special Report: Biodiversity. All Creatures Great and Small (Sept. 14, 2013). http://www.economist.com/news/specialreport/21585091 -biodiversity-once-preoccupationscientists-and-greens-has -become-mainstream (accessed July 2017).

Elling, B. (2010). Rationality and the environment: Decision-making in environmental politics and assessment. Routledge.

Enck, J. W., & Decker, D. J. (1997). Examining assumptions in wildlife management: a contribution of human dimensions inquiry.

Escobar, A. (1999). After nature: Steps to an antiessentialist political ecology. Current anthropology, 40(1), 1-30.

Estes, J. A., Terborgh, J., Brashares, J. S., Power, M. E., Berger, J., Bond, W. J., ... & Marquis, R. J. (2011). Trophic downgrading of planet Earth. science, 333(6040), 301-306.

Fischer, J., Abson, D. J., Butsic, V., Chappell, M. J., Ekroos, J., Hanspach, J., ... & Wehrden, H. (2014). Land sparing versus land sharing: moving forward. Conservation Letters, 7(3), 149-157.

Folke, C. (2006). The economic perspective: conservation against development versus conservation for development. Conservation Biology, 20(3), 686-688.

Galvin, S. L., & Herzog Jr, H. A. (1992). Ethical ideology, animal rights activism, and attitudes toward the treatment of animals. Ethics & Behavior, 2(3), 141-149.

Geldersch Landschap en Kastelen (2017). Sysselt. Retrieved October 15, 2017 from: https://www.glk.nl/landschap-kastelen/locatie/?locatie=33

Gerber, J. (1997). Beyond dualism: the social construction of nature and the natural and social construction of human beings. Department of Geography, University of Nottingham, University Park, Nottingham NG7 1PY, UK

Giddens, A., & Pierson, C. (1998). Conversations with Anthony Giddens: Making sense of modernity. Stanford University Press.

Goldman, M., & Schurman, R. A. (2000). Closing the" great divide": New social theory on society and nature. Annual Review of Sociology, 563-584.

Gompper, M. E. (Ed.). (2013). Free-ranging dogs and wildlife conservation. Oxford University Press.

Goralnik, L., & Nelson, M. P. (2010). Anthropocentrism.

Groot Bruinderink, G. G., & Lammertsma, D. R. (2002). Ethische aspecten bij het beheer van wilde zwijnen (No. 475, p. 38). Alterra.

Groot Bruinderink, G. W. T. A., Lammertsma, D. R., Pouwels, R., Eupen, M. V., Spek, G. J., & Oord, J. G. (2011). Wilde zwijnen in Limburg: wat zijn de consequenties van meer leefgebieden voor wilde zwijnen in Limburg?.

Guldemond, A., Dijkman, W., & Keuper, D. (2015). Wilde zwijnen op weg in Nederland; Analyse van ontwikkelingen in waardering, schade en risico's en aanbevelingen voor beleid en uitvoering. Centrum voor Landbouw en Milieu, 12-42.

Haraway, D. J. (2008). *When species meet* (Vol. 224). U of Minnesota Press.

Haraway, Donna (1997) Modest_Witness@Second_Millennium. FemaleMan©_ Meets_OncomouseTM. London and New York: Routledge.
Hinchliffe, S. (2007). Geographies of nature: societies, environments, ecologies. Sage.
Hinchliffe, S., & Whatmore, S. (2006). Living cities: towards a politics of conviviality. Science as culture, 15(2), 123-138.
Hinchliffe, S., Kearnes, M. B., Degen, M., & Whatmore, S. (2005). Urban wild things: a cosmopolitical experiment. Environment and planning D: Society and Space, 23(5), 643-658.
Hinde, R. A. (1976). Interactions, relationships and social structure. Man, 1-17. ISO 690
Holbrook, M. B., Stephens, D. L., Day, E., Holbrook, S. M., & Strazar, G. (2001). A collective stereographic photo essay on key aspects of animal companionship: the truth about dogs and cats. Academy of Marketing Science Review, 2001, 1.
Hosey, G., & Melfi, V. (2014). Human-animal interactions, relationships and bonds: a review and analysis of the literature. International Journal of Comparative Psychology, 27(1).
Kareiva, P. & Marvier, M. (2007). Conservation for the people. Scientific American: Nov. 50–57.
Kareiva, P., Lalasz, R. & Marvier, M. (2012b). Anthropocene Revisted. http://thebreakthrough.org/index.php/journal/debates/conservation-in-theanthropocene-a-breakthrough-debate/anthropocenerevisited/ (accessed January 2013).
Kareiva, P., Watte, S., McDonald, R. & Boucher, T. (2007). Domesticated nature: shaping landscapes and ecosystems for human welfare. Science 316, 1866–1869.
Kellert, S. R. (2012). Building for life: Designing and understanding the human-nature connection. Island press.
Knight, J. (2009). Making wildlife viewable: habituation and attraction. Society & Animals, 17(2), 167-184.
Knight, R. L., & Cole, D. N. (1995). Wildlife Responses to. Wildlife and recreationists: Coexistence through management and research, 51.
Kohn, E. (2015). Anthropology of ontologies. Annual Review of Anthropology, 44, 311-327.
Kremen, C. (2015). Reframing the land-sparing/land-sharing debate for biodiversity conservation. Annals of the New York Academy of Sciences, 1355(1), 52-76.
Latour, B. (1993). We Have Never Been Modern (Harvester Wheatsheaf, Hemel Hempstead, Herts)
Latour, B. (2004). Politics of nature. Harvard University Press.
Lenth, B. E., Knight, R. L., & Brennan, M. E. (2008). The effects of dogs on wildlife communities. Natural Areas Journal, 28(3), 218-227.
Lewicki, R., Gray B., Elliot M. (2003)Making sense of intractable environmental conflicts: concepts and cases. Island Press,Washington, DC.
Loker, C. A., Decker, D. J., & Chase, L. C. (1998). Ballot initiatives—antithesis of human dimensions approaches or catalyst for change?. Human Dimensions of Wildlife, 3(2), 8-20.
Lorimer, H. (2006). Herding memories of humans and animals. Environment and planning D: society and space, 24(4), 497-518.
Madden, F. (2004). Creating coexistence between humans and wildlife: global perspectives on local efforts to address human–wildlife conflict. Human Dimensions of Wildlife, 9(4), 247-257.
Manfredo, M. J., & Dayer, A. A. (2004). Concepts for exploring the social aspects of human–wildlife conflict in a global context. Human Dimensions of Wildlife, 9(4), 1-20.
Marvier, M. (2014). New conservation is true conservation. Conservation Biology, 28(1), 1-3.
Matless, D. (1994). Moral geography in Broadland. Ecumene, 1(2), 127-155.
Miller, B., Soulé, M. E., & Terborgh, J. (2014). 'New conservation'or surrender to development? Animal Conservation, 17(6), 509-515.
Miller, K. K. (2009). Human dimensions of wildlife population management in Australasia–history, approaches and directions. Wildlife Research, 36(1), 48-56.
Miller, K. K., Ritchie, E. G., & Weston, M. A. (2014). The human dimensions of dog–wildlife interactions. Free-ranging dogs and wildlife conservation, 286-304.
Miller, S. G., Knight, R. L., & Miller, C. K. (2001). Wildlife responses to pedestrians and dogs. Wildlife Society Bulletin, 124-132.
Montana Fish, W., Parks, K., Jacobs, A. H., Lyon, L. J., & Vore, J. (1999). Domestic dogs in wildlife habitats.
Mulder, M. B., & Coppolillo, P. (2005). Conservation: linking ecology, economics, and culture. Princeton University Press.
Natuurmonumenten. (2012). Visie Natuurmonumenten op natuur en landschap in 2040. Retrieved from: https://www.natuurmonumenten.nl/sites/default/files/Visie%20Natuurmonumenten%20op%20natuur%20en%20landschap%20in%202040.pdf
Nordhaus, T. & Shellenberger, M. (2007). Breakthrough: from the death of environmentalism to the politics of possibility. New York: Houghton-Mifflin.
Noske, B. (1997). Beyond boundaries: Humans and animals.
Nyhus, P. J. (2016). Human–Wildlife Conflict and Coexistence. Annual Review of Environment and Resources, 41, 143-171.
Peterson, M. N., Birckhead, J. L., Leong, K., Peterson, M. J., & Peterson, T. R. (2010). Rearticulating the myth of human–wildlife conflict. Conservation Letters, 3(2), 74-82.
Peterson, M. N., Hansen, H. P., Peterson, M. J., & Peterson, T. R. (2011). How hunting strengthens social awareness of coupled human-natural systems. Wildlife Biology in Practice, 6(2), 127-143.
Pickett, S. T., Parker, V. T., & Fiedler, P. L. (1992). The new paradigm in ecology: implications for conservation biology above the species level. In Conservation biology (pp. 65-88). Springer US.

Piek, H., & van Tooren, B. F. (2005). 100 jaar veranderingen in natuurbeheer bij Natuurmonumenten. De Levende Natuur, 106(3), 134-137.
Pratkanis, A. R. Breckler, SJ (ed.), Greenwald, AG (ed.)(1989). Attitude structure and function.
Pyhälä, A. (2003). Productive conservation in Amazonia: institutions, participation and markets (Doctoral dissertation, University of East Anglia).
Redman, C., Grove, M. J. and Kuby, L. (2004). Integrating Social Science into the Long Term Ecological Research (LTER) Network: Social Dimensions of Ecological Change and Ecological Dimensions of Social Change. Ecosystems Vol.7(2), pp. 161-171.
Redpath, S. M., Bhatia, S., & Young, J. (2015). Tilting at wildlife: reconsidering human–wildlife conflict. Oryx, 49(2), 222-225.
Richardson, T., & Weszkalnys, G. (2014). Introduction: resource materialities. Anthropological Quarterly, 87(1), 5-30.
Riley, S. J., Decker, D. J., Carpenter, L. H., Organ, J. F., Siemer, W. F., Mattfeld, G. F., & Parsons, G. (2002). The essence of wildlife management. Wildlife Society Bulletin, 585-593.
Schwarz, M., & Thompson, M. (1990). Divided we stand: re-defining politics, technology and social choice. University of Pennsylvania Press.
Serpell, J. (1995). From paragon to pariah: Some reflections on human attitudes to dogs. The domestic dog: Its evolution, behaviour and interactions with people, 245-256.
Serpell, J. (1996). In the company of animals: A study of human-animal relationships. Cambridge University Press.
Soulé, M. E., & Wilcox, B. A. (1980). Conservation biology: an evolutionary-ecological approach. Sunderland, MA: Sinauer Associates.
Spek, G. (2014). Faunabeheereindheid Gelderland. Faunabeheerplan grofwild FBE Gelderland 2014-2019. Retrieved from: https://gelderland.stateninformatie.nl/document/4877394/1
Srinivasan, K. (2011). The biopolitics of animal being and welfare: dog control and care in the UK and India. Transactions of the Institute of British Geographers, 38(1), 106-119.
Treves, A., & Karanth, K. U. (2003). Human-carnivore conflict and perspectives on carnivore management worldwide. Conservation biology, 17(6), 1491-1499.
van der Reest, P., Schipper, P., Verstrael, T., & Schimmel, I. (2013). Naar nieuw natuurbeleid in Nederland. De Levende Natuur, 114(3), 104-105.
Van der Windt, H. J. (1880). En dan: wat is natuur nog in dit land. Natuurbescherming in Nederland, 1990, 1880-1990.
Van der Windt, H. J., Swart, J. A., & Keulartz, J. (2007). Nature and landscape planning: Exploring the dynamics of valuation, the case of the Netherlands. Landscape and Urban Planning, 79(3-4), 218-228.
Van Slobbe, T. (2013, March). De toekomst van natuurbeleving in Nederland. HOEZO NATUUR? De Levende Natuur, 41-45.
Van Tooren, B., van der Ploeg, N., & Dirks, P. (2007). Toezicht in natuurgebieden van Natuurmonumenten. *De Levende Natuur*, *108*(1), 12-13.
Vining, J. (2003). The connection to other animals and caring for nature. Human Ecology Review, 87-99.
Washington, H. (2013). Human dependence on nature: how to help solve the environmental crisis. Routledge.
Welkom op de Sysselt! (2013, May). Geldersch Landschap en Kastelen, 1-2. doi:https://www.dekleinepol.nl/wp-content/uploads/2014/02/Wandelroute-de-Sysselt-Ede.pdf
Whittaker, D., & Knight, R. L. (1998). Understanding wildlife responses to humans. Wildlife Society Bulletin, 26, 312-317.
Winkel, A. (2017, 19 April). 'Baasjes van een hond zijn altijd verantwoordelijk als ze loslopen'. De Gelderlander. Retrieved from: https://www.gelderlander.nl/wageningen/baasjes-van-een-hond-zijn-altijd-verantwoordelijk-als-ze-loslopen~a76635e6/
Woodroffe, R., Thirgood, S., & Rabinowitz, A. (Eds.). (2005). People and wildlife, conflict or co-existence? (No. 9). Cambridge University Press.
World Wide Fund for Nature (2017) Human-wildlife conflict. Retrieved October 06, 2017 from: http://wwf.panda.org/about_our_earth/species/problems/human_animal_conflict/

Annex

Annex 1 Interview formats

All interview formats are in the language they were conducted (Dutch).

Interview format dog owners (5-15 minutes interviews)

Questions

- Welke wilde dieren komen er in dit gebied voor?
- Bent u ooit een wild dier tegengekomen? Zo ja, kunt u omschrijven hoe dit ging?
- Hoe reageert uw hond op de wilde dieren /op het gebied?
- Hoe zou u de Sysselt omschrijven?
- Hoe zou u de wilde dieren in de Sysselt omschrijven?
- Hoe zou u de honden in de Sysselt omschrijven? / Wat is uw ervaring met honden in de Sysselt?
- Hoe zou u de mensen die naar de Sysselt komen omschrijven?

Interview format hikers (5-15 minutes)

Questions

- Welke wilde dieren komen er in dit gebied voor?
- Bent u ooit een wild dier tegengekomen? Zo ja, kunt u omschrijven hoe dit ging?
- Hoe zou u de Sysselt omschrijven?
- Hoe zou u de wilde dieren in de Sysselt omschrijven?
- Hoe zou u de honden in de Sysselt omschrijven? / Wat is uw ervaring met honden in de Sysselt?
- Hoe zou u de mensen die naar de Sysselt komen omschrijven?

It might also be interesting to ask where (and why) people generally walk in the Sysselt, as some people might avoid place because there are free-roaming dogs or wild animals in those areas.

Interview format forest rangers

Algemeen

- Kunt u wat meer vertellen over de Sysselt?
  - E.g. Welke dieren komen er in dit gebied voor?
  - Wanneer en waarom is de Sysselt (gedeeltelijk) een losloopgebied geworden?
- Hoe zou u de Sysselt omschrijven?
- Hoe zou u de wilde dieren in de Sysselt omschrijven?
- Hoe zou u de honden in de Sysselt omschrijven? / Wat is uw ervaring met honden in de Sysselt?
- Hoe zou u de mensen die naar de Sysselt komen omschrijven?

Interacties

- Welke interacties vinden er plaats in de Sysselt? (mens-dier en dier-dier)
- Hoe gedragen mensen en dieren zich in de Sysselt?
- Wat is uw ervaring met honden en hun baasjes in de Sysselt??
- Wat is uw ervaring met wilde dieren in de Sysselt?
- Wat is het effect van de interacties tussen mens en dier, en verschillende dieren in de Sysselt?

Afsluiting:

- Wat is uw visie voor de Sysselt?

Interview format ecologists

Natuurbeheer in Nederland (en de rest van de wereld) is in de loop der jaren erg veranderd. Natuurbeheer was eerst een kwestie van sterke scheidingen tussen mens en dier met ecoducten, nulstandgebieden, etc., maar is nu steeds meer gericht op 'coexistence' van mens en dier in (natuur)gebieden:

- Hoe is deze verandering ontstaan?
- Welke belangen zijn belangrijk in deze kwesties?
- Wat betekent dit voor het gedrag van mens en dier?
- Wat betekent dit voor het gebruik van deze gebieden voor mens en dier?

De Sysselt is een bosgebied in Ede. Het gebied is gedeeltelijk losloopgebied voor honden. Verder komen er o.a. herten, reeën en wild zwijnen in het gebied voor. Er gebeuren soms aanvallen op honden of van honden op wilde dieren.

- Wat is uw ervaring met honden en hun baasjes in dergelijke gebieden?
- Is coexistence mogelijk in deze gebieden? Zo ja, hoe?
- Wat is de (mogelijke) impact van recreationisten en honden in dergelijke natuurgebieden?
- Hoe staat u tegenover het uitlaten (los en/of vast) van honden in dit soort gebieden?