Seeing like a wolf

Control, care and conviviality in planning a more-than-human future

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Cover image: Ecoduct Woeste Hoeve in Apeldoorn, the Netherlands © Rutger den Hertog, 2020

Abstract. After 150 years of absence from the Netherlands, the wolf is back in the country. The effects this has had for sheep and livestock farmers, and other people's feeling of unease, calls for politicians and nature mangers to respond. But the strict protected status of the animal, helped by its mythical aura, makes management hard. This thesis uses a praxiographic method to inquire how the practitioners who are mobilized by this situation do this. The case study is used to explore how more-than-human planning can be developed. Using the conceptual categorization of control, care and conviviality, I research how ambitions, values and hopes materialize among practitioners in the field. I conclude that however ambitions of control are still prevalent, practices of care configure in all sorts of variants in the field. To achieve convivial futures of co-existence, care relations and practices must be made explicit in a more-than-human planning.

Keywords: *more-than-human planning, ontological politics, praxiography, care, conviviality*

1. Introduction

In the 17th and 18th century during a time of urbanization and large-scale agriculture, wolves were successfully eradicated out of the borders of the Netherlands. Because of similar situations in other Western European countries, these animals were pushed all the way to the mountains of Spain and Italy and Eastern Europe and ended up threatened with extinction. After a convention in Bern in 1979 however, the animal gained protected status on the continent (Wolven in Nederland, 2022). Still, for a long time the wolf remained absent in countries like the Netherlands. In the meantime, urbanization and agriculturalization continued and it is often stated that every square meter in the Netherlands is planned. This development largely came at the expense of nature areas in the country, which in public opinion are often seen as scattered and small.

Yet, since 2015, for the first time in 150 years, the wolf is back.

In media, angry or fearful stories of wolves killing sheep and appearing in residential areas are alternated by nature-protectors arguing that there is nothing to worry about and that wolves are good for the ecosystem. Since the Netherlands has not had a wild apex predator for 150 years, and because of the mythical aura surrounding the wolf, the topic is enthusiastically reported on, and the public debate is lively (Argos Medialogica, 2021). While ecologists emphasize that the shown behavior of these animals is perfectly natural, others state that "there is no room for the wolf in the Netherlands" (Woort, 2020). Politicians and decision-makers are asked to respond to the challenges this animal brings. In this thesis, I explore how they do this.

However uncomfortable sometimes, nonhuman nature in the Netherlands has always been manageable to some extent. If the otter disappears, a thorough reintroduction program is started. If there are too many deer, hunters would shoot some down to manage the population. But in the case of the wolf, the animal seems to be biting back, and not only literally by killing sheep. Due to excessive media attention, animal protection laws and the fact that the wolf is not often seen before causing damage, the case of the wolf is disruptive to the ways in which nature management has been going on for decades. This is a challenge for future co-existence of humans with nonhumans in the highly populated Netherlands and forces us as humans to rethink our position in the wider natural ecosystem.

Dutch nature philosopher Martin Drenthen says about the situation: "The uneasy truth of the resurging wolves is that we have forgotten what it means to live in a world that remains to be wild" (Drenthen, 2015, p. 332). The possible return of wolves in landscapes where they were thought to have gone extinct forever, challenges existing notions about humans and our relationship with our environment. Although many things in the Netherlands are kept under close control not everything lets itself be controlled. According to Drenthen, we have to "relearn who we are in a world that is still—to a large degree—uncontrollable and wild" (*Ibid.*).

These issues are nothing new: the world-out-there always bites back, has always been wild. The comeback of the wolf in the Netherlands lays bare some recurrent themes and challenges in the practices surrounding planning (for) nature. Not only because of the impact on landscape and agriculture, but especially because it forces planners to question their very position in this landscape. Just like flood risk, heavy weather, pandemics, and plagues, it shows that the environment will not wait patiently while we alter it and use it as a resource. These situations show that humans are not the only effectual powers.

Humans have traditionally often been perceived as the superior species due to their subjectivity and ability to influence nature. This history seeps through in current capitalist and neoliberalist ways of thinking, which focus only on human flourishing and perceive nature as categorically separate. This

human exceptionalism, according to some, is the very reason the climate crisis occurs. Excessive energy and material use, CO_2 emissions and intensive agriculture have pushed nature and natural areas to the margins. The current rate of biodiversity loss has been called the Sixth Mass Extinction (Novacek, 2007). Yet, humans are not separate from nature, and our survival is dependent on these ecosystems which we are part of. If we strive for a sustainable future, we need to work hard to stop the mass extinction and preserve the biodiversity that is left. To do this, researchers in spatial planning and other social sciences are letting go of their sole focus on the human to develop theories that are equipped to understand these more-than-human realities. This is a shift from 'egocentrist thinking' to 'ecocentrist thinking' (see **Figure 1**).

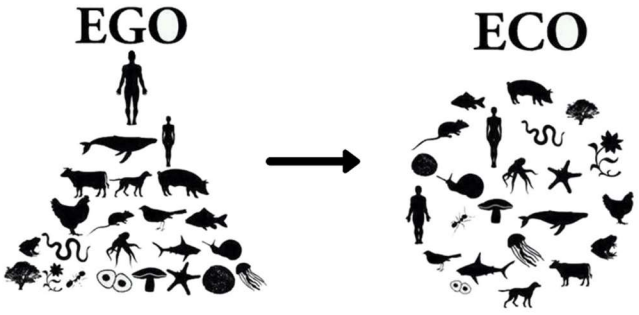

Figure 1 *The shift from a human-centric worldview towards eco-centrism, source: Social Gabe/Flickr*

Theoretically, this thesis is situated within the framework of this planning beyond human exceptionalism, or what Houston et al. (2017) call, a more-than-human planning. This means that it tries to move beyond the sole human focus of traditional planning theories, towards the development of a theoretical framework and methodologies in which other-than-humans share the stage. How do we achieve this? Is it even possible? To inquire this, I answer to Houston et al.'s call to develop "modes of intellectual inquiry that explore how nonhuman species and things get caught up in (and reconfigure) conflicting urban desires" (*Ibid.*, p. 14). The 'mode of intellectual inquiry' that I develop in this thesis explores how the wolf reconfigures the status quo in Dutch spatial planning and policymaking. I do this, by attempting to do what I call 'seeing like a wolf'.

Seeing like a wolf is an ontological experiment in which I take, referencing James C. Scott's seminal work Seeing Like a State (1998) the imagined viewpoint of a wolf. With this I do not mean that I pretend to know the phenomenological experiences of a wolf. Instead, in a humbler fashion I mean that my theoretical analysis starts out 'from the ground'. It takes the position of a hypothetical wolf returning in the Netherlands and encountering a highly planned, highly bureaucratic system. What sort of encounters occur? Which humans are called upon to respond to the wolf? Which policies, reports, laws become relevant? In short, which human and nonhuman actors does the comeback of the wolf mobilize? These will be the starting point of my research.

By exploring the field in this way, I start inquiry from a position which does not make any pre-established assumptions. The humans and nonhumans with impact, influence and knowledge show themselves in this process. And their practices are central, because as I will explain later, this is where the world unfolds. From there, I explore which conceptual and methodological tools are helpful to develop a planning beyond the human. Therefore, my overarching research question is as follows:

How can a more-than-human planning be developed?

I hypothesize that paying attention to control, care and conviviality is a helpful guide into the world of more-than-human planning. These concepts, categorized by Arora et al. (2020), shed light on how ambitions, practices, and hopes constitute technologies, practices, and institutions, which "matter critically" for transformations to sustainability (*Ibid.*, p. 538). To inquire whether these concepts are actually useful in more-than-human planning as well, my sub-questions are:

1. ***How do ambitions of control materialize in human responses to nonhumans?***
2. ***How do values of care materialize in human responses to nonhumans?***
3. ***What do hopes for conviviality look like regarding human-nonhuman relationships?***

This thesis explores an alternative way of doing planning research: its methodology is oriented on practice. By using the praxiography as developed by ethnographer-philosopher Annemarie Mol (2002), I aim to move along with the ontological shift that a movement beyond the human necessitates. If humans and nonhumans are on a par with each other, and the world is co-constructed by the mutual relational activities of these actors, this means that realities are multiple (*Ibid.*). The world is not pregiven but is *enacted* in practices. This way of thinking requires analysis to be focused on these practices, to achieve an understanding in exactly *how* they enact reality. This thesis, therefore, studies (planning) practices mobilized by the comeback of the wolf, such as sheep protection and policy making.

By shaping the research in this way, this research is not objective or neutral, but a value-laden intervention in the planning field. Following Maria Puig de la Bellacasa (2017), I aim to reshape these subjects as matters of care for planners. If successful, this thesis contributes to a wider project of revisioning planning as care for more-than-human place (Metzger, 2014). The ontological politics and more-than-human planning this thesis is positioned in will be explained in the next section on the theoretical framework. The concepts of control, care and conviviality will also be explained there. Then, in section 3, I explain the methods used, particularly building on elite interviews and praxiography. Following this, the results section provides the findings of my empirical research. Using these results, I turn to an analytical discussion in section 5 which draws lessons for a more-than-human planning. Finally, the conclusions in section 6 provide an overview of the findings and provides some future research lines on the topic.

2. Theoretical Framework

This thesis starts out from an interest in the possibilities of a more-than-human planning. To explore these possibilities, I first establish the argument that this project is necessitated by an ontological politics: a perception on ontology and politics that stems from research in Science and Technology Studies (STS) and more specifically Actor-Network Theory (ANT). A short history lesson into STS and ANT will bring to light how reality is enacted in practices and agency is distributive. This realization implies that control, one of the central concepts of this thesis, is impossible. Instead, practices of care need to be developed to account for the more-than-human in politics. Taking this perspective in planning will lead to convivial futures of autonomous co-existence.

2.1 Ontological politics and control

Humans do not act alone. In this subsection, I will show that agency, the capability to act or make changes, is not only held by humans. According to theorists of ANT, agency is distributed among the collective. This means that nonhuman entities such as materials, reports and animals can also act (Latour, 2005). The components of reality get spread out; ontology is flat. This ontological shift has implications for politics and technology, for how to intervene with reality, as well. Lastly, this had implications for modernist ambitions to have control: however stubborn they are, the conclusion is that such ambitions are based on a fallacy.

Distributive agency

Starting in the 1970s, some social theorists and anthropologists started a project of inquiry into the social studies of science and technology. They took the methods developed in their social theories and applied these to the relations and happenings in laboratories. By doing this they developed a theory of how scientific facts are not 'dis-covered' in the world-out-there, but 'constructed' in the very laboratories where scientists did their work (Latour and Woolgar, 1979). By doing this they developed an ontological understanding of how scientific facts were created. Instead of a theory of knowledge that started from knowledge, they started from practice and showed that distinctions such as those between nature and culture, object and subject, human and nonhuman are not pregiven but constructed in such situations (Callon, 1984; Law and Hassard, 1999).

As a result, reality was no longer a stable background waiting to be researched, managed or exploited. Instead, reality is *done* in specific and local contexts. To analyze this, Actor-Network Theory (ANT) as developed by Latour and others, is a method of analysis which does not assume any categories and hierarchies beforehand. Instead, "the collective" consists of actors (human as well as nonhuman) which in their relations give shape to networks. According to this analysis, a speed bump on the road might have as much influence as a policeman (Latour, 2005). This has implications for ontology, the philosophical study of existence. If categorizations (such as human/nonhuman, culture/nature, subject/object) are not pre-established, this results in a 'flat ontology' (Delanda, 2006) in which all potential actors (human as well as nonhuman actors) make changes in the collective.

Theories such as Actor-Network Theory (ANT) emphasize the agential powers of materials and nonhuman actors (Latour, 2005). Agency, the capability to act, is not only held by humans anymore, but all units that inhabit the 'social' realm are capable of acting. In the collective, there is never merely one actor at play, instead they share the stage with props, instruments and the stage itself (*Ibid.*). A product designer, for example, is not implementing his plans on the material world, but a design process can better be seen as a 'conversation' with the materials. These materials have certain restraints and effects of themselves: they 'talk back'. Within planning theory as well, the realization came that humans are not the only actors in a planning process, but materials, environments and infrastructures too have the capacity to influence the playing field.

Actors in their networks should not be seen as static nodes in an analysis, but as having their own worldviews which determine their possibilities to act. If agency is distributed, and understandings of objects are scattered, reality becomes multiple. Not plural, because different perceptions on one object do concern the same object, but multiple. John Law develops this view in *Aircraft Stories* (2002), where he brings together the diverging views that exist on one aircraft (that was never used). Annemarie Mol does something similar in her study of atherosclerosis in her book *The Body Multiple* (2002), where she inquires the multiple realities this disease has in one and the same hospital. These views vary widely, but do not necessarily cause conflict. She concludes that reality as enacted in practices is multiple: "If practice becomes our entrance into the world, ontology is no longer a monist whole. Ontology-in-practice is multiple" (Mol, 2002, p. 157). This conclusion is especially telling for practice-oriented sciences such as medicine, engineering and, indeed, planning.

We have never been in control

So where does this leave interventions? In an earlier paper called "Ontological Politics", Mol writes that

> "If the term 'ontology' is combined with that of 'politics' then this suggests that the conditions of possibility are not given. That reality does not precede the mundane practices in which we interact with it, but is rather shaped within these practices." (Mol, 1999, p. 75)

Previously, reality was assumed to be *out there.* This meant that technology and politics, endeavors which aim at altering reality, "worked on the assumption that the world might be mastered, changed, *controlled*." (*Ibid.*, emphasis mine). In modernist viewpoints, control of the world was possible. Mol continues, "along with this it was assumed that the building blocks of reality were permanent: they could be uncovered by means of sound scientific investigation." (*Ibid.*) So, the world is out-there to be discovered. And then, if you know the world, you also know how to alter it according to your wishes. You know how to control it.

But within an ontological politics, reality is not pregiven for science to discover. Instead, reality is seen as *enacted* in practice. This means that the role of science changes. It does not, cannot, provide politicians, engineers, and indeed, planners, with objective knowledge about a world 'out there'. After all, knowledges about the world are local, contextual performances of this world rather than a representation of it. This also means that the perception on control changes, and therefore on interventions in the world. Because if reality is shaped within practices (political, technological, scientific practices), it becomes multiple. In Mol's words, the 'conditions of possibility' are not given. So, interventions are possible, but their results are never completely known.

And this complete knowledge, according to Arora (2019), is a necessary precondition for control. He concludes that control can be seen as "a fallacy based on grandiose belief in (some) humans' ability to mould and master the world, often using techno-scientific knowledges and artefacts implicated in the enactment of social power" (2019 p. 1574). This means that, notwithstanding the mistaken nature of ambitions of control, they still have real-world effects which must be accounted for. If science, politics and engineering perform reality in their practices, control becomes obsolete. After all, control is only possible in – it is based on the expectation of – an objective and singular reality out-there. It aims for reality to be *pinned down.* But instead, political ontology opens up to possibilities. Instead of matters of fact, what is produced are matters of concern (as we will see later, Puig de la Bellacasa (2017) later reconceptualized these into matters of care). So, in the interventions of politics, technology and planning, ambitions of control tend to be overreactions of real-world possibilities. It is important to be able to recognize such ungrounded ambitions, as to not let them run their course.

Ontological politics implies that reality is multiple and enacted in practice. According to this view, control cannot really exist. The effects of interventions are never completely known, and reality might always 'bite back'. Politics, technology and planning concern 'conversations' with the world, rather than dominations of it. In what follows, I show that they must therefore be seen as consisting of practices of care. Furthermore, the human is not categorically separated from other nonhuman actors. What does this mean? In this section I develop an understanding of society, or the collective, as consisting of more-than-human assemblages. Finally, following Metzger (2014), I reconceptualize planning as care for more-than-human place.

Resituating humans and nonhumans

If reality is enacted by the practices of humans and nonhumans alike, our analyses have to decenter the human. Alternatives to human centrism have to be explored. Feminist philosopher Val Plumwood states that imagining the alternatives consist of two aspects: 'to resituate the human in ecological terms' and to 'resituate the nonhuman in ethical terms' (2009, cited in Houston et al. 2017, p. 5). For the first part, resituating the human in ecological terms, it is often pointed out that humans are embedded in, or part of, the ecosystem we live in (again, for a visual representation of this see **Figure 1**). Agriculture is dependent on pollinators, for fresh air we are dependent on trees, and many more examples can be made. Further, land usage and nature extraction by humans has effects for the larger whole: the ecosystem is brought out of balance by human actions. Emphasizing these effects help realize that humans do not only use nature as a resource but are part of nature as well. Resituating the human in ecological terms might also make us turn to our insides: most of our cells consist of other organisms, and the functioning of our digestive system is highly dependent on intestinal fauna such as bacteria (Yong, 2016). Because of this interdependence upon other beings, it can be concluded that our very existence is a more-than-human coming-together.

The second aspect Plumwood points out is "resituating the nonhuman in ethical terms". If humans are not separate from nature but embedded in an ecosystem. Endeavors to improve the world can not merely focus on the human condition anymore but have to extend their views to the 'multispecies assemblage', an open-ended and mutually influencing mesh of different species, that we are part of. Houston et al. (2017) emphasize the implications this realization has for planning theory. Not only do planning decisions effect the natural 'world outside', but the very basis of our existence is built upon this nonhuman world (*Ibid.*, p. 7). They therefore call for planning theorists to critically question this by "developing modes of intellectual inquiry that explore how nonhuman species and things get caught up in (and reconfigure) conflicting urban desires" (*Ibid.*, p. 14).

Responding to this call, Jon (2020) endeavors to develop a posthumanist approach to planning: a planning that goes beyond human exceptionalism. To establish this, she argues that environmental politics should be seen as a politics of representation, arguing for and representing nonhuman actors in politics and planning. Just as Houston et al. stated, a new emphasis on our material dependency on this nonhuman world is necessary. To develop a political motivation beyond the human, Jon argues, it is necessary for planners (and others) to be empirical and sensual contact with these others, for example by being in 'nature'. This ethics of proximity is an aspect of the broader concept of care.

What is care

Maria Puig de la Bellacasa, in her work *Matters of Care* (2017) starts her work from a broad definition of care she borrows from Joan Tronto and Bernice Fischer. Here, care is understood as

> "*everything that we do* to maintain, continue and repair "our world" so that we can live in it as well as possible. That world includes our bodies, ourselves, and our environment, *all of*

> *which we seek to interweave in a complex, life-sustaining web*" (Tronto 1993, 103, cited in Puig de la Bellacasa 2017, p. 3, emphasis hers).

She continues to develop her conception into care building on a broad history of feminist care ethics but emphasizes that it is "much more than a moral stance" (*Ibid.*, p. 4), but it involves "affective, ethical, and hands-on agencies of practical and material consequence" and "suggests interdependency as the ontological state in which humans and countless other beings unavoidably live" (*Ibid.*). Care, in her conception, is not easily pinned down but includes a wide range of activities and modes of relating, from emotional states towards maintenance work.

Her ontological emphasis on interdependence is important for this research, as it connects to the wider project of developing a more-than-human planning. As developed by ANT-theorists (Callon, 1984; Latour, 2005) the collective can be seen as a bunch of actors acting together in networks. The suggestion that reality is enacted within these socio-material practices also implies that these relations, these connections, are not merely accidental, but vital to (co-)existence. Humans are dependent on their environment and its human and nonhuman components. The concept of care is mobilized to bring attention to such more-than-human interdependencies.

De la Bellacasa thus sees care as affective engagement, as well as ethico-political involvement and maintenance work (2017, p. 5). Metzger (2014), building further on this, rethinks the very act of planning as caring for more-than-human place. He argues that "caring for place is an ethicopolitical inclination that can lead to good things" (p. 1001). But emphasizes that "a key term here is *can*, which in turn is dependent on the *how*" (*Ibid.*). It is essential that practices and technologies posing under the guise of care are not free from critical scrutiny. Furthermore, care has a characteristic of being about what is *already there*, while planning is eminently about future possibilities. Metzger's project of reimagining spatial planning as care for more-than-human place might be criticized for its inability to develop future visions, which arguably are exactly what is necessary in the current climate crisis. Besides emphasizing care, I want to make space for facilitating hope. To complement the essential concept of care, therefore, the concept of conviviality is included in this research, to generate hopes for convivial, more-than-human futures.

2.2 Planning for convivial futures

Conviviality as a term was used by Ivan Illich in *Tools for Conviviality* (1973). Building on this in technology research and further expanding it to be inclusive beyond merely humans, leads to a concept that is useful in the development of more-than-human planning. It complements the envisioning of planning as care for more-than-human place (Metzger, 2014) to enable future visions and generate hope for convivial futures.

Autonomous co-existence

In 1973 the Austrian priest Ivan Illich wrote *Tools for Conviviality* in which he develops his conception of conviviality. The term conviviality, he states, is meant "to designate the opposite of industrial productivity" (p. 11), to continue

> "I intend it to mean autonomous and creative intercourse among persons, and the intercourse of persons with their environment; and this in contrast with the conditioned response of persons to the demands made upon them by others, and by a man-made environment. I consider conviviality to be individual freedom realized in personal interdependence and, as such, an intrinsic ethical value." (Illich, 1973, p. 11)

He emphasizes that industrial productivity cannot satisfy any society's needs without conviviality. The 'autonomous and creative intercourse' is therefore essential for a just society and its relations to the

environment. Technology and spatial planning, as well as nature conservation, all have historical entanglements within industrial productivity. As the importance of these fields to move away from this and be more caring becomes apparent, conviviality as a concept is useful to come up with alternative futures.

Another important aspect of the quote above is the emphasis on 'interdependence'. Illich's emphasis on personal interdependence as an ethical value not only motivates reciprocity but also underlines moral entanglements. Conviviality therefore became central to anti-utilitarianist social theoretical projects which aim to develop an ethics beyond individual focus (Vetter 2018, Caille, 2011). In this conception of conviviality, focus on individual freedom and autonomy is not lost, but combined with a relational emphasis on creative intercourse and interdependence.

More-than-human futures

Coming from a different (but related) discipline, Bram Büscher and Robert Fletcher develop a conception of conviviality applied to the process of nature conservation. In their work *The Conservation Revolution,* Büsscher & Fletcher (2020) argue that rather than separating human from nature, forging connections and breaking conversation borders between human areas and natural areas to bring these together in a convivial conservation regime is crucial. This has obvious implications for the field of spatial planning. If nature conservation is making a movement towards human areas of development, these human areas subsequently have to move towards 'nature'. Planning has to become explicitly more-than-human. This is exactly the project of this thesis, but I come from a different entry point than Büscher and Fletcher. What will this movement mean for planning ontology? And how is a convivial stance already taken in planning practice?

In their development of a politics of conviviality, Hinchcliffe & Whatmore (2006), use a conception of conviviality which is inclusive towards the more-than-human as well. Their political project is

> "concerned with a more broadly conceived accommodation of difference, better attuned to the comings and goings of the multiplicity of more-than-human inhabitants that make themselves at home in the city than conventional political accounts." (p. 125)

They continue that politics should refuse "the old settlements between society and nature, between humans and the rest, between matter and mattering: a political reengagement that we style here as a politics of conviviality that is serious about heterogeneous company and messy business of *living together*." (*Ibid.*, p. 134). In their account of the White Ibis in Australian cities, McKiernan and Instone emphasize a view on the ibis "as partners in the ongoing historicity of urban environments." (McKiernan & Instone, 2016). These authors conclude that a convivial ethics of human and animal co-existence in a city "is never settled, but unsettling" as we imagine a future that is uncomfortable, but finally "takes seriously multi-species lives, past and present" (p. 491).

The characteristic of being unsettling is important here. Including the more-than-human in a politics of conviviality necessitates a "conceptual and political style of research that is avowedly and unavoidably a form of intervention in the world, opening up rather than pinning down, the possibilities of city living" (Hinchcliffe & Whatmore 2006, p. 125). Opening up politics is crucial, because more-than-human entanglements are "lived realities that can and do demand responses and entail all sorts of obligations" (*Ibid.*). Hinchcliffe and Whatmore call these 'matters of controversy' which can be compared to Puig de la Bellacasa's 'matters of care'. Both conceptions open up politics to go beyond a shallow conception of situations as 'matters of fact'.

In this section I highlighted some general characteristics of my main concepts: control, care and conviviality. I consciously avoid giving clear-cut definitions, as to not *pin down* a reality that is yet to

configure in my research. The concepts are merely used as starting point, and the concepts are not boxes for reality to be put into. In the next section I explain how I expect these concepts to guide my research.

2.3 Operationalization

Seeing like a wolf is an exercise in ontological politics. The case study I explore in this thesis, the comeback of the wolf, is a situation which demands response. This thesis starts out from these responses. I inquire which people, reports and institutions are mobilized by this situation, and how their practices co-constitute the situation in return. How, in this case, do practices enact reality into becoming? Specifically, I am interested in how control, care and conviviality materialize. Following Arora et al. (2020), I take ambitions of control to be materialized in technologies, values of care to be materialized in practices, and hopes for conviviality to be materialized across societies. In their analysis of politics of technology in sustainable transitions, they use control as a central concept of analysis. Control here is defined as "the ambition to maintain fictitious borders between hierarchically ordered categories" (Arora et al. 2020, p. 247). These authors emphasize that these modernist ambitions remain prevalent in politics, and research how they materialize in technologies. Values of care, they write,

> "constitute socio-technical practices where connections are prioritized over categories and hierarchy is countered with egalitarian commitment. In caring practices, objects are thus treated as subjects, often within political contexts that are dominated by ambitions to control" (*Ibid.*)

Lastly, hopes for conviviality are "based on democratic mutualism and self-realization" (*Ibid.*). The point of these definitions is not that I blindly take their conceptions of these matters. Nonetheless, I do find inspiration in their clear description of processes of materialization.

In the next section, where I turn to my methodology, I will show that where a traditional interview method might ask participants about these ambitions, values and hopes directly, in this thesis I start out from these materializations, *from matter*, to inquire where control, care and conviviality configure in the case. To do this, I argue that it is beneficial to study practices, what is *being done*, rather than utterances and purifications. The latter is a reference to Bruno Latour's work *We Have Never Been Modern* (1993), in which he argues that *in practice,* scientists and engineers do not make a distinction between nature and culture. It is only after, when scientific facts are established and technological tools are finished, that purification happens: the distinction is re-introduced and said to have existed all along. Since I want to avoid such distinctions, I set my focus on what happens before purifications, namely practice. In practice these distinctions are not made. I show this by using the method of praxiography, as developed by Annemarie Mol (2002).

3. Methodology

As we have seen in the previous section, the aim of this thesis is to explore how planning can go beyond human exceptionalism. To do this, I operationalized the concepts of control, care and conviviality to analyze a more-than-human planning situation. I have done this by conducting in-depth elite interviews in a praxiographic manner. In this section I explain what this methodology entails.

3.1 Research design

The exploration of how to develop a more-than-human planning has ontological implications for methodology. Before explaining the exact research methods that I use in this study, therefore, I explain why traditional methods are not sufficient. Instead, in this thesis I use a praxiographic method as developed by Annemarie Mol (2002). This is a method that is similar to ethnography, but that avoids categorical assumptions and starts out from an ontological approach in which practice enacts reality. Still, to develop my style of praxiography, I adopt aspects of traditional methodologies such as in-depth elite interviews and the case study method, which are explained later.

Praxiography

It is important to avoid unwanted associations and implications of my methodology. Not only because methods might have histories I do not want to be associated with. Especially in experimenting with a flat ontology, categorizations into for example 'elites', 'experts' and 'lay people' stop making sense. Agency and expertise are distributed among the participants in the field and this distribution is not assumed beforehand. Therefore, I use the praxiographic methodology which avoids assumptions and treats reality as enacted in practice.

The information that I am looking for concerns the question into what is being done. Going beyond human exceptionalism, as explained in the theoretical framework, makes a shift to a flat ontology necessary. Flat ontology demands us to reject distinctions such as subject and object, and culture and nature. Instead of "assuming (hierarchical) differences between entities beforehand", one can study "the performance of differences in these ever-changing, shifting realities" (Mol 2015, 100). The question of research becomes 'what happens?', or 'what is done?'. As Mol continues, "this directs the focus to encounters, practices, and moments" and because subject and object, or culture and nature, are not viewed as separate, in these encounters, practices and moments, it follows that "matter and culture are acting together, producing meaning or a reality in that moment." (*Ibid.*). In line with this, in this research I subscribe to Mol's ontological position that reality is enacted through particular relationships and practices.

Traditional in-depth interviews are generally interested in perceptions, experiences and opinions. While my information is of course informed by these, they are not my main focus. My main focus in these in-depth interviews is on *practices*: what is being done? This change in focus means that "the emphasis shifts. Instead of the observer's eyes, the practitioner's hands become the focus point of theorizing" (Mol 2002, p. 152). Such a praxiographic approach "allows and requires one to take objects and events of all kinds into consideration when trying to understand the world." (Mol 2002, p. 158). Not only humans are considered worthy research subjects, but objects, events and indeed, animals as well.

Praxiography is similar to the method of ethnography. As Bueger and Gadinger state "the common concern is to record, describe and to reconstruct (-graphy); however, the interest lies not in culture (ethno), but with practice (praxis)" (2018, p. 132). In their chapter entitled *Doing Praxiography,* Bueger and Gadinger explain further that because of its similarity to ethnography, "many of the considerations, guidelines and experiences of ethnographic, interpretive and qualitative research are

also relevant for practice theory research" (*Ibid.*, p. 137). These authors emphasize that praxiography should still be combined with other research instruments such as participant observation and fieldwork (*Ibid.*, p. 144). Mol, for example, in her work draws her information from extensive fieldwork as well as interviews. In this thesis, I do this by using in-depth elite interviews into a case study.

Elite interviews

I combine a praxiographic method with other research instruments such as the case study and elite interviews. In order to obtain first-hand knowledge about the planning field in this case, I decided to use in-depth interviews for my empirical data collection. Natow (2020) says that elite interviews "can be a crucial data source for studies examining public policy, politics, and power relationships." (p. 160), however "information provided by elites may be biased or inaccurate" (*Ibid.*).

Elite interviews, according to Seldon (1996), "can be defined as those conducted with individuals selected because of who they are or what they did" (p. 353). If they, for example wrote or helped develop certain documents, such interviews can be helpful because they "can also assist by revealing the assumptions and motives lying behind documents." (p. 355). For current research this is relevant because part of the inquiry also starts out from a policy document and interviews its writers. During elite interviews, it is useful to use an open-ended questioning method, "to avoid clumsy flow of conversation that will inhibit in-depth ruminations of the issues of interest" (Aberbach and Rockman, 2002, p 675).

Case study research

For this thesis, I am interested in how relationships of humans and nonhumans come about in reality. Since this is a *how*-question, and because such relationships are highly contextual, it is useful to use a case study approach (Yin, 2014). Baxter & Jack (2015) characterize case study research as an approach "that facilitates exploration of a phenomenon within its context using a variety of data sources" (*Ibid.*, p. 544). Case studies are therefore useful for grounding theory and testing the operationalization of concepts, and possibly generalizing from real life examples.

To study the phenomenon of human responses to nonhumans in the context of planning, I use the case of the comeback of wolves in the Netherlands. As Flyvbjerg (2011) defines a case study as an "intensive analysis of an individual unit (as a person or community) stressing developmental factors in relation to the environment" (p. 301), in this section I specify what that individual unit in this thesis is. This is easier said than done, as 'individual unit' in this case is not so clearly individually demarcated. The case in question is an event (the comeback of the wolf) to which some are asked to respond politically or technologically.

The event of the comeback of the wolf in the Netherlands has increasing implications for sheep farming and agriculture in general, and effect on the public debate about the Dutch relationship with nature. Responsible actors (nature organizations, policymakers and policy-advisors) are asked to respond to this. Since the phenomenon is relatively recent and rather clearly demarcated (in terms of time and people involved), with implications for a larger nature politics, this case is very appropriate to study relationships between humans and nonhumans. To explore these relationships in practice, it is useful to have a case study in which a relationship is still in development. Therefore, in order to answer my research questions, I inquired the planners that I interviewed for this thesis for their responses to a relatively new nonhuman actor which relatively new impacts on the political and physical landscape.

As Flyvberg states "in the study of human affairs, there appears to exist only context-dependent knowledge, which thus presently rules out the possibility for social science to emulate natural science in developing epistemic theory, that is, theory that is explanatory and predictive" (2011, p. 302). Therefore, the exceptionality of the comeback of wolves should not be seen as a barrier, because every

case would be exceptional and highly dependent on context. The case of the wolf, furthermore, is not only exceptional but paradigmatic as well, as it highlights "more general characteristics of the societies in question." (*Ibid.*). The wolf is often referred to as a symbol for (wild) nature and is therefore politically significant to draw conclusions on the human relationship with nature.

General characteristics of society might also be highlighted because of the agency that is granted the wolf, more than other animals (Komi, 2021). It is therefore an interesting case to study through a more-than-human lens, because it makes certain tensions apparent that are present but not recognized. As Drenthen (2015) states,

> "As soon as we have to deal with entities in nature that have their own agency, and that behave in ways that we do not like and that we cannot control, then it turns out that it is hard to tolerate nature as an independent autonomous force. And nowhere can this problem be felt more clearly than in our confrontations with dangerous carnivores." (p. 323)

This tension is what makes it an interesting case to explore "how nonhuman species and things get caught up in (and reconfigure) conflicting urban desires" (Houston et al. 2017, p. 14). Regarding the politically controversial nature of the wolf, furthermore, the praxiographic method helps to avoid diving into political framings and emotional experiences too fast and focus on the practicalities: how do actors *practically* respond to the wolf? Which encounters occur, and how are differences created?

3.2 Data collection and analysis

I found the potential participants for my thesis among a set of people who are authors of reports and policies on the topic, mentioned on websites as part of committees or groups, recommended by my colleagues, friends and other participants or simply encountered in a hallway while waiting for another interview. These people were selected on the basis that they were expected to be well positioned to answer the type of questions I was interested in. A full list of participants and the date when I spoke to them can be found in **Table 1** List of participants interviewed for this research**.**

Nr.	Participant	Date interview
P1	Ecological advisor – management	31-05-2022
P2	Nature area management organization	31-05-2022
P3	Ecological advisor – large carnivores	01-06-2022
P4	Policy – licensing	02-06-2022
P5	Ecological advisor – technology	07-06-2022
P6	Ecological advisor – mediation	07-06-2022
P7	Policy – executive	10-06-2022
P8	Ecological advisor – rewilding	10-06-2022
P9	Information platform	14-06-2022
P10	Association for animal management	17-06-2022

Table 1 *List of participants interviewed for this research*

At first, I started my analysis with two responses to the comeback of the wolf: by focusing on the interprovincial wolf plan (Interprovinciaal Overleg, 2015) and livestock protection. My first participants were recruited according to their involvement with these matters. During the data collection I realized that many of my participants were part of the 'same world' ("The Netherlands is a village, the world of nature protection even more so" – one of my participants taught me) this might give a one-sided view and so I decided to include another starting point: a position paper that some property owners, interest groups and associations for animals (mostly grazers – the wolf's main prey) published, arguing for

'controlled management' of the wolf (Federatie Particulier Grondbezit, 2022). This allowed me to include 'other' voices without too much deviation from my original collection method: these participants might still be seen as *mobilized practitioners*.

Participants' contact information was mostly found on the internet and they were recruited using an e-mail asking whether they, or someone else in their organization were willing to participate in my research. During this snowball-process I sent twenty-five invitations via e-mail, planned and conducted ten interviews eventually[1]. **Table 2** below gives a broad description of the participant's practical involvements in the three 'starting points' for my recruitment. 'Involvement' in this description is understood as 'a seat at the table', in the case of the plan and the paper, and 'work in the field' in the case of livestock protection. It should be mentioned, however, that many of the participants knew each other from this work, and in their mutual contact can reasonably be assumed to influence each other. Three participants (P1, P5 and P8) often work together on some projects, although mentioning that they do start from differing ideals and organizations.

Nr.	Involved with wolf plan	Involved with livestock protection	Involved with position paper
1	X	X	
2	X		
3	X	X	
4	X		
5		X	
6		X	
7	X	X	
8	X	X	
9			X
10			X

Table 2. *Interview participants and their involvements in different aspects of wolf management.*

All interviews were conducted in Dutch had durations ranged from 30 minutes to 90 minutes, with the longest being held on location. Interviews were conducted semi-structurally. This means that I had an interview guide, but not a strict one, and I allowed participants to redirect the conversation. A full version of the interview guide can be found in **Appendix 1: Interview guide**. These interview questions allowed me to inquire the practices of my participants, including their responses to the wolf, to from there learn about ambitions, values and responsibilities that inform these responses. Finally, I asked them about their hopes for the future. I should emphasize that the interview guide as stated here is a very general abstraction of the real conversations that took place.

After conducting the auto-ethnographic interviews, if recording was admitted, I transcribed them. If not, I used my notes to develop a transcription as precise as possible. These transcription documents were then coded using Atlas.TI, using a combined process of deductive and inductive coding. Many codes were determined beforehand, such as some institutional tools, technological tools and a few attitudes. These were then supplemented while coding, if new information came up. Some information did not fit any category, although I did judge them to be worth mentioning. These were put in the coding group 'General' and include references to agency of the wolf, references to other literary

[1] One participant mentioned that the members of his committee receive a lot of interview requests from students writing their thesis and that they divide these requests amongst each other. Out of this I understand that the wolf is a popular thesis-subject in the Netherlands, and that this might be a reason that many of my invitations were left unanswered.

sources such as news articles or books and finally some general information that my participants told me. This resulted in the coding tree presented below.

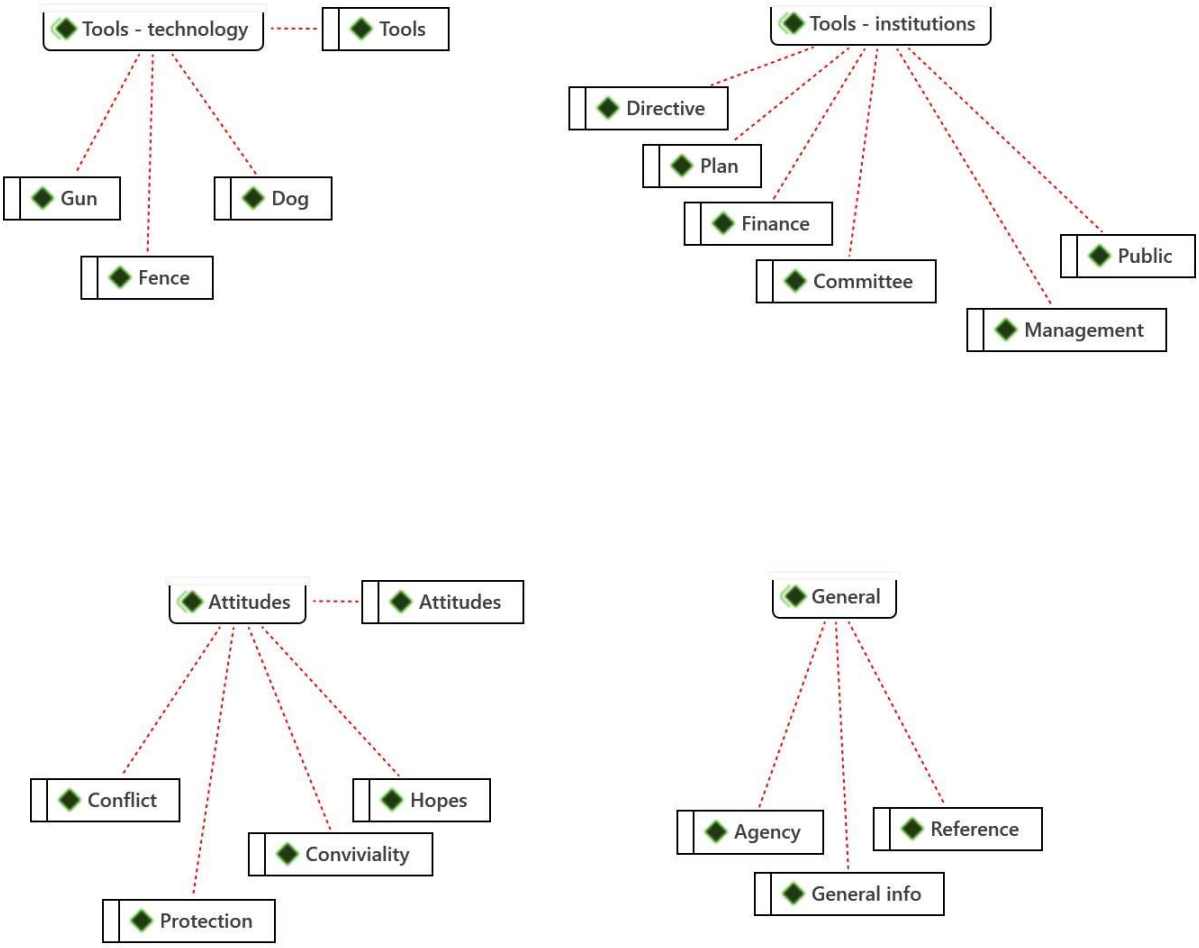

***Figure 2**. Coding tree*

3.3 Limitations and ethics

Finally, a note about limitations and ethics. In doing research, it is important to take limitations and ethical considerations into account. An example of this is anonymization of the obtained results. To protect the privacy of my participants, I leave out their names and the names of their organizations. Instead, I use a somewhat abstract description of the role they play in this thesis. Also, I made sure to share a consent form with all participants before the interview, in order that the goals and questions of my research were clear. This form included the contact details of my supervisor, to ensure that my participants knew where to go if they felt the need to report on my behavior.

The collection of research participants is informed by my own values and opinions of who is worth talking to and is therefore biased. However, as stated above, I aimed to work around this bias when it occurred, by introducing a position paper composed by less influential stakeholders. Still, this thesis is largely informed by the political importance I personally believe nonhumans such as animals should and do have. Therefore, however much I try to remain objective, my conversations with participants were probably in some way informed by this as well.

I believe that the political relevance I personally ascribe to this research subject and to the field of planning in general, improves this research. A researcher is never truly objective, and all science is value-laden. Therefore, a thesis might as well be used to provoke care for topics which are thought to be of importance. As Puig de la Bellacasa argues, the practices of a researcher are concerned with matters of care as well (2017). My positionality in this research is therefore not aimed to be ignored but is a seminal component of the very research itself.

The main limitation of this research was a lack of time and resources to do long-term ethnographic (or in this case, praxiographic) research. The results therefore lack some depth and the conclusions that can be drawn are limited. I therefore see this thesis as explorative of possibilities. The end-result then, is an example of how more-than-human planning research might be done, of what praxiography could add to the planning field, and of the concepts of control, care and conviviality are useful for such endeavors. However, these explorations are not a definite answer as to whether they are scalable, or useful to bring planning further. Then again, that is rarely what a master's thesis is.

4. Results

In this section, I explain the most relevant findings I collected. The interviews taught me a lot about what is going on with wolf-related work in the Netherlands. In the first section I give some context and relevant discussions, built around the practices of my participants. What do practices entail exactly? And what tasks are my participants involved in? Then, the findings are categorized broadly according to materializations of ambitions of control, of values of care and hopes for conviviality. We will see that these categorizations are not so strictly separate in practice. This means the subheadings become only a device to develop the story, rather than a categorization.

4.1 Practice

As a result of using the praxiographic method, I am mainly interested in the practices that occurred as a response to the wolf. In this section I will first set out the framework of possible action. Then, I will shortly touch upon some debates that were brought to my notice about these frameworks. In a table, the involvements of my participants are laid out, and I describe their (daily) practices surrounding the wolf. Then, in the next section I set out what my participants told me about the Dutch relationship with nature, and with the wolf, that flows out of these practices: is it controlling, caring or convivial? This allows me to, in the conclusion, answer the questions of how practical responses to the wolf in the Netherlands materialize ambitions of control, values of care and hopes for conviviality.

Policy framework: what is possible?

In the Netherlands, the provincial governments are responsible for legislation and policy of nature areas. This means that if something happens, for example the wolf comes back in the country, provincial decision-makers are interpolated to respond. In this case the Interprovincial Council (*Interprovinciaal Overleg,* IPO) did this by developing a joint wolf management plan. According to Participant 2 this is a report by the government about

> "…what their rules are regarding compensation for damage, protective measures and providing clarity about what their possibilities are to act in certain situations." (P2, 31-05-2022)

Some participants indicated that they were involved with either the writing or the consultation sessions of this plan (P1, P2, P4, P7) and the organization of Participant 8, learning from experience in Germany and Sweden, even took the initiative to convince the government that such a plan was necessary in the first place:

> "We started proclaiming that message and pushing for a management plan. With the idea: you should start talking about wolves to a lot of people now and ask how they would want to deal with it and what should be arranged. But if wolves are here and they start killing sheep, then everybody is angry and that will make the conversation impossible. We did that successfully. We had a wolf management plan right before the first wolf came." (P8, 10-06-2022).

Although it is the province's responsibility, their options are limited because the wolf is highly protected according to Article 12 of the EU's Habitats Directive. This directive entails that member states of the EU are obligated to ensure the conservation and protection of certain species. My participants are involved with policy and plans, but not powerful enough to change the law, let alone European legislation.

By all participants, the EU Habitat Directive is seen as an unchangeable framework, however there is some discussion about its demands. According to this directive, the population of the protected species must be supported in reaching a 'favorable conservation status' (Dutch: *gunstige staat van instandhouding*). But

> "that status has to be determined in a certain spatial unit and legislation says it needs to be a country. But for the wolf this will never work, because in the Netherlands we will never reach a favorable conservation status. We are simply too small, and the wolf has too large a use of space." (P2, 31-05-2022)

After all, the wolf population does not limit itself to country borders. Other participants as well mentioned this constraint of the directive (P4, P9, P10). Since the wolf population of the Alps and of Eastern Europe are combined and overlapping now, it might be argued that this favorable conservation status is reached (P1). Yet before any action can be undertaken, this has to be legally recognized (P2).

If this would be recognized, and some degree of management were possible, the possibilities of action can be determined by developing an escalation ladder (Dutch: *escalatieladder*). To explain this function, participants often mention the example of the beaver (P1, P2, P4). Beavers are also recently back in the country, are a protected species according to the EU Habitat Directive, and also cause damage. In the province of Limburg, where the animal surpassed its favorable conservation status, in some areas outside of beaver-territory, it is allowed to kill them. But not before first inquiring whether resettlement or other measures are possible using the ladder (P1, P2, P4). Eventually, according to Participants 1, 2 and 4, this will happen with the wolf as well. Such predictions follow from the current context of how it is done in the Netherlands.

Participant 1 points out that we rarely allow animals to reach their full 'ecological capacity', because they first reach their 'societal capacity':

> "You can like it or not, but in reality, there is no animal in the Netherlands which we allow to take its natural place in the landscape" (P1, 31-05-2022)

continuing that

> "Yearly we shoot some hundred thousand geese, to avoid impact to swimming water and agriculture and to keep airplanes in the air. If we do nothing for three years the Netherlands would be full of wild boars, that goes super-fast. We do not want deer everywhere because of road safety and damage. And beavers are being killed in Limburg for the last ten years because they push up water, making land unfit for agriculture. All examples of animals we don't allow to reach their ecological capacity. And for the wolf this will not be any different, I expect." (P1, 31-05-2022)

The Netherlands, some participants mention, is a cultural landscape (P1, P6, P9) and so allowing nature to run its course is hard. But not impossible:

> "A natural balance in a cultural landscape is a tricky one. But if we work hard on recovery of biodiversity, a lot is possible" (P6, 07-06-2022)

> "Look at the North of Canada, why are there not more wolves there? There's plenty of space and the people do not all carry around guns. What is stopping the wolf? It is the available amount of prey and of space. And if necessary, they fight about it. So, who is managing the wolf? The wolf does!" (P8, 10-06-2022)

This shows that current practices as well as the policy framework are not entirely uncontroversial. The exact demands of the habitat directive within which the wolf management plan is made, and its implications for an escalation ladder with killing at its end, are contested. Some of the participants mention the necessity of having this democratic discussion as an essential element of a co-existence

with the wolf (P9, P10). But first let us turn to the hands of the practitioners: what is happening in practice? How do they respond to the wolf?

Practical responses

Before analyzing the underlying ambitions, values and hopes of practical responses to the wolf, I will explain broadly what the participants' responses entailed when the wolf was recognized to be back in the country. Short term responses might range from dealing with one problematic wolf (P4) to giving interviews to news outlets (P8), but long-term responses and development of tools is more interesting for this thesis. At long-term response is usually the development of technological and institutional tools. In later sections, these are analyzed as either being materializations of ambitions for control or materializations of values of care. Broader societal materializations of hopes of conviviality are touched upon after.

Some participants mention that, looking at the spreading population of wolves in Germany, the comeback of the wolf within the Netherlands was no surprise and so their organization saw it coming (P2, P3, P5, P8). This allowed an early development of a wolf management plan of which some participants are involved in the initiative writing, the council sessions, or the current updating (P1, P2, P3, P7, P8). Some are part of a working group or a committee (P2, P4, P7). Others are mainly involved with the (development of technologies for) protection of sheep and other livestock (P1, P3, P5, P6, P7, P8).

Additional practices in response to the wolf include other advisory work (P1, P3, P5, P6, P8), providing information to the wider public via books, flyers and online platforms (P3, P8, P9), helping farmers in the field implement the technologies that were developed (P1, P5, P7, P8) and providing licensing in the case of a problematic situation surrounding the wolf, as happened in 2015 when a wolf which was already being chased in Germany crossed the border (P4). Lastly, the two final participants work in the field mostly in other capacities and respond politically by developing a position paper (P9, P10).

After this quick summary of responses that were mentioned, I will now go deeper and analyze – if possible – the underlying ambitions, values and hopes. Sometimes these become implicitly visible in a description, other times they were reflected upon by participants themselves.

4.2 Ambitions of control

The most obvious materialization of an ambition of control is the getting rid of the problem at all. Fully eradicating the wolf out of the country, after all, already happened 150 years ago. Notably, this was never mentioned as an option by my participants. Most participants agree that it is not a debate whether the wolf is welcome here, because he came here voluntarily. Still, some controlling measures were mentioned by participants.

The gun

Some practitioners refer to the role of the gun in managing the wolf. Full control is hardly possible, although we did eradicate the animal before.

> "… because the gun became a weapon that you could operate remotely, which meant that animals could be killed which we could not physically approach before because we were to slow or to weak, so to say" (P3, 01-06-2022)

The invention of gunpowder, as P3 pointed out, is at the foundation of a changing relationship between humans and animals. The gun is a technology that allows humans to kill animals without having to be strong or fast. This allowed humans to eradicate the wolf in the first place and is central to our relationship with many other animals now. This might also be why fallacies of control are so rigorous:

historically, if we did not like an animal, we could just get rid of the problem by shooting it. In this light, it is no wonder that an hierarchical image appeared where humans are superior and have control over nature.

But the wolf was never fully exterminated from the continent, and the EU Habitat Directive shows that extinction of the wolf is not politically desirable either. Does this mean there is no ambition to control at all? The public debate in the news seems to tell another story. A participant indicates that some stakeholders might have this ambition:

> "Now I have to be careful not to generalize, but I expect a lot of agriculturalists and sheep farmers to be people of control. That is their profession. Within these confines they perform their work, they earn their bread being completely focused on control. Currently, it's not – it's with a grid. But they would rather control with a gun and that is not allowed. And they ask, "what do I need this wolf for? It's only a burden. Were we not perfectly fine living without the wolf?"." (P2, 31-05-2022)

The generalized farmers in this quote, and some people appearing in media, would like the wolf to be eradicated. But among the actual practitioners in the field that this thesis focuses on this is not a question. Disregarding one or two wolves presumably being poached (nothing is certain as no one was convicted), ambitions to eradicate are not materialized in the technologies and other tools that are developed in the field.

Participants generally recognize the impossibilities of control but note that we might attempt to do so by practicing 'management' or 'controlled management' (as noted by a participant, a hunter himself, "management is a hunter's euphemism for shooting" (P10, 17-06-2022)[2]. And this is widely taken to be generally possible. After all, as stated above, it happens for beavers, geese and wild boars already. Mentioning these animals, one participant argued that

> "the wolf would be a similar situation. You can monitor the wolf relatively well, to know how many pups are coming and all. You also know where they should go and where they cannot." (P4, 02-06-2022)

This opinion is not uncontested. A rather long quote by a participant clears out the complications of management.

> "I am not against doing something if there is an uncontrollable[3] wolf, with whatever preventive measures. But it is easier said than done. It's easy to call out, in media for example, to "just shoot the beast". But it's another thing to kill the exact right wolf, to come close enough. It is just difficult. We see this in other countries: if wolves have not settled yet, they are very hard to find. It costs a lot of manpower of hunters and heaps of money. Is it part of a pack? They might for example give a shooting permit for the male pack leader, but then shoot the wrong one and the male is still there. If they shoot the male and the female pack leader both, a bunch

[2] Moreover, another participant wished not to call it management (Dutch: *beheer*) at all and preferred the term management (Dutch: *management*). The nuance in language is lost in translation, but this participant noted that the latter includes a "larger tool kit than only that gun. In the Netherlands fauna management [*beheer*] is often only that gun, but it needs to be understood broader. The word management [*management*] communicates that better" (P2, 31-05-2022). Note that nuances such as these might be lost in my translation of the Dutch context.

[3] Dutch: *"niet te beheren"*, translated to controllable. It is translated thus to show that, following previous footnote, something might also be gained in translation. The English word 'uncontrollable' here, shows that even a practitioner arguing against certain materializations of control, does implicitly assume a necessity of others: if a wolf is 'uncontrollable', out of hand, feral, *then* we are allowed to control it. To shoot it.

> of pups are left with no capacity to hunt yet, which drives them to livestock. It's tricky business. So yeah, I am not against getting rid of a real problematic wolf, also for the other wolves that are unproblematic. But we have to have all the details clear and right to do it well and realistically. And we are not even close to being there." (P5, 07-06-2022)

Not only ecologically this proves difficult, but also institutionally:

> "If we would really have to manage the wolf – to capture or shoot it – that would be a whole discussion with lawsuits and animal protection and all. But we are not that far yet." (P6, 07-06-2022)

So, controlled management is not so easy to do. Full control is not possible, but ambitions to control are present still. Technologies to materialize this ambition are the gun, first of all. But besides controlling the population and the presence of the wolf, the whereabouts of the wolf might be aimed to be controlled. A materialization of this ambition is the fence.

The fence

Something that humans might be able to control is where we allow the wolf to be. Among the participants there is a broad commitment to protect sheep and other livestock. This is done by fencing, using a higher fence than is regularly used, as well as five electric wires instead of the usual three. It is paid for by provincial subsidies, but only on the specific condition of being within a confirmed wolf-area, sometimes only if there has been damage done for a minimum of two times. Taking measures is expensive and takes time and sometimes more manpower. Many participants plead for more money to be available for farmers to be able to do this (P2, P5, P9).

Another discussion about the fence is its visible impact on the Dutch landscape.

> "We worked on removing all the fencing in the Dutch landscape to connect the nature areas in a network. The Dutch Nature Network – NNN. But with the comeback of the wolf all these fences and grids threaten to come back, to protect animals against the wolf. […] All these fences and barriers – you do not only stop a wolf from coming in the meadow, but also a badger for instance." (P1, 31-05-2022)

A slippery slope is feared:

> "What if we have all the sheep behind an electric fence and the wolf thinks: "you know what, I'll get your cows"? Are we going to fence off all the cow meadows? All the places where horses are? What will this do to the habitat of the roe deer? And the badger? These are discussions we need to have and decisions that need to be made in the future." (P4, 02-06-2022)

The fence not only controls the whereabouts of the wolf, but also of roe deer and badgers. These unwanted consequences show the downsides of an ambition to control. These downsides are all noted by participants, after all they work with it daily, and so true ambitions of control are not very prevalent amongst them. Instead, a care-full implementation of such measures can be noted in practice. By tinkering, adapting and respecting the other, ambitions are attempted to be achieved.

4.3 Values of care

Values of care, according to Arora et al. (2020) materialize in practices. But when is something a materialization of values of care? In this section, I use 'taking responsibility', 'tinkering and maintenance' and 'recognizing agency' as guiding principles to show the nuances between care and control. However, the distinction between the two is not so easily laid: in practice, ambitions of control and values of care, as well as their materializations, seem to often intertwine.

A political responsibility for animals

Participants generally agree that in nature policy and animal management, responsibility is an important factor.

> "I think we have a responsibility to all other beings out there. Especially if they are animals that we keep or breed, such as livestock or pets. There is no doubt about that. But other wild animals that live on our earth as well. They are there and they should have a place." (P5, 07-06-2022)

After all, the loss of biodiversity is largely caused by human effects and so the responsibility to do something about would be ours too.

> "We have to be way humbler as human beings. And this includes not exploiting the earth. We as a humanity of course have screwed up a lot. We caused that. That's why I think it's our turn now, also for the next generations, to make some repairs. Yes, I do see that as a human task." (P6, 07-06-2022)

This human task is not clearly mapped out, but a source for much debate. If we want to tackle the challenge and give space (back) to animals, how far are we willing to go?

> "We see a biodiversity crisis that stems from the fact that we have pushed nature very far back. We have regulated, we set boundaries, where it really was the dominant view that people are central. Animals should not bother us. We enjoy them, but they should not be annoying. Yes, that is what put us into this crisis. In that sense I find the wolf very interesting. It confronts us with reality: how much space do we actually offer? Mentally as well as physically, in the landscape. That is where it gets interesting: how much space are you willing to give the wolf? (P2, 31-05-2022)

This might mean reconstructing nature:

> "Yes, I do think we have a responsibility to do everything we can to co-exist with these species. And we should also begin to see that there is a limit to the demolition, and that there should actually be reconstruction of nature. Not demolition." (P5, 07-06-2022)

But taking responsibility to grant animals the space they deserve, might also mean managing the population:

> "We do have a responsibility for the wolf, but this means responsibility to manage it. To make sure the population doesn't get out of hand. The downside of its comeback is that it must have a territory." (P10, 17-06-2022)

Taking responsibility to care might mean different things in different contexts. Reconstructing nature and managing the population might both be materializations of care. Taking responsibility for livestock might also mean using fences, which at the same time function as a device to avoid conflicts and maintain social support.

Ontological interdependence

But the work that is put into care for biodiversity not only has to do with a political responsibility; we are also dependent on biodiversity for our very existence. A participant mentions that our practices, for example agriculture, are dependent on biodiversity.

> "If biodiversity doesn't recover sufficiently, at some point particular things will be impossible. Agriculture will be in trouble, then. In the example of pollination this is obvious: if there are no

> pollinators you will have to do it with tiny brushes or drones. We are just dependent on insects for pollination of our crops. 50 to 70% of crops, research says, is dependent on insects." (P6, 07-06-2022)

The ontological interdependence of humans and nonhuman nature is, according to a participant, increasingly recognized in the field.

> "There is a change in attitude where we are slowly beginning to realize that we are part of nature, and that we cannot live up to this superior way of thinking. Especially not in the long run. And this requires a change in attitude, not that everybody is working on this, but I do think that there is a societal shift in there that is a long way from being over." (P3, 01-06-2022)

So, a societal shift towards recognition that we are part of nature. The participant also refers to the image shown in **Figure 1**. Also, this relates to the participant earlier who argued that we have to take a humbler position (P6, 07-06-2022).

Care as maintenance work

As seen in the previous section, the fence is not implemented without debate. But one participant, a developer of livestock protection technologies – such as fences, grids, and guard dogs – points out that, however easy it seems to buy a technological artifact and use it, it might not work that way.

> "The producers tell us, 'we have this product and it works', but in practice you have to observe: 'does it?'" (P5, 07-06-2022)

He emphasizes the care work, the tinkering and experimenting, that goes into the development of such a technology.

> "It is hard to find dogs that can handle a wolf that is already settled. And conflict preventing measures, such as grids, nets, those were already present in other countries of course. But now that we work with them in differing habitats, we find out that some don't work. Or don't work sufficiently. That this is influenced by the season or the soil." (P5, 07-06-2022)

Another issue with guard dogs is that they might not be suitable for the Dutch landscape, where other dogs and tourists are more present in the areas where sheep are.

> "We have a few pilots where we give information and advice to people who want to work with those dogs. And we supervise the experiment. Supervision is necessary because the functioning of those dogs is really different to the traditional countries: less tourism and stuff." (P5, 07-06-2022)

So, the dogs have to be aligned with the environment. For a technology to be implemented, all involved have to on the same wavelength. Otherwise, it will not work. This also includes the sheep-owners, who have to be willing and able to implement such a protective measure in the first place. Foregoing participant mentions how expensive these measures are for a farmer. Not only are they expensive, but the implementation also requires manpower as well. Still, it is legally required for owners of livestock to protect their animals, and it could be argued that adapting to a changing environment (for example one in which wolves are present) is simply part of the business operation (P6, 07-06-2022). But how to convince people to adapt, and make sure that those in the field are all on the same page? You work together.

> "We could all go to the press and write that farmers should take preventive measures, and tell the government that they should grant subsidies, and tell the area managers that they must help their shepherds. But that does not work. You must take the lead and do it together. You

> know what, we will not only tell you what you should do but we will do it with you. And we are also in the field erecting fences and talking to sheep farmers and we hear what's going on and what they go through." (P5, 07-06-2022)

The 'we' this participant talks about, includes participants 1 and 8 as well. By "being in the field", this 'team' actively works on care for wolves and sheep and aims to establish a convivial co-existence between all stakeholders. I now turn to other ways in which hopes for conviviality materialized according to, and among, the participants of this research.

4.4 Hopes for conviviality

How does conviviality materialize in hopes across societies? As seen in the theoretical framework, it is hard to pin down *materializations of* conviviality. In a sense, everybody hopes for conviviality in ways that might diverge largely. In this thesis, I see conviviality as consisting of certain elements. First, following Hinchcliffe and Whatmore (2006), conviviality is understood to be not only about humans, but about a broader more-than-human community. In the case of the wolf, I show how wolf-agencies are often recognized by participants to then inquire whether this leads to inclusion as well. Further, my participants touch upon hopes for democratic solutions of co-existence. I conclude that, in my research, hopes that flow out of more-than-human planning practice, and are therefore informed but not limited by possibilities reality offers, have much in common.

Care and conviviality: the wolf as a subject

It might be because of their mythical connotations, but opposing some other animals, the wolf is often recognized as a being with agency. A few quotes by participants show in what contexts the wolf is granted agency. First, the wolf is mentioned to have initiative:

> "The wolf arrives here on his own initiative." (P7, 10-06-2022)

Also, the wolf can learn. Several participants, for example, talked about livestock protection and wolf management as learning mechanisms for the wolf. Electric fences play an important role in this.

> "Most important is that they have enough electricity. That is the learning mechanism for that wolf, as it gets a blow on the nose if it tries to go under it." (P2, 31-05-2022)

Even for participant 3, who is an expert in large carnivores, this is the main focus of his advisory work. This is focused around

> "… mainly what the possibilities and limits are of what a wolf can learn, what measurements can be taken for that and how to anticipate to it." (P3, 01-06-2022)

Participant 5 emphasized several times that "every wolf is different" (P5, 07-06-2022).

> "You really have to look at an individual, or the individuals, to know what you are dealing with." (P5, 07-06-2022)

> "And we are dealing with wolves from abroad who have a backpack full of experiences, from their birthplace and on the road. Of what measures can and cannot be overcome, and how." (P5, 07-06-2022)

So, a wolf is an individual who shows initiative and who can learn. But does this mean we also perceive them as such in our responses to the comeback of the wolf? The quotes above show that the granting of agency for the wolf is not something that flows out of theory (as it might do in an academic setting), but out of practice. The advisory work and engineering practices of participants demand a perception on the wolf as an individual with agency, to account for exceptions and local contexts. It shows how

agential inclusion of the more-than-human in practices, and convivial manners that flow out of it, is not a theoretical ethico-political demand, but a pragmatic one.

Thinking in a manner in which the wolf is worthy as a political participant as well, requires a shift in thinking.

> "We find them difficult, but they are not difficult. They just clash with our interests. But we started giving them less space, and those species will adapt to other habitats." (P5, 07-06-2022)

> "Complains about too many deer can be seen as the same as complaints about a lack of predators. But you do not so often hear the latter. Most people who are not happy with the number of deer, are unhappy with the wolf as well. But it could be the other way around." (P8, 10-06-2022)

This participant – in a quote that is already mentioned – explicitly grants the wolf autonomy, when stating that

> "Who manages the wolf? The wolf does." (P8, 10-06-2022)

Still, many participants seem to ignore the agency of the wolf in their statements and talk about wolves as an objectified other. Population management is often mentioned as a viable option. As mentioned in the control-paragraph above, the tendency to manage a population can be seen as a control ambition. These ambitions undermine the autonomy of the wolf.

Control and conviviality: humans intervene

Even participants who are wary of population management and a general tendency of control indicate that some amount of control might still be necessary. Problematic wolves might cause conflicts that go too far, while ruining the reputation of the other wolves doing nothing wrong. This reputation is found to be important, meaning that democratic values and the respecting of others should come from the wolf as well.

> "But nature must color within the lines. And we determine those lines. And if you color outside of the lines, you get punished. Imagine we get 400 wolves, but the sheep are protected sufficiently, and they do not hunt kettle. Then there is no problem. But if we have 20 and we are drowning in conflicts, then we have to do something about it. So, you steer according to conflicts and not on numbers." (P4, 02-06-2022)

So, same as with human criminals, wolves get punished if they cross certain lines. This can be seen as a control-tendency, but also as that wolfs are part of a political, juridical system. So, do we stop controlling nature, then?

> "We humans cannot let go of control. We are scared to do so. We want control, right? Not me personally per se, but yes, we do want control. […] If you look at how the Netherlands was first inhabited, that was a bunch of wildernesses. And wilderness is equal to, yes, uncontrollable nature." (P6, 07-06-2022)

A participant emphasizes that all nature management has control elements.

> "Management is control of nature. There is much discussion among nature protectors, area management organizations and nature managers. Some have a vision to work towards, biodiversity in Natura 2000 consists of goal-species. That is made-up nature. It is not natural,

> because it is what we say is best. So many boars, so many deer, some particular plants…" (P10, 17-06-2022)

Even rewilding, according to this participant, holds elements of control:

> "Since 2015 there is a movement that aims to let nature run its course. But they also intervene. There is no nature in the Netherlands, nothing that is allowed to proliferate.[4]" (P10, 17-06-2022)

Participant 8, who is an expert in rewilding himself, agrees that Dutch nature management has a hard time letting go of control.

> "Rewilding[5] is about letting go. And that is terribly hard for people. Especially people who chase after nature target types. These are frozen elements in time, while in nature they shift in space as well as time. And yes, so the landscape is much more dynamic than we think right now. But we like to keep it constant so that it is well-structured." (P8, 10-06-2022)

In accordance with hopes for conviviality, for example in processes of rewilding, nature might be granted autonomy.

> "Rewilding is based on the resilience of nature, and you let natural processes run its course. You let rivers meander, you let large beasts graze again. And ultimately, the wolf is a part of that." (P8, 10-06-2022)

Hopes for the future

As a last question of the interview, I asked my participants what their hopes were. Answers range from mentioning management, to the future of agriculture in general. But they all can be perceived to materialize conviviality in a way. In this last section, I therefore want to mention answers of all ten participants.

Participant 1, on the one hand hopes for a solid support base for stakeholders who might fall victim to wolves and emphasizes that it is not enough yet.

> "Also, to protect human interests. Ponies, dogs and in the end also the wolf. If the complete countryside has had enough of the wolf, that can come at the expense of its support base" (P1, 31-05-2022).

On the other hand, he hopes that nature on the countryside can recover.

> "That we go towards a regenerative agriculture, that can adhere to production but also to nature. Not as it goes now, with artificial tricks and big machines, pesticides and animals inside. But that we go towards a different system." (P1, 31-05-2022)

The role of agricultural transition is also emphasized by participant 2.

> "From the perspective of biodiversity in the Netherlands, there is a lot to win if the agricultural areas move towards a nature inclusive agriculture. That is a crucial step." (P2, 31-05-2022)

[4] Dutch: "niets dat zomaar woekert".

[5] This participant emphasizes that rewilding is the same as the Dutch process of 'natuurontwikkeling', or 'nature development'. He tells me that it is not a new movement, but already happened under different names as part of projects Ruimte voor de Rivier (room for the river) and de Oostvaardersplassen.

> "Then, I think we provide a landscape in which it is attractive to live, and where it is also possible for farmers to make money because that also needs to happen. And the wolf will feel at home there as well." (P2, 31-05-2022)

If pets and livestock are protected well, according also to participant 7, the wolf can get the space it deserves. Moreover,

> "A big part of agriculture would be gone in the ideal future. It costs us more than it provides us with. Let's do good things with the space that yields: nature, of course, but necessarily also housing." (P7, 10-06-2022)

And participant 8 also dreams of a landscape with extensive agriculture.

> "And this is possible if you let animals graze in nature areas." (P8, 10-06-2022)

These nature areas, participant 10 emphasizes, are not wild and untouched, but landscapes which we influence and intervene in.

> "And if you start thinking from there, it can be great fun to look how to give space to the wolf. There has to be a nuance, of which you need to start thinking now." (P10, 17-06-2022)

Participant 9 complements this by pointing out the necessity of democratic debate.

> "I hope a broad societal debate becomes possible. That a realistic vision is put forward as to where we want to go with the landscape. And that policy works proactively towards that aim." (P9, 14-06-2022)

As a licensing civil servant, participant 4 is focused on following policy and directives. Therefore, his hopes for conviviality, he emphasizes, are mainly informed by what is directed by law and demanded by politicians, and therefore by democracy. He therefore points out that

> "It is important to have debate about where we want to go with the Dutch landscape. This is a discussion that still needs to enfold." (P4, 02-06-2022)

In this democratic deliberation, participant 5 points out, the wolf participates as well. This can only be done well if the wolf is granted the space to do so:

> "I hope the species can settle in the most ideal nature and outside areas and then can come to a scenario of co-existence with the local inhabitants. But this must include a halt to infrastructure development. And a halt to deforestation." (P5, 07-06-2022)

Participant 6 hopes for recovery of biodiversity as well, so that the wolf can contribute to a natural balance.

> "The ideal image is of course that population size is in balance with the habitat. Then there would be little problem. And if the wolf can for example maintain the boar population. And roe deer, which are on the rise. If the wolf would mainly eat young boar and roe deer, then I think a natural balance is possible." (P6, 07-06-2022)

Participant 3, finally, emphasizes a broader perspective on nature, in formulating his hope for conviviality:

> "I hope that nature is granted a place, which is substantial. And which makes it possible for natural systems to exist in their own complex figurations. So not nature defined as: no geese, but cows. In

fact, accepting that nature has, and lives according to, its own laws. And we should focus and live towards this instead of constantly putting our interests above other lifeforms." (P3, 01-06-2022)

In short, the ideal future, according to the practitioners I interviewed, is one in which agriculture and society in general becomes nature-inclusive, in which people do intervene in the natural landscape, but let it go wherever possible, and in which democratic debates help to shape the co-existence of humans with and within nature.

5. Discussion and Conclusion

In this chapter I discuss and draw conclusions on the research described above. I first come back to the theories introduced in the theoretical framework, to discuss these in the light of the case study of the comeback of the wolf in the Netherlands. Lastly, I draw some conclusions on the possibility of developing a more-than-human planning and answer the research questions of this research.

Discussion

Looking at practices (and how they enact reality) opens up a field that is not limited by preconceptions. Starting the inquiry from mobilizations – in this case responses to the comeback of the wolf – helps to avoid assumptions of who is worth interviewing and other a priori categorizations. From here, the relevant field opens up for inquiry. In a more-than-human planning theory this is important because the borders of the field are never laid out neatly beforehand. The case of the wolf shows how agency is distributed beyond humans only. After all, if humans were the only agents, this situation would not be so complex. But instead, the wolf chooses where to go and whom to prey on and humans can only try and take measures accordingly. This shows how the distribution of space is a more-than-human endeavor; other actors than human configure in its controversies (Houston et al., 2017) and voice their politics (Latour, 1998). This, in turn shows the urgency of an ontological politics (Mol, 1999) according to what Delanda (2006) calls a flat ontology. This will make humans more sensitive to environmental happenings and reconfigurations by more-than-human counterparts.

Although certainly not exhaustive, control, care and conviviality prove beneficial concepts to operationalize research into more-than-human planning. Unsurprisingly, the theoretical concepts do play out differently in practice and they are not as clearly distinct from each other as a conceptual explanation might suggest. But by taking these conceptions as starting points, a landscape of interesting lessons opens up within the field. For control, political ontology entails a vision on interventions beyond traditionally modernist tendencies to control. The participants in this research, all practitioners in the field, largely know this already: full control is impossible. This is best shown by their reluctance to fall into the same control ambitions as are present in the media. Even those in favor of stricter wolf management have no illusion of 'controlling' wolves, but merely aim to manage them. The statement that control is impossible is thus mainly a relevant lesson for theory. However, theoretical assumptions find their way into political ambitions, which sometimes get materialized into technologies in the field. This is why the concept of control should not be ignored in the categorization. If care and conviviality are the main focus, control shows what these are up against.

In the case of the wolf, ambitions of eradication came closest to control, although it can be seen as rigorously getting rid of the problem rather than truly solving it. For other responses, the main lesson is that ambitions of control and its materialization in technologies is not so clear-cut. Practices of implementation are often contextual and adaptive, and therefore relate to care as well. The categorization here becomes blurry. This has to do with two aspects. First, the fact that the situation is quite new: technologies of control are not so well-established yet, and their implementation is still in an experimental phase. This is a phase in which a technological product is not yet finalized: the situation of implementation of fencing technology in the field is still a 'conversation' with sheep farmers, soil and the right amount of electricity, and the wolves as well. Secondly, ambitions of control might be present in media and politics, but that is not the focus of this research. I am focused on practices. The actual practice in the field as shown in the result section, unsurprisingly, proves to be more contextual and, often, more careful. Practical reality is a nuanced version of the theoretical framings at play in theory, politics and media.

Several aspects of care can be recognized in more-than-human planning practices. Participants all endorsed the importance of wolf protection. Those less enthusiastic about the wolf mentioned situations in which wolf protection might clash with other safety concerns, which can be seen as care as well. Care, therefore, is not a clear-cut morally righteous endeavor but open to political scrutiny (Bellacasa M. P., 2017). Moreover, as mentioned, in the development of technologies for protecting sheep, such as fences, aspects of maintenance and care are very present and well-recognized. Wolf population management is a situation in which practices of care might be overrun by ambitions to control, for example if too much confidence is put into the possibility of population control in the first place. Opinions about wolf management vary widely, and the debate can be seen to show the degree in which a participant had the ambition to control. Participants often mention values of care as their motivation, but other motivations (such as the romance of being able to hunt a wolf) run the risk of blurring a careful deliberation.

When asked about hope, all participants mention aspects that can be related to conviviality. Everybody hopes for conviviality – so the specific components of this ideal future need to be defined strictly, and open, political deliberation must follow out of this (Büsscher and Fletcher, 2020). Some participants explicitly mention their hope for more-than-human co-existence. Others show control tendencies and caring ambitions at the same time and argue that both are necessary to reach conviviality. This ambivalence might be exactly what the politization of conviviality necessitates. Namely, if wolfs and humans are to co-exist, both need to grant the other physical territory and emotional space. While the wolf is protected under EU-law, the extent of this protection has its limits: too many conflicts and the wolf ruins its chances. The need to co-exist is widely recognized, although it might be uncomfortable, messy, and hard, and it forces us to rethink our own position in the landscape (Drenthen, 2015). How much comfort we are willing to give up is a matter of debate. The necessity to have this (political) debate about where to go with the Dutch landscape is often underlined by participants. Convivial democratic deliberations of managing the wolf, if it comes to this, will be chaired by humans. It is therefore important to not let these institutions be informed by ambitions to control (where, as seen, hierarchical relations prevail, and unforeseen consequences are ignored). Instead, convivial managing organizations should stem from and include practices of care, where the other is respected as a subject and granted space, territory, and autonomy.

But, regarding human-induced mass extinctions and climate change, maybe us humans wasted our time to speak. Maybe it is the wolf's turn to decide what landscapes look like in the future.

Conclusion

In this thesis I have attempted to show how research in more-than-human planning might be done. I investigated control, care, and conviviality, using a praxiographic methodology. By doing that, I have shown how ambitions, values, and hopes materialize in technologies, practices and institutions mobilized by the comeback of the wolf in the Netherlands. I argue that the wide range of responses by actors mobilized by the challenge of planning for the wolf show the merit of this categorization for more-than-human planning. Further explorations into the possibilities of praxiography for planning research are necessary to fulfil the potentials this method has. If planning research is to recognize the distribution of agency and include more-than-human configurations within spatial conflicts, it is essential to have a political ontological method which avoids assumptions and accounts for an opening-up of politics.

For the wolves in the Netherlands, the future is a political one. It is essential that policymakers and politicians are focused on practical situations, rather than theoretical political framings. A focus on practice, for theory as well as for policy, shows the nuances and real-life effects. If political deliberation does not start out from here, ambitions might be informed by control tendencies. This blocks thinking

about modes of action that go beyond the mere population management of wolves, or locking them up in nature reservations. A future of co-existence lies somewhere in between. Policy and political deliberation, therefore, need to be value driven. If our response to environmental disruptions that shake up the status quo, such as the wolf, are informed by values of care rather than ambitions to control, the convivial future we all want is within reach.

6. Reflection

This thesis has been a more ambitious work then I had originally foreseen. Because of time restraints and lack of other resources, surely the thesis has not at every point stayed true to this ambition. The attempted explorations into more-than-human planning are a too large endeavor to be all fully done in a master's thesis, but I am convinced that a small contribution has been made here. Reflecting on the process, some points must be highlighted.

Invisible wolves

Wolves in this research have been largely invisible. In a previous version of this thesis, the front picture included an image of a wolf, but I felt that imaginations of the wolf run a risk of contributing to unwanted political framings (the wolf as dangerous, wild, pure). To bring focus to the necessities of infrastructures for conviviality, rather than imaginations and framings, I chose to include a picture of an ecoduct. This Dutch invention is an example of how convivial co-existence might configure in more-than-human planning. This invisibility of the wolf is in accordance with the practices of planners and policymakers. After all, none of the practitioners I interviewed had seen a wolf in the wild. But it might also be seen as a limitation. To rightfully account for the interests of wolves in the Netherlands, actual research into the wolf is necessary. The wolf needs a "seat at the table", not only by imagining what a wolf would say, but also by paying heed to how a wolf already speaks (Meijer, 2017). As Metzger (2014) states, we should see that "the phenomenon of place is in no way exclusive to human existence" (1002). He continues that

> "if we sharpen our skills for reading the material-semiotic signal of nonhumans, we can also learn to better recognize and then also decide if the territorial articulations and attachments of other-than-human beings and entities are worthy of our respect and consideration" (*Ibid.*).

Extending such understanding is necessary to truly begin seeing like a wolf.

Generating care and hope

Research is never neutral. By making choices about which theories to include and exclude, which methodology to use, and which practitioners to interview, I have taken a position. I have aimed to make those choices explicit, and I hope to have shown that these came from values of care. However, surely there are things that I have overlooked. I can only wait for further debate to make these clear for me as well. In this thesis, I hope to have shown that research in general, but specifically in spatial planning, has a responsibility of generating care and even of generating hope. Moreover, I hope I have done so for the reader. For me, working on this has certainly generated hope and care. Therefore, I conclude with saying that, although the thesis ends here, this project is not done. In my professional life I will continue to pay attention to materializations of control, care, and conviviality, and possibly contribute to the development of a more-than-human planning.

7. Acknowledgments

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