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Revising the Stewardship Model by Taking Wolves' Agency into Account

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submitted by

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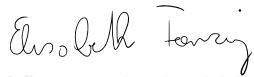
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Vienna, 24.07.2023, Elisabeth Fanzoj

*Dedicated to my parents
for their endless love and support.*

*And to my favourite philosopher
for always being by my side.*

ABSTRACT

Since the mid-19th century, the wolf has been considered extinct in Austria, but in recent years, there has been a noticeable increase in wolf numbers. While the urban population tends to welcome the return of wolves, the rural population tends to fear damage to livestock and the need to adapt their traditional way of life. In particular, livestock depredation caused by wolves has sparked emotionally charged public debates about the appropriate handling of returning wolves. In this context, it is necessary to address human-wolf conflicts, which not only refer to the conflict between the interests of wolves and livestock owners but also to conflicts between different population groups that have different views on the appropriate handling of wolves.

The return of wolves has been facilitated primarily through the improvement of habitat conditions and the implementation of supportive international legislation. These legal regulations are largely based on the stewardship model, primarily understanding wolves as passive beings, worthy of protection, and humans as superior stewards. The stewardship model, however, hardly aligns with the perception of the rural population affected by livestock depredation, who do not experience the wolf as passive but as a threatening agent. This discrepancy can lead to parts of the rural population feeling ignored and subsequently not adhering to proposed measures or resorting to illegal actions such as killing wolves. The current approach to dealing with wolves thus appears unsatisfactory.

Drawing on Edelblutte et al. (2022), I propose that considering animal agency can help to sustainably resolve human-wolf conflicts, understanding animal agency as the ability of animals to actively influence wildlife management outcomes through their adaptive, context-specific, and complex behaviors. In my thesis, I criticize the inadequate consideration of the constructive agency of wolves by livestock owners and relevant legal regulations concerning wolves.

Building on Palmer's (2010) argument for the existence of special obligations to assist animals harmed by humans, I argue that we have a duty to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship by taking their agency into account. Furthermore, I propose a revised stewardship model that demands the consideration of agency and is suitable for reducing human-wolf conflicts.

ABSTRACT

Mitte des 19. Jahrhunderts galt der Wolf in Österreich als ausgestorben, doch im Verlauf der letzten Jahre stieg die Wolfspopulation in Österreich an. Während die urbane Bevölkerung der Rückkehr der Wölfe tendenziell positiv gegenübersteht, steht die ländliche Bevölkerung ihr eher negativ gegenüber, da sie Schäden an Nutztieren befürchtet und sich gezwungen sieht, ihre traditionelle Lebensweise umzustellen. Insbesondere Nutztierrisse sind dabei Anlass für emotional geführte öffentliche Debatten. Hierbei ist von Mensch-Wolf Konflikten zu sprechen, die sowohl den Konflikt zwischen den Interessen der Wölfe und jenen der Nutztierhalter:innen beschreiben, als auch zwischen verschiedenen Bevölkerungsgruppen.

Die Rückkehr der Wölfe wurde insbesondere durch verschiedene internationale rechtliche Regelungen zum Zwecke des Wolfsschutzes ermöglicht. Diese fußen in weiten Teilen auf dem Stewardship Model, also in erster Linie auf dem Verständnis von Wölfen als schützenswerten, passiven Lebewesen und den Menschen als übergeordneten *stewards*. Dieses Verständnis konfligiert mit der Wahrnehmung der ländlichen Bevölkerung, die den Wolf nicht als passiv erlebt, sondern als potenziell schädlichen *agent*. Dies kann dazu führen, dass sich Teile der ländlichen Bevölkerung nicht ernstgenommen fühlen und sich folglich nicht an vorgeschlagene Maßnahmen halten beziehungsweise illegale Maßnahmen – wie das Töten von Wölfen – als Protestmaßnahmen setzen.

Der derzeitige Umgang mit Wölfen erscheint somit als verbesserungsbedürftig. In Anlehnung an Edelblutte et al. (2022) schlage ich vor, dass die Berücksichtigung von *animal agency* dabei helfen kann, Mensch-Wolf Konflikte nachhaltig zu lösen. Ich verstehe *animal agency* dabei als Fähigkeit von Tieren, durch ihr anpassungsfähiges, kontextspezifisches und komplexes Verhalten aktiv Einfluss auf die Ergebnisse des Wildtiermanagements zu nehmen. Im Rahmen meiner Arbeit kritisiere ich einerseits, dass die konstruktive *agency* von Wölfen von Nutztierhalter:innen nicht ernstgenommen wird und andererseits, dass *animal agency* auch in relevanten rechtlichen Regelungen nicht angemessen berücksichtigt wird. Unter Bezugnahme auf Palmers (2010) Argument der besonderen Verpflichtungen, Tieren zu helfen, die durch Menschen geschädigt wurden, argumentiere ich, dass wir die Pflicht haben, Wölfen dabei zu helfen, Konflikte mit Menschen zu vermeiden und ihnen zu erlauben, aktiv an der Mensch-Wolf-Beziehung teilzuhaben, indem wir ihre *agency* berücksichtigen. Weiters schlage ich ein überarbeitetes *stewardship model* vor, das die Berücksichtigung von *agency* verlangt und geeignet ist, Mensch-Wolf Konflikte zu verringern.

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INTRODUCTION

Wolves were almost extinct in Western Europe in the last century but improving habitat conditions, supportive legislation and pan-European conservation efforts have allowed the few remaining populations to recover. Wolves were able to naturally recolonize their former habitats without the need of any major reintroduction programs. Between 2009 and 2015, up to seven wolves per year were detected in Austria. In 2016, the first pack established itself at the Allentsteig military training area; seven years later there are already seven packs in Austria. In addition, there are numerous wolves that only pass through Austria and only stay here for a short time (cf.: Österreichzentrum Bär, Wolf, Luchs 2021a: p. 9-12; Linnell, Cretois 2018: p. 9; Wöbse, Kupper 2021: p. 90; WWF 2021; Selimovic et al. 2023).

The relationship between humans and wolves has been characterized by tensions in the last centuries. Not least, these conflicts have also led to their near extinction towards the end of the last millennium (cf. Linnell, Cretois 2018: p. 9). For farmers and livestock owners, the attacks of wolves became increasingly problematic in the Middle Ages. During this time, there was a strong expansion of agriculture with the consequence that forest areas were cleared for farmland and formerly contiguous forests were separated (cf.: Hackländer 2020: p. 79). The wolf was hunted intensively from the Middle Ages onward primarily for three different reasons: (1) hunters viewed wolves as competitors, (2) rural farmers viewed them as an existential threat, and finally, (3) wolves were also viewed as man-eating beasts (cf.: Hackländer 2020: p. 79; Zedrosser 1995: 244).

Organized hunts took place and poison, traps, nets, and guns were used. Thus, the dangerous wolf was largely eliminated in Europe. Individual populations could survive only in remote areas (cf.: Hackländer 2020: p. 84; Zedrosser 1995: 245). The last autochthonous wolf populations in Austria became extinct during the 19th century due to intensive persecution (cf.: Hackländer 2020: p. 84).

In the last decades, however, attitudes towards wolves have changed. The persecution of wolves stopped in Europe and wolf-friendly legal regulations led to the resettlement of wolves in their original habitat. Until 2016, the number of annually tracked wolves in Austria remained below 10. At the Allentsteig military training area in Lower Austria two unrelated wolves from Lusatia finally managed to establish a pack with their first reproduction in 2016 (cf. Österreichzentrum Bär, Wolf, Luchs 2021b: p. 5; Kotrschal 2022: p. 78). Around 2018, two more pairs of wolves settled in the northern Waldviertel, but by 2020 they were no longer

detectable. Every year, wolves migrate to Austria from neighboring populations. In 2020, 40 wolves were detected, one year later the number increased to 50 (cf.: Kotrschal 2022: p. 78). The wolf numbers continued to rise in the following years, and as a result, there are already four wolf packs in Lower Austria and three wolf packs in Carinthia (spring 2023) (cf.: Selimovic et al. 2023).



Fig. 1
„Wish you a nice holiday...I am already here!
Animal cruelty promoted by: European Union -
WWF - The Green Party”

poster of an Carinthian farmer (July 2023)

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With the return of wolves in Austria, where alpine regions are commonly used for livestock farming and where the number of hoofed game is high, long-forgotten conflicts resurfaced, with predation of livestock animals by wolves being the primary cause of conflicts (cf.: Hackländer 2020: p. 20). With the wolf population growing, numbers of livestock kills are on the rise. In 2022, around 790 livestock animals were killed by wolves (cf.: Österreichzentrum Bär Wolf Luchs 2023).

Human-wildlife conflicts, characterized by negative interactions between humans and wild animals, involve multiple conflicting parties (cf.: Messmer 2009: p. 10). It is not only the interests of humans and wolves that are at odds; there are also social tensions among different societal groups. On one hand, there are those who support the return of wolves and view them as symbols of freedom and nature. On the other hand, farmers, particularly those affected by livestock kills, fear that increasing wolf numbers will require them to change their traditional way of life and feel that their concerns are not adequately represented in political discourse (cf.: Redpath 2013: p. 101; Linnell et al. 2016: p. 366; Fig. 1). The management of wolves is a highly debated topic in Austrian society, and the public discourse surrounding it is emotionally charged. Scientific facts often become overshadowed by a politics of fear, which involves the deliberate manipulation of fear by stakeholders, while a process of symbolization, fueled in part by fairy tales, leads to the emergence of symbolic animals that often do not align with the reality (cf.: Linnell et al. 2016: p. 365-366; Lawrence 1993: p. 302).

Wolves enjoy a high protection status, which arises from the regulations of the 1979 *Bern Convention on the Conservation of European Wildlife and Natural Habitats* (Bern Convention), the 1973 *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (Washington Convention - CITES), and the Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (Habitats Directive). The aforementioned legal texts have in common that they are largely based on the concept of environmental and animal stewardship. In this context, wolves are primarily understood as passive beings to be protected, while humans are seen as superior stewards (cf.: Drenthen 2021: p. 431-432; Seamer 1998: p. 205; Palmer 1992: p. 85).

Parts of the rural population, especially those directly affected by the return of wolves, perceive the current legal framework as unrealistic and feel a political alienation, which sometimes leads to non-compliance with existing regulations and to the implementation of illegal measures (cf.: Zscheischler & Friedrich 2022: p. 1052; Von Essen et al. 2014: p. 200).

The current handling of the return of wolves appears to be in need of improvement. Edelblutte et al. (2022) argue that considering animal agency can help improve the management of wildlife. In this context, agency is understood as "the ability of animals to actively influence wildlife management outcomes through their adaptive, context-specific, and complex behaviors [...]" (Edelblutte et al. 2022: p. 9). In this thesis, I will criticize that the constructive agency of wolves is neither adequately taken into account by livestock owners who perceive the wolf merely as a dangerous beast, nor within legal regulations that understand wolves as passive beings, leaving little room for considering their agency. In this regard, I will demonstrate that the non-consideration of constructive animal agency, particularly during times of human-animal conflicts, is problematic, as it represents a potential tool for reducing these conflicts.

In the first part of my thesis, I will argue for human responsibility to consider animal agency. In the second part of my work, I will criticize the insufficient consideration of animal agency at the legal and political levels. To overcome this deficit, I will propose a revised stewardship model and address the research question underlying this thesis: *To what extent can revising the stewardship model by taking wolves' agency into account help improve human-wolf coexistence?*

The thesis is structured as follows. The aim of the first chapter is to provide a better understanding of the human-wolf conflict. In particular, I will address social conflicts that

become apparent in dealing with the return of wolves to Austria. By describing various involved stakeholders, I will demonstrate that human-wolf conflicts involve not only humans and animals as conflicting parties but also different groups in society pursuing different interests.

As human-animal conflicts often involve questions of animal ethics, I will present Grimm's *ethical method of solving moral problems*, which is an adaptation of Dewey's *pattern of inquiry*, as a possible method for developing solutions to moral problems. This method consists of five steps: (1) the perception of a *felt difficulty* or an indeterminate situation, (2) the definition of a problem, (3) finding hypothetical solutions, (4) evaluating their appropriateness and (5) the practical implementation of defined appropriate solutions.

Chapter two and three will subsequently focus on the application of this method, using the fictional example of an Austrian sheep farmer who does not implement any herd protection measures despite the presence of wolves in the alpine regions where his sheep are kept. Chapter two will concentrate on the situation of disorientation, which serves as the starting point for further analysis. Here, I will argue that the criticism directed towards the sheep farmer is capable of triggering a so-called felt difficulty. In chapter three, I will conduct a problem definition and determine that the farmer, due to the lack of implementing herd protection measures, fails to fulfill his obligation to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship, by recognizing their agency.

To overcome this deficit, in chapter three, I will first propose various herd protection measures that consider the agency of the wolf and are suitable for deterring wolves from attacking livestock animals. Through a so-called dramatic rehearsal, I will examine the proposed herd protection measures in terms of their scientific compatibility, feasibility (legal and practical conditions), and (extra-)moral reasonableness. Finally, I will discuss potential obstacles to the practical implementation of the proposed herd protection measures.

After addressing the obligation to consider wolves' agency at the level of farmers and sheep owners in chapters two and three, I will explore in chapter four whether wolves' agency is adequately taken into account in relevant legal regulations. To answer this question, I will also examine the stewardship model present in animal protection and conservation law, which conceives of (wild) animals as passive beings and provides limited consideration for animal agency.

After describing the (animal) stewardship model and discussing the criticisms mentioned in the literature, I will analyze whether aspects of the stewardship model can be found in the *Bern Convention*, the *Washington Convention*, and the *EU Habitats Directive*. Subsequently, I will demonstrate that animal agency is not adequately taken into account in

the stewardship model and the aforementioned legal regulations, and I will address the negative consequences of this. Finally, I will propose a revised stewardship model that considers animal agency and is suitable for minimizing human-animal conflicts. The final chapter of this thesis summarizes the main findings of the study and includes a discussion on the implications of the results for the future management of wolves.

1 HUMAN-WOLF CONFLICTS

Human-wildlife conflicts are usually described as situations characterized by negative interactions between humans and wild animals. These conflicts occur on economic, social, and/or political levels (cf.: Messmer 2009: p. 10). Human-wolf conflicts about wolves returning to Austria are multi-layered and involve (1) ecological, (2) financial, and (3) social issues at their core (cf. Lin et al. 2021: p. 2).

(1) There are those who view the wolf as a crucial component of the ecosystem, responsible for naturally regulating the population of other wildlife. However, others doubt the wolf's importance as a top predator and contend that hunters have been fulfilling this role satisfactorily for many decades (cf.: Lin et al. 2021: p. 2; Sjölander-Lindqvist 2008: p. 72; Sjölander-Lindqvist 2009: p.131). (2) Wolves attacking livestock animals and causing financial harm to farmers is a sensitive topic that evokes strong emotions. There is a debate about the extent to which farmers should receive compensation for such damages, with the amount of these payments being a contentious issue. Also, questions about financial support for herd protection measures lead to conflicts (cf.: Lin et al. 2009: p.2; Österreichzentrum Bär, Wolf, Luchs 2021b: pp. 8, 19-20). Tourism professionals fear financial losses due to the absence of tourists who may avoid areas where wolves have been sighted (cf.: Rebernick 2023). (3) In addition to conflicts revolving around the ecological relevance of wolves and financial issues, the return of wolves also raises social questions. While some interpret the wolf as a symbol of nature and derive its right to exist from animal rights, others see it as a dangerous animal that threatens the tradition of alpine farming and tourism as well as the rural population in general. The idea of the wolf as a barbaric and uncivilized creature clashes with the perception of the wolf as a strong animal that represents a thriving environment, and these views appear to be incompatible (cf.: Lin et al. 2009: p.2; Caluori et al. 2001: p. 169, 176, 179-180).

In the conflicts arising from the return of wolves, it is not just two conflicting parties facing each other, but there are several parties whose interests (partially) conflict. To illustrate this, the following will examine the conflict that arises from wolf attacks on livestock animals. Relevant stakeholders will be defined below to be able to identify relevant conflicting parties, which is an important step towards conflict management. There are different definitions of stakeholders (cf. Lin et al. 2021: p. 6), but usually it refers to "individuals, groups and organisations who are affected by or can affect" the outcomes of a project (Reed et al. 2009: p. 1933). Doyle-Capitman et al. (2018) use a narrower definition in the field of wildlife conservation and

understand stakeholders as organizations, networks, and individuals that are interested “in the management of resources targeted for conservation”, are potentially impacted by resource management decisions, and “have the power [...] to support or impede implementation of pro-conservation management actions” (Doyle-Capitman et al. 2018: p. 376).

The classification of stakeholders below is based on previous studies regarding relevant stakeholders in the field of wolf management and defined in reference to the definitions by Lin et al. (cf. Lin et al. 2021: p. 6). The classification of Lin et al. was expanded to include a differentiation between the general public and affected local residents. Additionally, the wolf was included as a relevant stakeholder in the classification. This results in the following classification of stakeholders: (1) environmentalists, (2) general public, (3) affected local residents, (4) hunters, (5) livestock owners, and (6) wolves.

(1) *Environmentalists* are understood as those who advocate for the return of wolves through an organization. They strongly support the return of wolves (cf. Lin et al. 2021: p. 6). An example of such an organization is the WWF, which advocates for the coexistence of humans and wolves in Austria (cf. Reif 2021).

(2) Similar to environmentalists, the *general public*, referring to people living in urban areas, generally have a positive attitude towards the return of wolves, mainly because they do not have concerns about possible direct damages caused by the return of wolves (cf. Lin et al. 2021: p. 6,12).

(3) The situation is different for (*affected*) *rural residents*. They fear limitations in their way of life, such as kindergarten teachers being hesitant to take children on trips to the forest. Therefore, they strongly oppose the increasing wolf population (cf. Lin et al. 2021: p. 6, 11-12; Rohrhofer 2023). In Austrian communities where wolves have been sighted, the formation of citizen initiatives against wolves is observed (cf. Rohrhofer 2023).

(4) Similar concerns are shared by *hunters*. People engaged in hunting activities generally have a strong negative attitude towards wolves as they perceive a threat to hunting culture, as they compete with wolves for game animals (cf. Lin et al. 2021: p. 6, 11-12; Dressel et al. 2015: p. 573).

(5) *Livestock owners* - individuals who live in rural areas and own livestock animals - anticipate damages to their livestock animals and therefore generally have a negative attitude towards wolves (cf. Lin et al. 2021: p. 6, 11-12). For example, representatives of the Chamber of Agriculture in Austria express concerns that the return of wolves would lead to the decline of sheep farming in alpine landscapes (cf. Aschbacher 2022).

(6) In addition to humans, animals can also be considered stakeholders. This can be justified by the definition of a stakeholder - a wolf is undoubtedly affected by conservation measures and can also influence them, as will be shown in the course of the master's thesis (cf. Reed et al. 2009: p. 1933; Smart 2022: p. 297). Thus, *wol/ves* can be defined as relevant stakeholders which naturally have an interest in ensuring that their reintroduction is not hindered (e.g. through killings) or made more difficult by management measures.

The categorization of stakeholders involved in human-wolf conflicts highlights that the conflicting interests are not limited to wolves and humans alone, but also extend to various groups of humans. Hence, it is inaccurate to solely refer to a conflict between humans and wolves; instead, it should also be recognized as a conflict among humans. This phenomenon can also be observed in connection with other human-wildlife conflicts and is often attributed to the fact that conflicts associated with the influence of wild animals actually represent conflicts between different groups in society that arise from different societal ideas about the human-animal relationship, insufficient stakeholder involvement in the conservation plan, or conservation measures perceived as harmful and dangerous by some stakeholders (cf.: Redpath 2013: p. 101; Linnell et al. 2016 : p 366).

In connection with the return of wolves, conflicts are observed that arise from the tension between rural and urban populations (urban-rural divide), traditional and modern lifestyles, or knowledge based on experience and academic knowledge systems (cf.: Linnell et al. 2016: p 366; Nie 2003: p.128).

In 2020, approximately 8.000 sheep in Austria died due to rockfall, diseases, falls, or severe weather. In contrast, around 294 sheep were killed by wolf attacks. Therefore, wolves are responsible for approximately 3.5% of the sheep deaths (cf. Kotrschal 2022: p. 55; Österreichzentrum Bär, Wolf Luchs 2021c). Assuming that the number of sheep killed by rockfall, diseases, falls, and severe weather remains relatively constant each year, the 496 sheep killed by wolves in 2021 account for approximately 5.8% of the total number of sheep deaths (cf. Österreichisches Zentrum Bär, Wolf, Luchs 2022a). In 2022, around 769 sheep were killed by wolves, which represents 8.8% of all sheep deaths (cf. Österreichisches Zentrum Bär, Wolf, Luchs 2023a). Despite the relatively low percentage of damage caused by wolves to livestock, conflicts over the management of wolves in Austria are highly contentious. Particularly because personal perceptions do not necessarily align with empirical facts. Two

possible reasons for this will now be discussed: (a) the process of symbolization and (b) the politics of fear.

(a) According to Lawrence (1993), the apparent discrepancy between scientific knowledge and personal feelings can be explained by the process of symbolization. Lawrence assumes that the "real-life" animal - which we encounter or talk about - cannot be thought of without the "symbolic" animal, a construct of the human mind which is the result of predetermined societal and cultural factors and is also influenced by individual experiences and assumptions. In the process of symbolization, fairy tales and traditional legends play a crucial role. For example, the fairy tale of Little Red Riding Hood played a decisive role in portraying wolves as dangerous and evil in Western culture. This view even contributed to wolves not being given scientific attention until the mid-20th century (cf.: Fritts et al. 2003: S. 294).

The imagined "symbolic" animal does not always correspond to the actual one. Rather, "nature" - in this case, the natural behaviours of an animal and its biological characteristics - is reinterpreted into a cultural construct through the process of symbolization (cf.: Lawrence 1993: p.302). The "symbolic" animal of each human individual can differ significantly from that of another member of society. While the wolf can represent wilderness and environmental completeness for environmentalists, the farming community may see it as a symbol of nature that is out of control and needs regulation (cf.: Fritts et al. 2003: p. 290).

(b) Linnell et al. (2016) argue that fear is a driving factor in the context of societal discourse regarding the return of wolves. They suggest that it is not about the fear of individual persons, which may arise from personal experiences. Rather, concerns of specific population groups are picked up by (political) actors and used for their own purposes. As a result, the societal discourse is shaped by fear and misinformation, making it difficult to approach wolves in a fact-based and solution-oriented manner. However, they also point out that the complete denial of problematic aspects of the wolf's return does not contribute to a solution either, as this denial would make wolf skeptics feel disregarded and subsequently less open to solution proposals based on academic knowledge (cf.: Linnell et al. 2016: p. 365-366).

The previous discussion has shown that the human-wolf conflict occurs on economic, social, and/or political levels and encompasses ecological, financial, and social components (cf.: Messmer 2009: p. 10; Lin et al. 2021: p.). By classifying relevant stakeholders ((1) environmentalists, (2) the general public, (3) affected rural residents, (4) hunters, (5) livestock owners, and (6) wolves), it has been illustrated that conflicts associated with the return of

wolves occur not only between humans and wolves but also between people with different interests. Human-wolf conflicts are thus also related to social conflicts among different groups of society (cf.: Redpath 2013: p. 101). Furthermore, it has been pointed out that human-wolf conflicts are fiercely fought, even though the actual percentage of livestock damage appears to be low. There is a discrepancy between perceived and actual reality, which can be explained, among other things, by the process of symbolization, which describes the emergence of "symbolic" animals, and the politics of fear, which refers to the use of fear by political actors for their own purposes (cf.: Fritts et al. 2003: p. 294; Linnell et al. 2016: p. 365-366).

1.1 Solving Moral Problems in Animal Ethics

Human-animal conflicts often involve questions of animal ethics. In the following, a possible method for developing solutions to moral problems will be presented - namely, Grimm's adaptation of Dewey's pattern of inquiry.

The relationship between humans and animals as well as ethical questions that arise from the interaction of humans and animals have been the subject of philosophical and ethical reflection since antiquity. However, modern animal ethics did not emerge as an independent philosophical field of ethics until the 1970s. Milestones were the book *Animals, Men, and Morals. An Enquiry into the Maltreatment of Non-Humans* published in 1971 by Stanley Godlovitsch, Rosalind Godlovitsch and John Harris and the book *Animal Liberation* by Peter Singer, published in 1975. In 1976, Tom Regan and Singer co-edited *Animal Rights and Human Obligations*, followed by Singer's influential book *Practical Ethics* (1979) and by Regan's book *The Case for Animal Rights* (1983) (cf. Grimm 2012a: p. 438; Ach 2018: p. 20). Even though Singer's preference utilitarian approach and Regan's rights approach differ in many respects, not least with regard to the consequences for the treatment of animals, they share a number of similarities: Both Singer and Regan hold the view that the moral status of an animal is determined neither by its species membership nor by its relationship to humans, but solely by its interests and capabilities. And, more importantly, their work revolved around the fundamental question of the moral status of animals and justification of moral obligations towards animals. Singer and Regan formulated normative claims and provided the basis for further considerations and with that contributed significantly to today's animal ethics (cf. Grimm 2012a: p. 438, 458; Ach 2018: p. 21).

Critics have correctly pointed out, however, that both theoretical approaches reach their limits insofar as a problem is to be solved in practice. Singer and Regan take concrete problems in reality as the starting point for ethical reflection, but they answer only basic questions of animal ethics and do not aim to solve problems in practice (cf. Grimm 2012a: p. 458). To solve ethical problems in practice – such as the human-wolf conflict – an approach is needed that offers application-oriented methods, that provide a basis for reflective ethical orientation, and gives space for interdisciplinary knowledge (cf. Grimm 2012b: p. 279).

One that put addressing practical problems by using science at the heart of his work was John Dewey. Thus, Dewey's *The Pattern of Inquiry* (1986 [1938]: p. 105-122) will be introduced in the following. *The Pattern of Inquiry* is rooted in the empirical methodology of the natural sciences and allows for a structured analysis and resolution of problems while considering contextual conditions. Grimm (2010) applies Dewey's *Pattern of Inquiry* to the field of ethics and develops a model based on Dewey's explanations that can be used to address moral philosophical issues (cf.: Grimm 2010: p. 81). Grimm's further development of Dewey's *Pattern of Inquiry* appears to be useful, as it helps to approach ill-structured problems in the field of ethics in a structured manner and reveal practice-oriented solution proposals. Thus, it will be used to approach the problem of human-wolf conflicts in the following chapters.

In the first part of this thesis, I apply Grimm's method to analyse the situation of a sheep farmer in the human-wolf conflict to provide sensible solutions and identify obstacles hindering conflict resolution. Grimm's method is specifically designed to tackle real-life problems. For example, he applies it to analyze whether the use of a gestation crate by a farmer is ethically justifiable (Grimm 2010).

Since my thesis is purely theoretical, I imagine a fictional sheep farmer who does not implement any herd protection measures, despite the presence of wolves in the alpine regions where his sheep are kept. He is therefore criticised by animal rights activists. This criticism leads to the farmer doubting the correctness of his previous approach and triggers the problem-solving process, as I will demonstrate later. While the example I have constructed is fictional, it is not entirely unfounded, as demonstrated by the heated public discourse surrounding the human-wolf conflict, which I will provide a brief overview of in the upcoming chapter.

The structure of the following chapters is based on Grimm's ethical method of solving moral problems. Thus, chapter two will focus on the situation of disorientation, which serves as the starting point for further analysis (chapter 2.1), as well as the problem definition (chapter 2.2).

Chapter three aims to find hypothetical solutions (3.1), evaluate their appropriateness (chapter 3.2), and address potential obstacles to the practical implementation of defined appropriate solutions (chapter 3.3). Each of these chapters is subdivided into three sections: I will first discuss Dewey's *The Pattern of Inquiry*, then describe Grimm's ethical method of solving moral problems, and finally apply the method to the situation of the sheep farmer in the human-wolf conflict.

2. FROM A FELT DIFFICULTY TO THE INSTITUTION OF A PROBLEM

The following two chapters focus on the path from disorientation to problem definition. In particular, I address moral intuitions that not only trigger uncertainty but also contribute to recognizing and defining the problem.

2. 1 Feeling Lost and Confused

The aim of chapter 2.1 is to describes a felt difficulty, which arises because moral habits cannot be executed as usual and moral intuitions lead to uncertainty and disorientation (cf.: Grimm 2010: p. 141-142). I argue that criticism from outside (or moral intuitions from others) lead to a situation in which the farmer feels confused and uncertain. To address this situation, ethical contemplation is initiated, leading to the onset of reflective thinking (cf.: Grimm 2010: p. 151).

2. 1. 1 Dewey's "Indeterminate Situation"

Dewey perceives the initial situation as indeterminate, marked by disturbance, ambiguity, and confusion. In other words, it is a situation where "we have ›lost our heads‹" (Dewey 1986 [1938]: p.109). It is possible for this to occur in a scenario where we are unable to anticipate the result or where conflicting responses are elicited (cf. Dewey 1986 [1938]: p.109). The indeterminate situation is characterized by three central features (cf. Grimm 2010: p. 127): it is (1) *questionable* or *uncertain*, (2) *evokes inquiry*, and (3) *exercises control* over the inquiry procedure (cf. Dewey 1986 [1938]: p. 109).

(1) A situation is perceived as *questionable* or *uncertain* when existing habits no longer work as patterns of action and there is no obvious path to a solution. Dewey uses the term habits to refer to behaviors acquired through experience that influence action. Habits arise through interaction with the environment and are culturally conditioned. They describe the orientation framework by which the individual can find his/her way in new, unknown situations and remain capable of acting (cf.: Dewey 1988 [1922]: p. 31 ff.). However, if suitable habits are lacking, a feeling of disorientation arises (cf. Grimm 2010: p. 128-129).

(2) This feeling of uncertainty is subsequently perceived as unpleasant. Under certain circumstances, unreflective actions may be taken to end this discomfort. To overcome the disorientation permanently, however, it is necessary to use reflective means. This can be achieved by initiating a process of inquiry. Thus, the feeling of discomfort and uncertainty, that

is perceived as requiring overcoming and which is associated with the indeterminate situation, *evokes inquiry* (cf. Dewey 2001 [1929]: 227-228; Grimm 2010: p. 129-130).

(3) Furthermore, the indeterminate situation exercises control over the process of inquiry. Overcoming an uncertain situation can only be achieved, if one is aware of what makes the indeterminate situation problematic in the first place. Only when one is aware of this, it is possible to conduct a problem definition and take solution-oriented actions (cf.: Dewey 1986 [1938]: p. 109; Grimm 2010: p. 131-132).

2. 1. 2 Grimm's "Felt Difficulty"

In the realm of morality, Grimm emphasizes that moral habits and moral intuitions are particularly important (cf.: Grimm 2010: p. 151). Moral habits refer to behaviour dispositions that, through implicit guidance, ensure that our actions conform to normative expectations. However, if moral habits are not upheld or fail, the actor is no longer able to act habitually and begins to doubt. Subsequently, moral intuitions come into play, which suggest that there may be a violation of legitimate normative expectations (cf.: Grimm 2010: p. 141-142). One can also refer to this as a felt difficulty. If the actor has this intuition, he/she is uncertain about his/her own actions; if someone else has it, others' actions are questioned and challenged. In both cases, a state of doubt and disorientation arises. To overcome this state, ethical reflection is initiated, and reflective thinking sets in (cf.: Grimm 2010: p. 151).

2. 1. 3 Public Debate, Farmers and Feeling Morally Deficient

At the beginning of a morally problematic situation there is doubt and the feeling of uncertainty. As described in Chapter 2. 1. 1 moral doubt can be associated with one's own behaviour, but it can also be directed against the behaviour of others and expressed as a moral condemnation (cf.: Grimm 2010: p. 246-247). Doubt that is directed at others is often verbalized and can potentially lead to public debate on the situation in question. Thus, public debate can serve as an indicator for a felt difficulty.

Since the recolonization of wolves in Austria there has been public debate on how to deal with wolves killing livestock animals. These debates have become heated over the last few years. Based on the example of so-called problem wolves, such as Wolf 118 MATK, the following

section aims to illustrate the conflict between different social groups through several exemplary statements of stakeholders involved in human-wolf conflicts (cf.: Linnell, Cretois 2018: p. 14).

In October 2021, the Expert Board Wolf - Bear - Lynx passed a resolution for the first time, in which an undesirable behaviour of a wolf (with the designation 118 MATK) was identified and its killing was recommended. According to the *Tiroler Jagdgesetz, LGbl. Nr. 41/2004 idF 23/2023 (TJG 2004 - Tyrolean Hunting Law)*, humans as stewards are entitled to lethally take wolves that have killed several livestock animals. The killing of wolves does not require preventive measures such as fences or the use of herding-dogs to have been in place. The Expert Board Wolf - Bear - Lynx argued that the wolf showed an increased tendency to repeatedly attack grazing animals. Based on this recommendation, the Tyrolean provincial government issued the Wolf 118 MATK Endangerment Ordinance (Bote für Tirol 340/2021). By decision of October 27, 2021, an exemption (limited in time and place) from the prohibition of the year-round closed hunting season (§ 36 (2) TJG 2004) was issued for the killing of an animal of the species wolf. An appeal against this decision was filed by several non-governmental organizations. The Regional Administrative Court granted the appeal a suspensive effect (contrary to the original decision) and subsequently also overturned the decision. The matter was returned to the Tyrolean provincial government for the issuance of a new decision. Up to now the wolf has not been shot (cf. Fachkuratorium Wolf-Bär-Luchs 2021; Amt der Tiroler Landesregierung 2021: p. 23).

According to former minister of agriculture, Elisabeth Köstinger, the peaceful coexistence of wolves and farmed sheep in alpine landscapes is an illusion and will never be possible. The former minister considers herd protection to be unsuitable as a countermeasure. The effort involved would be disproportionate and unreasonable for the alpine farmers. Köstinger argues that fencing is ineffective because wolves would jump over these fences. If no action is taken now and if problem wolves are not allowed to be shot, soon there will be no alpine farmers anymore, Köstinger argues. Furthermore, she suspects wolf attacks on humans to be likely (cf. Arora 2021). Tyrolean governor Geisler has a similar opinion: Killing of problem wolves - such as 'Problem Wolf' 118 MATK - is inevitable to avert further serious damage (cf. Bauernzeitung 2021). In opposition to that, the World Wide Fund For Nature (WWF) highlights that the wolf is a strictly protected species and an important component of an intact nature. Instead of demanding illegal shooting, the affected alpine farming must be supported by a herd protection offensive (cf. Arora 2021).

The statements of Köstinger and Geisler and the statement of the WWF show that the current way of dealing with human-wolf-conflicts is dissatisfying in two different ways: One hand we fail to protect wolves and to promote their welfare, which we have committed ourselves to, and on the other hand we are also unable to defend the interests of farmers. The current public debate in Austria indicates that there is doubt on how to deal with the return of wolves in Austria.

Even wolf experts – such as Klaus Hackländer and Kurt Kotrschal – do not reach a consensus regarding the most appropriate management measures for wolves. Unlike Hackländer, Kotrschal does not believe that wolves must be hunted in order for them to continue to show fear towards humans' presence. He refers to the fact that several hundred wolves are currently living in Germany, which are not hunted and nevertheless do not lose their fear of humans. In addition, he points out that there are data indicating that livestock losses increase, not decrease, with the intensity of wolf hunting (cf.: Kotrschal 2019; Kotrschal 2022: p. 91-92; Dzugan 2019). Wielgus and Peebles (2014) analyzed data from Idaho, Montana, and Wyoming regarding the link between wolf hunting intensity and grazing livestock losses. As wolf density increased, so did the number of grazing animals that were killed. Surprisingly they found that the more wolves were hunted, the more sheep and cattle farmers lost the following year (cf.: Wielgus and Peebles 2014: p. 1). Thus, Kotrschal is convinced, hunting stimulates the reproduction and the food demand of the wolves, disturbs their social structure and their natural hunting behaviour (cf.: Kotrschal 2022: p. 92).

While Hackländer favours wolf-free zones, Kotrschal opposes them. Kotrschal argues that intense localized hunting may prevent the formation of a pack in an area, but the appearance of wolves roaming around looking for mates and causing the damage cannot be prevented by creating wolf-free zones. Kotrschal brings forward the argument that local packs can be "trained" in dealing with grazing animals. They deter foreign wolves and are therefore a stability factor not a risk factor (cf.: Kotrschal 2019; Dzugan 2019).

As even experts are not of the same opinion when it comes to wolves in Austria, it becomes clear that there are different conflicting suggestions, calling for further inquiry.

The public discussion surrounding the return of wolves highlights the diverse opinions on how to handle them. Some livestock animal owners who do not implement herd protection measures are criticized by animal welfare activists and organizations who argue that it is wrong to allow wolves that kill livestock animals to be shot without first implementing herd protection

measures. These accusations, which could also be seen as moral intuitions of the animal welfare activists, lead to doubts arising in some sheep farmers.

Let us assume that a sheep farmer is confronted with the accusation of not adequately fulfilling their responsibility to protect wolves from human-caused harm, because, for example, they do not implement herd protection measures that would enable a peaceful resolution of the human-animal conflict, which otherwise likely results in wolves getting killed. In case the farmer does agree in principle that we have responsibilities towards wolves, the criticism strikes a chord, and they find themselves in a state of uncertainty, questioning the moral justifiability of not implementing herd protection measures.

The following evaluation will assess whether there is, in fact, a moral deficit in the described situation and, if so, how it can be overcome. Having described the farmer's felt difficulty, the next step is to further define the possible (moral) problem.

2. 2 Problem Definition

This chapter seeks to determine the problem adequately. Therefore, I will go back to the moral intuitions described in the previous chapter, as they point to the morally relevant principle at stake. Furthermore, I will assess whether there is a violation of this principle and if this a moral deficit that needs to be overcome.

2. 2. 1 Dewey's „Institution of a Problem“

The problem institution involves discussing the conditions that make a situation an indeterminate situation. Problem identification is central to Dewey's *Pattern of Inquiry*, as only when a problem has been properly defined can meaningful and appropriate solutions be developed in subsequent steps (cf.: Dewey 1986 [1938]: p. 112; Grimm 2010: p. 157-158). According to Dewey, „a problem well put is half solved“ (Dewey 1986 [1938]: p. 112). Dewey's assumption is that the problem is well-structured and implies a clearly defined desired state. Through observation it is possible to identify relevant constituents of a problematic situation and by using the perspective of the desired state, it is possible to determine and define the underlying problem (Dewey 1986 [1938]: p. 112; Grimm 2010: p. 159-160).

2. 2. 2 Grimm's "Institution of a Moral Problem"

Grimm points out that this method is inadequate in the field of morality due to the presence of ill-structured problems where the desired state is not clearly defined (cf.: Grimm 2010: p. 175). Therefore, another perspective must be sought to determine the problem adequately. Grimm suggests resorting to moral principles, which can be used to identify a moral deficit on the one hand and to formulate a desired state on the other (cf.: Grimm 2010: p. 164).

Once again, moral intuitions are of importance here, as they provide us with a sense of which aspects of the present situation need to be examined from a moral perspective. Moral intuitions have an empirical fact at their core, from which we can infer a relevant moral principle. This is due to the nature of moral principles and their genesis, which is based on various experiences and the process of abstraction, encompassing cases that share similar moral experiences or situations. Consequently, we can reverse this process: Moral intuition points us towards a morally relevant aspect of a situation, and by searching for similar situations that can be attributed to a moral principle, we can also assign our initial situation to this moral principle. If a violation of this principle can be identified on an empirical level, then one can speak of a moral deficit (cf.: Grimm 2010: p. 166-168).

Having described how a moral deficit can be defined using moral principles, the focus now turns to how a desired state can be formulated based on this. A moral deficit describes a violation of a morally legitimate principle. Recognizing this violation entails the obligation to overcome this deficit (cf.: Grimm 2010: p. 168-169). Defining the desired state only vaguely, as a state in which the previously defined moral deficit does not exist, is sufficient at this stage as it will be concretized in the next step (cf.: Grimm 2010: p. 175).

2. 2. 3 Denying Wolves' Agency

Starting from the animal welfare activists' moral intuitions in our example of the doubting sheep farmer, it must now be examined whether there is a moral deficit based on a moral principle. Moral intuitions point to empirical facts that indicate the morally relevant principle in this example. In my example, the farmer is accused of not trying to protect the wolf from human-caused harm by not preventing it from attacking sheep, which will most likely lead to the wolf being shot. These accusations suggest a violation of the principle of having positive duties towards wild animals to prevent human-caused harm. In our case, the possible positive duties seem to involve giving the wolves the opportunity to actively participate in conflict resolution. To determine whether the behaviour of the sheep farmer - not implementing herd protection

measures - actually violates this principle and thus constitutes a moral deficit to be overcome, the first step is to clarify whether the farmer has responsibilities towards the wolves as wild animals. Since I affirm this responsibility, the second step is to determine what it entails. For this purpose, particular attention will be given to the concept of animal agency.

The term *wild animal* will be used in this thesis to refer to an animal “that is living in a fairly wild place” and one over which humans do not have control in terms of breeding (Palmer 2010: p. 8). Different theories exist in the literature regarding the positive duties humans owe to these animals, which can be divided into three different groups: (1) laissez-faire approaches; (2) interventionist approaches; and (3) conditional duty approaches (cf.: Martin 2018: p. 283).

(1) Authors belonging to the first group assume that we have a duty of non-interference with regard to wild animals and they therefore argue against interventions in the lives of wild animals. They critically evaluate interventions from a moral perspective and consider interventions to be negative. In *Animal Liberation* (2009) Peter Singer argues, based on the damages caused by previous human interventions, that interventions should be rejected as the negative consequences outweigh the positive ones (cf.: Singer 2015: p. 326-327; Martin 2018: p. 283). Tom Regan (2004) believes that humans are obligated to refrain from interventions and emphasizes that wild animals, thanks to their abilities, are capable of living their lives without human assistance (cf.: Regan 1983: p. 244, 395; Martin 2018: p. 283).

(2) Supporters of interventionist approaches have a different perspective and point to the challenging lives of wild animals. They consider it morally obligatory to ease the lives of wild animals through human interventions, under the premise that these interventions are possible and have predominantly positive consequences. However, some criticize this approach as absurd, as strict adherence to this view would also imply preventing the hunting behaviour of wild animals (cf.: Martin 2018: p. 285-286).

(3) Those who advocate for conditional duty approaches argue for interventions only in specific situations, focusing particularly on the relationship between wild animals and humans (cf.: Martin 2018: p. 284). Palmer (2010) argues that we have duties not to harm or kill wild animals. However, in contrast to domesticated animals, which are dependent on us and whose reproduction we can control, we have no positive duties towards wild animals in the sense of support or rescue duties (cf. Palmer 2010: p. 8; Martin 2018: p. 284-285). Although rescuing or helping wild animals is not forbidden *per se*, it is not morally required. In Palmer's opinion, duties to help wild animals only exist after humans have caused harm to wild animals or when human-caused damage is likely to occur in the future. Furthermore, duties to help wild animals

are a result of dependency-relationships and vulnerabilities caused by humans. Thus, we have no positive duty to help wild animals in case of injuries or natural disasters that occur independently of humans, but only in case these injuries or disasters are caused by humans. However, when these conditions are created by humans, they result in a duty to assist the affected wildlife (cf. Palmer 2010: p. 5; Martin 2018: p. 284-285).

Palmer's approach appears to be particularly useful for addressing the question of farmers' responsibility, as Palmer explicitly considers various relationships between animals and humans, as well as the consequences of human-induced harm to wild animals. For example, if coyotes lose their territory due to the construction of a settlement and become more vulnerable due to increased traffic, compensations should be made and measures such as fences to protect coyotes from car accidents should be implemented to minimize the damage (cf.: Palmer 2010: p. 105). In the following, I will argue, based on Palmer's argument for the *prima facie* duty not to harm wild animals and the special obligations to assist animals harmed by humans, that the farmer in my example has a special obligation to assist wolves in case of human-animal conflicts.

Human-animal conflicts are often understood as situations characterized by negative interactions between humans and wild animals (cf.: Messmer 2009: p. 10). These conflicts are often resolved to the detriment of wild animals, not least because humans have "the ability, authority, and power to influence human-wildlife interrelations, and to make decisions over wider conservation policies and practices" (Komi & Nygren 2023: p. 5). It is therefore not surprising that human-wildlife conflicts often end fatally for wild animals. This can also be observed in the human-wolf conflict in Austria. With the increasing wolf population and livestock predation, regulations on lethally taking wolves are being increasingly implemented in different federal states. Six wolves have already been shot in Carinthia and one in Salzburg (cf.: Ruep 2023). If human-wolf conflicts are not avoided or non-lethally resolved, wolves face death and thus human-caused harm. In my example, the farmer is therefore responsible for preventing impending human-caused harm. Specifically, he has the duty to prevent the human-wolf conflict from escalating and resulting in the killings of wolves. This can be achieved by recognizing and considering constructive animal agency, as I will explain later.

However, it should be noted that in this context, one could raise the fundamental question of whether the shooting of wolves already violates Palmer's *prima facie* duties not to harm wild animals. While this question is valid, since I am examining the issue from the

perspective of the farmer in this part of the master's thesis and it is not within his scope of action to actually shoot the wolf, I will not further delve into this topic at this point.

Furthermore, the question arises whether the farmer has a justified obligation not only towards the wolf but also towards his livestock animals to ensure the avoidance of the human-animal conflict. This question seems to be answered in the affirmative. Palmer argues that we have *prima facie* duties not to harm domesticated animals and that we are often required to assist them (Palmer 2010: p. 5). It seems plausible that sheep farmers, therefore, have a duty to adequately protect their sheep from wolf attacks. This discussion was recently picked up by the media when an animal welfare organization (VGT) reported a sheep farmer for lacking protective measures (cf.: Petelin 2023). However, since my focus in this work is primarily on the relationship between humans and wolves, I will not further pursue this topic.

I have now established that farmers have a duty to assist wolves in order to prevent harm caused by humans. The harm in question is the potential death of wolves in unresolved human-wolf conflicts. I have already hinted that this obligation can be fulfilled by adequately considering animal agency. Considering animal agency can subsequently help in implementing (livestock protection) measures that avoid or resolve human-wolf conflicts, or at least minimize them. Before delving further into this argument, I will explain the concept of animal agency in more detail.

In simple terms, "an agent is a being with the capacity to act, and 'agency' denotes the exercise or manifestation of this capacity" (Schlosser 2019). According to this definition, agency may be found almost anywhere: Whenever individuals become connected with one another, form relationships and act on and with one another, there is agency. More usually the term agency is however interpreted more narrowly and understood as "the performance of intentional actions" (cf.: Schlosser 2019).

According to Blattner, Coulter, and Kymlicka (2020), the portrayal of animals as mere victims of human actions, which has been widespread in the animal protection movement for a long time, has contributed - unintentionally - to the denial of animals' ability to exercise agency. Thus, the idea of a defenceless animal at the mercy of human domination, without the ability to influence the relationship between humans and animals, has been reinforced (cf.: Blattner et al. 2020: p. 6-7).

In recent years, however, a rethinking has taken place. According to Ingensiep and Baranzke (2018), in the course of the "Animal Turn" proclaimed by the historian Harriet Ritvo, the humanities and cultural studies are setting out to perceive animals not only as objects, but

as effective subjects possessing theoretical self-awareness and practical agency. In particular, the emerging field of human-animal studies (HAS) is opening up new perspectives and topics in many disciplines by critically examining human-animal relations, including animal agency and its role in shaping human-animal relations (cf.: Ingensiep & Baranzke 2018: p.195). The focus of research interest shifted to the question to what extent animals act as intentional and competent actors, pursue their interests deliberately, create social bonds and actively shape them. In this context, it must be pointed out that this theoretical approach in no way denies the exploitation and oppression of animals by humans. Rather, the goal is to recognize that animals are not voiceless and very much possess their own subjectivity, which makes them social actors that cannot be acted upon arbitrarily (cf. Blattner et al. 2020: p. 7).

According to Blattner et al. (2020), animal agency is conceptualized differently by various scholars: some derive animal agency primarily from animal actions, which can be interpreted as an expression of resistance to human domination. Others, however, focus "on how animals' agency is manifested, even within the larger context of oppression, in a multiplicity of ways including how they influence, contest, cope, negotiate, and/or care" (Blattner et al. 2020: p. 7). Carter and Charles (2019) e.g. argue that animals act and their action have consequences, that they also resist unfavourable situations and, in certain cases, have the ability to modify their agency's conditions. Therefore, they possess agency (Carter et al. 2019: p. 322).

Among the theoretical approaches considered fundamental for Human Animal Studies are, in particular, the theories of Jacques Derrida, Gilles Deleuze and Félix Guattari, Giorgio Agamben, Donna Haraway and Bruno Latour, as Gabriela Kompatscher (2018) points out. She argues that agency theories have proven to be particularly suitable for multidisciplinary purposes, as they contradict the position that only people are actors with agency and effectiveness (cf.: Kompatscher 2018: p. 320).

Over the last decade scientist in various fields of research have found evidence that animals are not mere passive living beings and should not be viewed as objects under control of humans. Edelblutte, Krithivasan and Hayek (2022) have developed an agency model in the context of wildlife conservation and management which makes it also relevant for the human-wolf-relation. Thus, a concept of animal agency will be used in the following chapters that is based on their model.

Edelblutte et al. analysed results of 190 studies of wildlife conservation and management interventions. By doing that they found three common assumptions that underpin many approaches to wildlife conservation and management: (1) "animal behaviors are rigid

and homogeneous”; (2) “wildlife exhibit idealized wild” behaviour “and prefer pristine habitats”; and (3) “human-wildlife relationships are of marginal or secondary importance relative to nonhuman interactions” (Edelblutte et al. 2022: p. 1, 3, 6). Furthermore, the research team found that these management interventions insufficiently considered animal learning, decision-making, individuality, sociality and relationships with humans and led to unanticipated detrimental outcomes (cf.: Edelblutte et al. 2022: p. 1, 3, 6).

Edelblutte et al. point out that these problematic findings are due to the fact that Western science is still dominated by Christian views that assume human domination over nature. Animals are seen as inferior creatures that must be subordinate to humans. Animals are denied the ability to have emotions, self-awareness or personality. According to Edelblutte, currently dominant wildlife conservation and management approaches also assume that humans are able to dominate animals and put them in their place. As soon as wild animals break free from their ascribed roles and show unusual behaviours, they are considered too numerous or problematic (cf.: Edelblutte 2022: p. 7)

To overcome described shortcomings, they developed their own concept of animal agency. As animals are sentient and capable of adapting to new contexts, show individuality as well as personality and use social learning to make decisions, one can safely say that animals do possess agency (cf. Edelblutte et al. 2022: p. 8). Agency in this context is understood as „the ability of animals to actively influence wildlife management outcomes through their adaptive, context-specific, and complex behaviours that are predicated on their sentience, individuality, lived experiences, cognition, sociality, and cultures in ways that shape and reshape shared human-wildlife cultures, spaces and histories“ (Edelblutte et al. 2022: p. 9).

According to Edelblutte et al. there are five important components of animal agency: (1) animals are sentient, (2) “animals show individuality and personality”, (3) “animals’ [...] social learning contributes to individual and collective decision-making”, (4) animals are “capable of adapting to new contexts” and (5) animals and humans actively participate in co-shaping shared environments (cf.: Edelblutte et al. 2022: p. 8). The following section aims to show that wolves fulfil four of these components of animal agency and thus, the animal agency model by Edelblutte et al. is applicable to wolves as well.

(a) Animals are sentient beings that show empathy; feel pain and distress and are capable of planning for the future (cf.: Edelblutte et al. 2022: p. 8). Studies have shown that wolves possess these abilities. A study has e.g. shown that wolves yawn contagiously, but that

they are more likely to do so near other wolves with whom they are deeply attached. This could be a hint that wolves yawn to demonstrate empathy (cf.: Romero et al. 2014: p. 1)

(b) Animals within the same population show different personality traits (cf.: Edelblutte et al. 2021: p. 9). This is also true for wolves as studies e.g. have demonstrated that wolves show different levels of play behaviour (Cafazzo et al. 2014).

(c) Animals' collective and individual decision-making is influenced their ability of social learning (cf.: Edelblutte et al. 2021: p. 9). A study conducted by Range and Virányi (2013) found evidence that wolves are capable of learning from conspecifics. It was shown that wolves were able to use information that was provided by conspecific demonstrators in a local enhancement task.

(d) Animals are able to adapt to new contexts and habituate to new contexts (cf.: Edelblutte et al. 2022: p. 8). This applies to wolves as well: Mech (2006) was able to show that a predictive habitat suitability model for wolves in Wisconsin by Mladenoff was unsuccessful because it "failed to consider the adaptability of wolves" (Mech 2006: p. 874).

It has been shown that the agency concept of Edelblutte et al. can be used for wolves and should be thus incorporated in wildlife conservation and management. Referring to Edelblutte et al., I understand animal agency to mean the following:

- (1) Non-human animals (e.g. wolves) have agency, i.e. the ability to actively influence wildlife management outcomes
- (2) Non-human animals and humans are agents able to interact with each other
- (3) Non-human animals' and humans' agency is a possible tool to solve human-animal-conflicts

At the beginning of this chapter, I established that farmers have an obligation to prevent human-caused harm to wolves. Since human-wolf conflicts often result in the death of wolves, it is the farmer's responsibility to ensure that these conflicts do not arise or end non-lethally for the wolf. Wolves are often hunted down for killing livestock animals. Therefore, if one wants to prevent wolves from being killed – in other words, harmed – one must take measures to prevent wolves from preying on livestock. I have argued/claimed that there is a duty to assist wolves in avoiding conflicts with humans and actively participate in the human-wolf relationship. As my remarks on animal agency have shown, wolves also possess the necessary agency to recognize and accept these assistance efforts from e.g. farmers. Considering animal agency thus opens the door for (livestock protection) measures that allow

the wolf to actively influence wildlife management outcomes and reduce attacks on livestock animals.

Now that I have demonstrated the importance of considering animal agency, I will return to the example of the fictional sheep farmer to analyse whether there is a violation of the principle of special obligations towards wolves and thus a moral deficit. To answer this question, I need to examine whether the sheep farmer adequately considers the animal agency of the wolf. Animal agency can be taken into account, for example, by engaging with wolves and giving them the opportunity to participate in the resolution of human-wolf conflicts, or by utilizing their ability to learn and adapt to prevent them from causing damage to livestock animals.

Boonman-Berson (2018) argues that wildlife management should be understood as a collaboration between humans and animals and suggests that it can be meaningfully shaped through interaction and communication (cf.: Boonman-Berson 2018: p. 64-65). As an example, Drenthen (2021) mentions fences that function as a form of communication device. He argues that wolves, although physically capable of overcoming fences, choose not to do so. Drenthen draws a comparison to trails for hikers and trails for mountain bikers, which were created to accommodate the different interests of both groups and enable peaceful coexistence. While hikers could use mountain bike trails and vice versa, both groups stay on their designated trails. He attributes this behaviour to the desire of both groups to avoid conflicts and accordingly adhere to the designated trails (cf.: Drenthen 2021: p. 22-23).

In our example, however, the farmer takes no measures to use the agency of the wolf as a tool to resolve human-wolf conflicts. Since he makes no attempts to consider the wolf's agency, such as by erecting fences, it can be said that there is a violation of the principle of special obligations and therefore a moral deficit. This deficit can be overcome by implementing such measures. The desired state, therefore, is one in which the sheep farmer takes the special obligation towards wolves seriously and takes actions that consider the wolf's agency, contributing to a non-lethal resolution of the human-wolf conflict and the prevention of harm.

3 FROM POSSIBLE SOLUTIONS TO TESTING APPROPRIATE SOLUTIONS

The aim of chapter three is to find a solution. Therefore, possible problem solutions will be defined and later examined for their appropriateness. While an actual application in practice is not carried out within this thesis, possible obstacles that could hinder or prevent their implementation are only discussed theoretically.

3. 1 Suggestion of Possible Solutions

In the previous chapter, a moral deficit was identified - namely, the failure to fulfil the special obligations towards wolves by the sheep farmer. The following will now present hypothetical solutions that could overcome this deficit.

3. 1. 1 Dewey's "Determination of a Possible Solution"

According to Dewey, the determination of a solution is the focus of the third step (cf.: Dewey 1986 [1938]: p. 112). The vague desired state established in the second step needs to be refined into a specific desired state. In this context, so-called ends-in-view are central, which are understood as desired states of hypothetical solution proposals (cf.: Grimm 2010: p. 190). Here, only hypothetical solution proposals are discussed, because the examination of whether actors can implement the proposed solution has not yet been conducted. This examination is carried out in the fifth step (cf.: Grimm 2010: p. 191).

To reach ends-in-view, it is essential to pay attention to the context-dependent conditions of the situation, i.e., the observable and relevant constituents of the indeterminate situation. Only in this way can the ends-in-view help to further determine the problem at hand and thus contribute to a solution (cf.: Grimm 2010: p. 180). Based on the perceived constituting elements of the indeterminate situation, initial vague suggestions can be formulated, which will subsequently become hypotheses (cf.: Grimm 2010: p. 181-182). Ends-in-view must correspond to the vague desired state developed in step two and overcome the recognized moral deficit (cf.: Grimm 2010: p. 189).

Although ends-in-view, as described above, depend on the specific conditions that characterize the problematic situation, it must be noted that the process of solution-oriented thinking should not lead to passive submission and adaptation to these conditions. Instead, the focus should be on contemplating how actions can make a difference in the given circumstances (cf.: Grimm 2010: p. 179)

3. 1. 2 Grimm's "Determination of a Possible Solution in Ethics"

According to Grimm, in ethics - as in other areas - the ends-in-view must be defined situation-specifically on the one hand, and on the other hand, they must be based on the vaguely defined desired state. In the field of ethics, this means that ends-in-view must be suitable for overcoming the moral deficit of the problematic situation (cf.: Grimm 2010: p. 183-184). Furthermore, ends-in-view must (1) be based on legitimate and relevant moral considerations to enable morally correct solutions; (2) correspond to the practical living environment of the doubting actor, and (3) include knowledge from other disciplines to enable feasible and reasonable solutions; and finally, (4) the ends-in-view should only refer to the specific situation perceived as problematic (cf.: Grimm 2010: p. 184-185).

3. 1. 3 Herd Protection measures as Possible Solutions

In the following, I aim to identify ends-in-views as desired states of end-states as hypothetical solution proposals in the field of sheep farming, which are developed with consideration to the specific situation of the farmer and which overcome the moral deficit - namely, the disregard of special obligations towards wolves and animal agency. Assuming that the sheep farmer intends to continue keeping sheep in areas where wolves also exist, various measures can be considered to address the moral deficit. It is important to keep the context in mind and exclude measures that do not relate to the specific situation of the farmer and are not suitable for overcoming the moral deficit. Therefore, potential necessary legislative amendments and coordinated measures at the European level, which concern wolves, are not discussed in this context, as these measures would go well beyond what the farmer is capable of. In the following, only potential herd protection measures that fall within the farmer's scope of action and appear suitable at first glance for overcoming the moral deficit will be discussed.

These measures must be capable of preventing livestock kills by wolves in order to avoid a lethal outcome of the human-wolf conflict. This can be achieved by considering animal agency, as it allows the wolf to actively participate in the outcome of the human-wolf conflict. At this point, it is important to recall the understanding of animal agency that underlies this work, in order to subsequently analyse whether the proposed herd protection measures are suitable for adequately considering this animal agency. Referring to Edelblutte et al., I understand animal agency to be adequately considered when non-human animals (e.g. wolves) are granted agency (i.e. the ability to actively influence wildlife management outcomes); when it is assumed that non-human animals and humans are agents and able to

interact with each other; and when non-human animals' agency is used as a possible tool to solve human-animal conflicts. Taking this into consideration, the following measures will be further examined: (1) fences, (2) biofences, (3) shepherds, (4) livestock guarding dogs and (5) llamas.

(1) Fences

Drenthen (2021) argues that farmers often refuse to use fences due to a lack of trust and that they believe that wildlife - such as wolves - will always try to climb over or undermine fences. The author notes that there is actually little fencing that would completely prevent wolves from entering enclosures. But he argues that fences do work due to the wolves' ability to learn and their tendency to avoid conflicts with humans (Drenthen 2021: p. 437).

Thus, the use of fences is an example of considering wolves' ability to adapt, learn, and communicate, and viewing wolves as agents who are interested in avoiding human-wolf conflicts.

(2) Biofences

Ausband et al. (2013) conducted a study and showed that wolves' movement can be controlled by creating so-called biofences (human-dispersed scent markings) (cf.: Ausband et al. 2013: p.207-208, 214).

The concept of biofences takes into account the ability of wolves to communicate and adapt to new conditions through scents, thus acknowledging their ability to actively influence wildlife management outcomes.

(3) Shepherds, (4) Livestock guarding Dogs and (5) Llamas

The use of animals such as livestock guarding dogs and llamas, as well as shepherds, take into account the agency of wolves, as they are understood as agents capable of communicating with other beings and avoiding conflicts.

For example, individual wolves are described as cautious, avoiding situations where they perceive danger (cf.: AGRIDEA 2015: p. 5). By hiring shepherds and using livestock guarding dogs and llamas, one takes advantage of the wolves' caution to prevent human-animal conflicts and recognizes them as agents who avoid conflicts for their own interests.

In summary, it can be said that the mentioned herd protection measures meet the criteria of ends-in-view: they allow wolves to actively contribute to the wildlife management outcome and

thus fulfil the vaguely formulated desired state. Furthermore, they refer to the specific situation and the actor in question. They also incorporate knowledge from other disciplines (e.g. wildlife research).

3. 2 Appropriate Solution Proposals

Different possibilities to overcome the moral deficit were suggested. These include fences and bio-fences, shepherds, livestock guardian dogs and lamas. These measures are united by the fact that they are based on a concept of a wolf that has agency and can actively participate in wildlife management outcomes. In particular, the adaptability and learning ability of the wolf as well as its ability to pursue its own interests are emphasized. It must be pointed out that the formulated ends-in view must still be described as hypothetical at this point, since it must be verified in further detail whether they can actually be implemented by the actors concerned. The examination in the next chapter will therefore focus on analysing whether the hypothetical solutions can be implemented and whether the actors can be expected to implement them (cf.: Grimm 2010: p. 190-191).

3. 2. 1 Dewey's „Dramatic Rehearsal“

According to Dewey, in the fourth step, it must be verified whether the ends-in-view defined in the previous step can actually be implemented by the affected actor (cf.: Dewey 1986 [1938]: p. 115-116; Grimm 2010: p. 191). By considering real contextual conditions and taking into account moral-normative boundaries, it is determined what obstacles the actor may encounter when attempting to realize the proposed ends-in-view. Just like recognizing the current state with its moral deficit and determining the vague desired state and its concretization, the discussion of obstacles that the actor may face in achieving the ends-in-view is also part of problem identification and is therefore important for problem-solving (cf.: Grimm 2010: p. 191; 250). Based on the formulated ends-in-view, possible obstacles are determined, which also serve to adjust the ends-in-view and develop appropriate solution proposals. The goal is to find out whether the ends-in-view are not only hypothetical but also appropriate solution proposals (cf.: Grimm 2010: p. 191).

3. 2. 2 Grimm's "Dramatic Rehearsal"

According to Grimm, in the field of ethics, the implementation of a dramatic rehearsal can help identify those formulated ends-in-view, that can be considered as appropriate solution proposals. The dramatic rehearsal should take place within the context-specific conditions, and the ends-in-view need to be examined in terms of their feasibility - that is, their realizability, reasonableness - and scientific compatibility (cf.: Grimm 2010: p. 250). Scientific compatibility in the field of ethics is present when empirical assumptions are empirically valid, the solution proposal is subject to scientific criticism, or when the solution proposal is sufficiently justified to be open to questioning (cf.: Grimm 2010: p. 215). A solution proposal is feasible when it falls within the actor's range of action and can be implemented by the actor (cf.: Grimm 2010: p. 211). This is the case when the proposal is realizable - meaning the actor has the necessary means for implementation - and when the proposal is reasonable - meaning its implementation does not involve moral overload and can be demanded from the actor (cf.: Grimm 2010: p. 212, 213-214). If the dramatic rehearsal leads to a positive outcome, an end-in-view of an appropriate solution proposal has been found. This is an end-in-view that can be implemented by the actor and *should* therefore be implemented (cf.: Grimm 2010: p. 250).

3. 2. 3 "Dramatic Rehearsal" – Herd-Protection Measures

In the following, the hypothetical solution proposals formulated in the previous chapter (fences, biofences, shepherds, livestock guarding dogs and lamas) will be examined in terms of their scientific compatibility, feasibility (legal and practical conditions), and (extra-)moral reasonableness.

(1) Fences

Studies have shown that wolves stopped attacking herds of sheep when farmers consistently protected their herds with fences, even if they were theoretically able to cross these fences. Wolves have learnt to alter their behavior and concentrate on wild animals rather than livestock animals in areas where sheep farmers constantly safeguard their herds using fences that are challenging for wolves to climb. Adult animals teach their offspring how and what to hunt, and young wolves in these areas are taught that it is far simpler for them to pursue wild prey and leave livestock animals alone (cf. Boonman-Berson: p. 70-72; Drenthen 2021: p. 430-431; 437). Due to dyschromatopsia of wolves and sheep, a blue-white fence is

recommended, and in acute threat situations, flutter tape and LED flashes are also suggested (cf.: WWF 2020: p.10).

Since the use of fences is allowed and they can be easily purchased, there are no legal or practical constraints. The criterion of feasibility is therefore met.

The moral acceptability is also present, as it does not violate any justified moral convictions. However, the criterion of extra-moral acceptability needs to be examined, particularly regarding the investment capital. The acquisition costs for a 400-meter-long electric fence for herd protection amount to around €2,400, excluding the costs for fence construction and maintenance (cf.: Forstner 2023). Whether the farmer in my example can afford this investment can only be speculated within the scope of this study. However, it is clear that it is more likely if there are state subsidies available. The availability of such subsidies depends on the federal state in which the farmer resides. There are no subsidies in Burgenland, Carinthia, Styria, Vienna, and Vorarlberg. In Lower Austria, 80% of the net material costs are covered, in Upper Austria, 50% of the net material costs, in Salzburg, 80% of the acquisition costs (but not exceeding €3,000), and in Tyrol, 60% of the acquisition costs (cf.: Österreichzentrum Bär, Wolf, Luchs 2023c). If the farmer can afford the investment, for example, by receiving a subsidy, the use of fences can be considered an appropriate solution proposal.

(2) Biofences

Ausband et al. (2013) conducted a study to investigate whether scent-marking behaviour may provide a means for manipulating wolves' movements. Wild canids frequently use chemicals to communicate with one another via scent marking. Scent marking entails depositing urine or scat at a significant landmark or trail intersection, often over another canid's scent. Pheromones, chemical signals that cause other conspecifics to react, are part of scent markings. Because they may stay in the environment for long periods of time and work well at night, pheromones differ significantly from auditory or visual means of communication. Canids frequently utilize scent markings to protect territory and prevent conflict. Studies have shown that wolves turned around and retreated when they discovered a foreign smell mark along the edge of their territory and that canids retreated from the foreign scent traces of nearby packs (cf.: Ausband et al. 2013: p.208)

The authors suggested that as canids are often territorial, their movements may be controlled by creating so-called "biofences". Their goal was to use human-dispersed scent markings to control grey wolf movements. After the installation of the biofence, they anticipated

that fewer wolves would use the areas of the wolf territories that were not enclosed by it. Even though the excluded areas were frequented by the packs in prior summers, location data from satellite-collared wolves and sign studies in the first year of the study showed little to no violation of the biofence. The wolves appeared to have approached the biofence and even walked along it, according to collar and overmark position data, but instead of crossing the biofence, they turned around and headed back towards the center of their territory. However, in the second year of the study wolves did not alter their behavior due to biofences (cf.: Ausband et al. 2013: p.207-208, 214). Anhalt et al. (2014) conducted a study on the effectiveness of human-dispersed scent markings and foreign howls and found that wolves' movement was not affected (cf. Anhalt et al. 2014: p. 210).

Since the research on biofences is relatively limited and the existing results are not conclusive, it can be argued that it is not justified to assume that the desired target state can be achieved in this way. Considering animal agency can only be appropriately addressed if measures are taken that correspond to the agency of wolves and provide the opportunity to use wolves' agency as a tool for conflict resolution. As biofences seem impractical to alter wolves' behaviour, it cannot be anticipated that biofences would prevent wolves to approach sheep. It is likely that even with the implementation of biofences, wolf attacks on sheep would still occur, and it is not improbable that this would lead to the killing of wolves. Therefore, the farmer would not fulfill his obligation to help wolves protect themselves from human-caused harm by using biofences.

However, if we continue to explore the concept of dramatic rehearsal, it becomes evident that while there may be no legal constraints, there are indeed practical constraints. For example, the farmer likely does not have access to human-deployed scent marks. Regarding the question of reasonableness, it is difficult to assess the extramoral reasonableness as it was not possible to determine the financial costs associated with biofences. While the moral reasonableness is present, as it does not violate any justified moral convictions, the overall analysis suggests that biofences do not represent an appropriate solution proposal.

(3) Shepherds

The use of shepherds is considered one of the most reliable methods to prevent wolf attacks on livestock animals and, when combined with livestock guardian dogs, can provide nearly complete protection for the herd (cf.: Protect 2021: p. 32).

Since the use of shepherds is allowed, there are no legal constraints. There are not many trained shepherds (cf.: Kotrschal 2022: p. 69), but in case there are shepherds available

in the job market, there are no practical conditions that prove problematic. Therefore, the criterion of feasibility is met. Regarding the criterion of extramoral reasonableness, the costs need to be considered, with a focus on government subsidies. In Burgenland, Carinthia, Lower Austria, Upper Austria, Salzburg, Styria, Tyrol, and Vienna, the use of shepherds is not subsidized. In Vorarlberg, there is a tiered basic subsidy starting from 20 livestock animals, ranging from €1,000 to €2,000 per grazing season. In cases of specific suspicion of wolf attacks (e.g., alleged wolf kills), there is the possibility of additional funding for a maximum of 5 days, ranging from €50 to €100 depending on the herd size (cf.: Österreichzentrum Bär, Wolf, Luchs 2023c).

Shepherds, for example, receive a minimum gross wage of €1,940 according to the Vorarlberg collective agreement for agricultural and forestry workers, which increases to €2,183 from the third grazing season (cf.: Landwirtschaftskammer Vorarlberg). While shepherds provide excellent protection against wolves, the high costs are only justified for very large herds or when combining grazing areas (cf.: Protect 2021: p. 32). Whether the extramoral acceptability is present must be decided on a case-by-case basis, but it is generally not feasible for small herds.

If the extramoral reasonableness is present in a specific case, the moral acceptability must now be examined. This is met, as it does not violate any justified moral convictions. Therefore, the outcome of the dramatic rehearsal suggests that due to the high costs, the use of shepherds can only be considered successful for large herds or the consolidation of grazing areas.

(4) Livestock Guarding Dogs

Studies have shown that the use of livestock guardian dogs can enhance the protection of sheep herds. Switzerland can be considered as an example of a country where the use of livestock guardian dogs for herd protection is particularly widespread. In 2021, livestock guardian dogs were used on 104 alpine pastures, of these 22 pastures experienced livestock predation incidents despite the presence of these dogs (with only two or fewer livestock being attacked on 8 out of the 22 pastures). In light of the increasing wolf population, the Swiss agricultural advisory centre (AGRIDEA) assesses the use of livestock guardian animals as being successful, despite the occurrence of predation incidents (cf.: AGRIDEA 2022: p. 15-16; 18-19). Livestock guardian dogs, especially when combined with electric fences, appear to be a suitable means of protecting livestock from wolf attacks (Bruns et al., 2020: p.7).

The feasibility criterion is met, as there are no legal or practical constraints. Keeping livestock guardian dogs is permitted, and there are several breeders in Austria, although it needs to be mentioned that well-trained livestock guardian dogs are not always available (cf.: AHHC Allg. Hirten- und Hüt Hundclub).

Additionally, the criteria of moral and extra-moral reasonableness must be considered, namely in terms of the necessary investments and the responsibility of dog ownership. The cost of acquiring a trained livestock guardian dog ranges from €3,000 to €5,000 (cf.: Unsere.Almen 2023). Similar to the example of fences, an assessment of potential government subsidies needs to be conducted to better evaluate the likelihood of financial feasibility for farmers. In Burgenland, Carinthia, Lower Austria, Upper Austria, Styria, Tyrol, and Vienna, the acquisition of livestock guardian dogs is not subsidized. In Vorarlberg, the purchase of livestock guardian dogs may be eligible for subsidies on a case-by-case basis. In Salzburg, for herds of up to 200 sheep, 80% of the acquisition costs for two livestock guardian dogs (up to a maximum of €1,600) can be subsidized, and for every additional 100 sheep, another livestock guardian dog can be subsidized (cf.: Österreichzentrum Bär, Wolf, Luchs 2023c).

Whether the farmer in my example can afford these acquisition and training costs, as well as the expenses for feed and veterinary care, can only be speculated. Assuming that he can, the question arises as to whether the ownership of a livestock guardian dog can be reasonably expected of him, which can also only be speculated upon here. The training of livestock guardian dogs is time-consuming, and suitable accommodation must also be ensured during the months when the dog is not on the alpine pasture. Livestock guardian dogs occasionally exhibit aggressive behavior towards humans and other dogs, so their use is more recommended in areas with few people (cf.: Gehring 2010: p. 307). For example, in Switzerland in 2021, there were 18 incidents of biting attacks on humans and three on companion dogs (cf.: AGRIDEA 2022: p. 15-16; 18-19). Therefore, owning livestock guardian dogs entails a moral responsibility to ensure their appropriate care and comprehensive training to prevent harm and injuries to others. Whether this responsibility can be carried by the relevant actor must be decided on a case-by-case basis. Depending on the individual case decision, the outcome can be considered either successful or unsuccessful in terms of dramatic rehearsals.

(5) Lamas

While the use of lamas as protection against predators such as coyotes, dingoes, and foxes has been studied, the data regarding wolves is very limited. However, a pilot study in

Switzerland has shown that lamas have a deterrent effect, especially on lone wolves (cf.: AGRIDEA 2015: p. 5). The mentioned pilot study in Switzerland found that the cost of acquiring a lama is approximately €1230-1540, and the annual maintenance costs amount to around €205-235 (cf.: AGRIDEA 2015: p. 2). The feasibility criterion is met, as there are no legal or practical constraints. Keeping lamas is allowed, and they can be purchased. The use of lamas as livestock guardians is not subsidized in Austria (cf.: Österreichzentrum Bär, Wolf, Luchs 2023c)

As discussed in relation to previous measures, an individual assessment must be made regarding the criterion of extra-moral reasonableness. Although there is no subsidy, the costs are significantly lower compared to, for example, livestock guardian dogs. Additionally, an individual assessment must be made regarding the criterion of extra-moral reasonableness. The criterion of moral reasonableness is unproblematic, as keeping lamas entails much less moral responsibility compared to keeping livestock guardian dogs, thus avoiding moral overload.

The dramatic rehearsal conducted in this chapter has shown that biofences are not considered appropriate solutions. Furthermore, it has been revealed that the cost issue appears to be problematic, particularly in relation to shepherds. Regarding livestock guarding dogs, it has been pointed out that their keeping may potentially lead to a moral overload. However, I assume that at least one of the non-excluded herd protection measures (i.e., fences, shepherds, livestock guarding dogs, lamas) can be implemented by the farmer in my example.

3. 3 Testing the Suggested Solution

At this point, the proposed solution proposals, which have been deemed appropriate, would need to be implemented in practice to determine if they prove effective in overcoming the moral deficit and resolving the initial uncertainty. However, since this study is purely theoretical in nature, the following discussion will only focus on potential difficulties that could hinder the implementation of the appropriate solution proposals.

3. 3. 1 Dewey's "Empirical Verification of the Proposed Solution"

Dewey's model, *The Pattern of Inquiry*, ultimately concludes with an empirical verification of the results from phases 1-4, with particular emphasis on testing the outcome of the dramatic rehearsals in practice (cf. Dewey 2001 [1929]: 219; Grimm 2010: p. 226). In this process, the

alignment between the anticipated consequences of the proposed solution and the actual outcomes observed in reality is checked. If they align, the problem is considered solved, and the initial uncertainty described at the beginning is eliminated (cf.: Grimm 2010: p. 228-229).

3. 3. 2 Grimm's "Testing of Suggested Solutions for Moral Problems"

Unlike in the natural sciences, this test cannot be conducted in a laboratory in the field of ethics; rather, testing of solution proposals can only take place in reality, e.g. in real-life-practice (cf.: Grimm 2010: p. 245). This is not the only distinction between the scientific and ethical empirical verification of results. There is also a central difference regarding who is responsible for conducting the test. In a scientific experiment, the responsibility lies with the scientist. However, when solution proposals are empirically applied in the field of ethics, the actor himself is responsible (cf.: Grimm 2010: p. 250). The test in practice is considered successful when the initially uncertain and indeterminate situation can be overcome, and the expected consequences of the solution proposal occur. If the solution proposal proves effective when applied by an actor in practice, the defined problem is considered solved (cf.: Grimm 2010: p. 232). Unlike in the natural sciences, where solution proposals are first tested in the laboratory before being implemented in practice, the field of ethics lacks this intermediate step: within the framework of the test of efficacy, the solution proposal is immediately applied in practice (cf.: Grimm 2010: p. 233). Therefore, the test of efficacy in the field of ethics should not be taken lightly, as it potentially has negative consequences for the actor in real life (cf.: Grimm 2010: p. 251)

3. 3. 3 Testing Herd-Protection Measures in Practice

As mentioned earlier, it is now up to the sheep farmer to decide whether to actually implement the proposed solution developed in the previous phases. This thesis is purely theoretical, and there is no practical verification planned to determine whether the mentioned solution proposal - namely, implementing suitable herd protection measures - actually helps to eliminate the initial uncertainty and moral deficit described. However, three possible counterarguments and doubts of the sheep farmer, to whom the developed solution proposal is presented, will be considered below.

(1) In this context, one possible argument could be the reference to correctly adhered legal provisions (cf.: Grimm 2010: p. 242). The sheep farmer may justify himself by stating that he

follows and complies with the law. In fact, for example, in Tyrol, the hunting law has been revised, making it easier to remove wolves in so-called alpine protection areas. In these areas, the removal of wolves that have killed livestock at least twice is now possible, even if no deterrent or herd protection measures were previously taken (cf.: §4a Tiroler Almschutzgesetz LGBI.Nr. 49/1987 idF. LGBI.Nr. 110/2021; Land Tyrol 2023). However, it must be pointed out to the sheep farmer that not every action permitted by legal norms is free from moral deficits. In the previous chapters, it became clear that the lack of herd protection measures and inadequate consideration of the wolves' agency represents a moral deficit. This realization is not undermined by the fact that the law allows for the removal of wolves without the application of herd protection measures in certain situations.

(2) The sheep farmer may recognize the developed solution proposal as sensible and worth implementing but hesitates to do so due to fear of negative social consequences. Here, a study by Boronyak et al. (2023), examining the factors that hinder the implementation of non-lethal dingo management measures in Australia, is worth mentioning. Similar to the human-wolf conflict in Austria, there is a human-Dingo conflict in Australia. Through qualitative studies, Boronyak et al. conclude that, in addition to clinging to outdated traditions, non-effective financial incentives, and personal beliefs, the fear of social condemnation plays a significant role in farmers' reluctance to adopt non-lethal methods in relation to the human-Dingo conflict. Some cattle producers report peer pressure to adhere to lethal measures and even face abuse if they do not continue with them (Boronyak et al. 2023: p. 5,18). Austrian farmers and sheep farmers who advocate for non-lethal herd protection measures also struggle with social condemnation (cf.: Kotrschal 2023). For example, a sheep farmer who uses lamas as part of his herd protection measures reports being insulted by other farmers for "fouling his own nest." Furthermore, his neighbour has hung a poster of a sheep carcass on his property boundary (cf.: Arora 2020).

(3) It is also conceivable that an attempt is made to shift responsibility (cf.: Grimm 2010: p. 241). The sheep farmer could argue that measures that take the agency of the wolf seriously should have been taken earlier, not just on his pasture. He could demand that national politicians or EU institutions ensure nationwide or European-wide measures that have already taken effect before the wolf reaches the sheep farmer's herd. Undoubtedly, in addition to the sheep farmer, other agents also have a role to play in dealing with wolves in a manner that is appropriate and takes their agency into account. However, the shared responsibility of others does not absolve the sheep farmer of his responsibility. In the previous chapters, it was established that the sheep farmer can overcome a moral deficit by implementing appropriate

herd protection measures that adequately consider the agency of the wolf. As demonstrated, the sheep farmer can solve a moral problem through his own actions and implementation of the proposed solution. If the proposed solution is feasible for the actor, his possibilities and limitations have been taken into account, and the measure does not violate morally relevant values, then the actor can be expected to implement the proposed solution from a moral perspective. He is not exempt from this moral responsibility simply because other actors also share responsibility (cf.: Grimm 2010: p. 239-240).

3. 4 Interim Discussion

The aim of the first part of my thesis was to answer the question of whether it is ethically justifiable for a farmer to keep sheep, without implementing herd protection measures in areas where wolves exist.

In order to answer this question, I applied Grimm's ethical method of solving moral problems and identified a moral deficit that arises when the farmer does not implement herd protection measures. I found that farmers have a special obligation to assist wild animals, if they are at risk of harm caused by humans. Since wolves that attack and kill sheep are considered problem wolves and are removed by hunters, the farmer should strive to avoid such a situation. This can be achieved by adequately recognizing the agency of the wolf and taking measures that allow the wolf to actively contribute to wildlife management outcomes. The previous chapters have demonstrated that there are herd protection measures that are suitable for overcoming the moral deficit. I have shown that they are feasible and reasonable (assuming the farmer actually has the necessary financial means). Therefore, it can be concluded that it is ethically unjustifiable for the farmer in my example not to implement herd protection measures.

At this point, it must be noted, that the application of Grimm's method has revealed a weakness of my thesis. Since my thesis is purely theoretical, the final step - the practical testing of the proposed and deemed appropriate herd protection measures - could not be carried out. However, the results of other practical studies that have examined the effectiveness of these herd protection measures, and which I have referred to in previous chapters, suggest that the practical implementation of these measures would be successful.

Finally, I want to emphasize a key finding from the first part of my thesis that will serve as a starting point to the second part of my thesis. I have demonstrated that appropriate herd protection measures, which consider the agency of the wolf and prevent it from killing sheep, can help avoid or resolve human-animal conflicts. It is important to note that these measures can be expensive and often require government support for implementation. Consequently, resolving human-animal conflicts relies not solely on affected farmers but also on the presence of supportive legal and institutional frameworks. But these supportive frameworks seem to be lacking in Austria as not all federal states promote herd protection measures. In the upcoming section of my thesis, I will delve deeper into relevant legal frameworks and reveal weaknesses.

4. CRITICALLY REVISING THE STEWARDSHIP MODEL

As I have already established in the first part of my work, considering animal agency is crucial in resolving human-animal conflicts. Therefore, in the following section, I will examine, among other things, whether animal agency is taken into account in relevant legal rules.

As I will show, the animal stewardship model, which is present in animal protection and conservation law and which shapes our understanding of the relationship between humans and wildlife, perceives (wild) animals as passive beings, thus leaving little room for considering animal agency.

In the upcoming subchapter, I will first describe the stewardship model, which underlies the rules of wildlife conservation, and present general points of criticism. Furthermore, I will demonstrate that aspects of the stewardship model can be found in the legal regulations regarding wolves, such as in the *Bern Convention*, in the *Washington Convention*, and in the *EU-Habitat Directive*. Subsequently, I will criticize the insufficient consideration of animal agency within the aforementioned conventions and the FFH Directive, as a result of which the wolf is not seen as an agent capable of actively influencing wildlife management outcomes.

Furthermore, I will address central problems of not considering animal agency in wildlife conservation law. I will demonstrate that the insufficient consideration of animal agency in wildlife conservation law leads to a lack of appropriate solutions for human-animal conflicts.

As the wolf is primarily understood as a passive being and not as an independent agent whose interests may conflict with those of humans, there are numerous regulations concerning the protection of wolves, but only a few that address the management of human-animal conflicts.

The perception of wolves as passive beings contrasts significantly with the perceived reality of rural populations affected by them. Since the wolf is primarily understood as a passive being, worthy of protection, within animal conservation law, those who perceive the wolf as dangerous feel that the current conservation legislation does not accurately reflect reality. People living in rural areas who are directly or indirectly affected by the return of the wolf and who suffer damages - such as livestock predation - feel that they are not being adequately acknowledged and are being patronized by politicians, nature conservation organizations, and urban populations (cf.: Zscheischler & Friedrich 2022: p. 1052; Von Essen et al. 2014: p. 200).

I will argue that this potentially leads to non-compliance with proposed measures and illegal killings of wolves as well as to smaller governmental units attempting to bridge the

alienation between the rural population and conservation law by implementing measures demanded by the affected rural population, which partly conflict with prevailing EU laws (cf.: Firlein 2018: p. 340-341).

Thus, I will argue that the inadequate recognition of the wolf as an active agent in relevant legal texts leads to political alienation of the rural population, resulting in the illegal removal of wolves and the implementation of regulations by smaller government units that allow for the shooting of wolves.

As studies have shown that the shooting of wolves, which the stewardship model indirectly contributes to, is less successful compared to non-lethal herd protection measures (cf.: Bruns et al. 2020: p.6), a revised stewardship model is needed, which I will propose at the end of this chapter. In doing so, I advocate neither for a reduction of the conservation status of the wolf nor for a complete abolition of the stewardship model, as the latter would absolve humans of their responsibility towards nature and animals. Instead, I aim to complement the stewardship model by incorporating the concept of animal agency, which acknowledges the possibility of human-animal conflicts but also emphasizes that these conflicts can be resolved through the consideration of animal agency in a constructive manner.

4. 1 The (Animal) Stewardship Model

Before analysing the connection between the stewardship model and legal regulations regarding wolves in the upcoming chapters, this chapter will focus on the foundations and origins of the stewardship model.

According to Seamer (1998), Jewish and Christian religions and cultures have had a profound impact on attitudes toward animals in the Western world. Several biblical references to animals served as a starting point for the basic notion of man's rule over animals and nature. Animals have been used in many ways: as a source of food and transportation, for the production of clothing, and, in recent centuries, also for conducting experiments. As Seamer puts it, „animals were essentially things or property owned by man, subordinate to him and worthy of little or no consideration in their own right” (Seamer 1998: p. 202).

Over time, however, a shift in thinking occurred and the excessive exploitation of nature and animals was critically questioned. In the field of conservation policy, the stewardship model is particularly noteworthy in this context, as it is deeply rooted in religious and traditional movements worldwide and emphasizes, from a religious perspective, that humans have a

responsibility to care for God's creation (cf.: Mathevet 2018: p. 363). Regarding land ethics, Leopold (1949) discusses the relationship between humans, nature, and animals, and calls for a new ethic "dealing with human's relation to land and to the animals and plants which grow upon it" (cf.: Leopold 1949: p. 203). Dixon et al. (1995) understand stewardship as "the moral obligation to care for the environment and the actions undertaken to provide that care" (Dixon et al. 1995: p. 42). They thus emphasize the moral obligation of humans to care for the environment and act in a resource-conserving manner (cf.: Dixon et al. 1995: p. 42). In the field of animal welfare, "the concept of stewardship imposes upon man a responsibility for the care and welfare of animals" (Seamer 1998: p. 204).

The understanding of humans as stewards of nature and wildlife underlies many contemporary considerations in the field of environmental science and environmental policies (cf.: Keulartz 2021: p. 115). Thus, the approach of environmental stewardship has also found its way into animal protection and conservation law. For example, the Council of Europe speaks of a "moral obligation to look after the environment and to be careful stewards of the planet," which has been translated into law through the Bern Convention (d'Alessandro 2015: p. 2). In the following chapters, I will delve further into the connection between the stewardship model and conservation law regarding wolves.

Although the stewardship approach put a stop to boundless exploitation of animals, as it imposes a responsibility upon man to take animal welfare into consideration, I want to point out, that its roots are in the idea of human's superiority (cf. Seamer 1998: p. 205; Palmer 1992: p. 85). This can be seen, among other things, from the general understanding of the term "steward": "A steward is someone who is entrusted with the management of another person's property" (cf.: Seamer 1998: p. 204). For example, someone who manages a farm or estate for payment is referred to as a steward. According to Seamer, they take on two responsibilities: "The first is for the care of the property which is entrusted to the steward [...], the second responsibility is to the owner or employer who employs the steward to manage the property" (Seamer 1998: p. 204). The approach of stewardship in the field of animal welfare involves the responsibility "for the care and welfare of animals" and the responsibility "to a higher authority" (e.g. God, other humans, or future generations) (Seamer 1998: p. 204). Within the concept of animal stewardship, animals are thus understood to some extent as property to be managed and are therefore seen as passive and without agency. I will discuss the problematic nature of this understanding in the context of environmental law and, in particular, human-animal conflicts in the following subsections.

4. 1. 1 The (Animal) Stewardship Model and its Critics

The concept of animal stewardship has been criticized in the literature as being anthropocentric and for putting human interests over vital interests of animals (cf. Berry 2006: p. 81; Palmer 1992: p. 85).

Anne Primavesi has described it as being exploitative and unecological (cf.: Primavesi 1991: pp. 106-107 quoted in Southgate 2010: p. 67). Sean McDonagh argues that by using the analogy of stewardship, the earth gets "reified and becomes either inert property to be cared for or financial resources to be" handled in a way that offers a decent "return on investment" (cf.: McDonagh 1994: p. 130 quoted in Southgate 2010: p. 67). Stewardship, according to Edward Echlin, "easily lends itself to a detached and manipulative view of creation" and "has not moved hearts" (Echlin 2004: p. 16 quoted in Southgate 2010: p. 67). Furthermore, the concept of stewardship is "so deficient in content that it gives us very little instruction about how to behave in any particular scenario," according to Bill McKibben (McKibben 1994: p. 51 quoted in Southgate 2010: p. 67).

Donaldson and Kymlicka (2011) reject the idea of animal stewardship as animals are viewed as "incompetent, and as passive recipients of [humans'] (benign or harmful) actions" (Donaldson; Kymlicka 2011: p. 170). They discuss national parks, which are created under the stewardship model to provide protected habitat for wildlife. Humans are in charge of managing or stewarding these natural regions for the benefit of both humans and wildlife. Human access and usage may be rigorously regulated as some sort of a human management exercise, but not to acknowledge animal sovereignty. They criticize the fact that people feel entitled to declare certain areas as nature reserves and to decide on their use and management (cf.: Donaldson; Kymlicka 2011: p. 170). Instead, they propose a model that recognizes animal sovereignty, and which does not understand animals as objects in need of our care. According to Donaldson and Kymlicka, the autonomy of wild animals should be recognised, and there should be no subordination of animals to human stewards. Donaldson and Kymlicka suggest rethinking our relationship with wild animals. Humans should no longer see themselves as stewards of wild animals. Rather, humans should relate to wildlife in much the same way as they relate to other independent nations. A balanced division of damages and advantages between two sovereign groups of people and wild animals is the goal of a fair relationship between humans and wild animals (cf.: Donaldson; Kymlicka 2011: p. 169-171; Drenthen 2021: p. 431-432).

Another critique of the stewardship model comes from Clare Palmer (1992), who has criticized it on three different levels: (1) theological, (2) political and (3) ecological.

(1) From a theological point of view, Palmer criticises the separation of God from our world. Palmer notes that the stewardship concept is not consistent with the idea that God is present and acting in our world. In the stewardship model “God’s action and presence in the world are largely mediated through humans” (Palmer 1992: p. 74). This is the case in the feudal understanding of stewardship, where God as the master hands the control of his land over to humanity, as well as in the financial understanding of stewardship, where God as the owner of financial resources entrusts them to mankind. Referring to Lynn White Jnr., Palmer argues that some sort of desacralisation of the natural world goes hand in hand with the stewardship concept, which in further consequence facilitates the exploitation of our nature (cf.: Palmer 1992: p. 74-75).

(2) In addition to that, Palmer discusses political implications of stewardship and states that “[t]he political message encoded in stewardship is one of power and oppression; of server and served” (Palmer 1992: p. 76). Palmer suggests that the popularity of the stewardship model can be explained by the dominance of Western rich countries over developing countries. What is contradictory here is that the stewardship concept does not correspond to those political structures that we ourselves advocate. Since the basis for the stewardship model is to be found in times when slavery was a matter of course, thereby propagating a despotic and autocratic form of rule, stewardship is to be rejected, says Palmer (cf. Palmer 1992: p. 67-77).

(3) Furthermore, Palmer points out that certain problematic assumptions lie behind the concept of stewardship, such as “that the natural world is a human resource, that humans are really in control of nature, that nature is dependent on humanity for its management” (Palmer 1992: p. 77-78). The natural world is not only not dependent on humans, but humans are dependent on nature and unquestionably a part of it. Although humans are the most dominant species, there is no “evidence that humanity has been in some theological or even philosophical sense ‘set apart’ as manager or governor [...]” (Palmer 1992: p.78). In addition, Palmer shows that within the concept of stewardship lies the idea that nature is imperfect and needs to be managed by humans, which she refers to as nonsense (cf.: Palmer 1992: p. 78-80).

4. 1. 2 The Stewardship Model and Animal Protection Law

Although the stewardship model has been criticised by many scholars in the past – as described above –, it has found its way into animal protection and nature conservation regulations. In the following, an overview of the legal provisions that apply in Austria and are relevant for the human-wolf conflict will be given. In addition, it is to be illustrated that these regulations understand humans as stewards when it comes to wolves.

Wolves are protected by law at international and national level. Large carnivores enjoy a high protection status throughout Europe. By ratifying the *Bern Convention*, the *Washington Convention* and the *EU Habitats Directive*, Austria has committed itself to restoring a favourable conservation status for large carnivores. The following chapter will focus on topic-related parts of these legal regulations and aims to highlight that they are based on a stewardship model.

The various concepts of stewardship are unified by the fact that they consist of three dimensions. The first refers to who empowers the steward to act (God, feudal lord, fellow humans, political majority etc.); the second dimension refers to the actor – the steward – who becomes active (humans, liege men, hunters etc.); and finally, the third dimension refers to what is to be controlled/managed and is understood as passive and controllable (nature, property, animals etc.). For the purpose of the analysis of current legal regulation, the stewardship model is understood to mean the following:

- (1) Responsibility is assigned by an authority
- (2) to someone to manage an object or entity
- (3) that is understood as passive and expected to be manageable.

The Bern Convention on the Conservation of European Wildlife and Natural Habitats (1979)

The stated goal of the *Bern Convention*, an international treaty of the Council of Europe, of which Austria has been a member since 1983 (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10) is “to conserve wild flora and fauna and their natural habitats, especially those species and habitats whose conservation requires the co-operation of several States [...]” where “[p]articular emphasis is given to endangered and vulnerable species, including endangered and vulnerable migratory species” (Article 1, Bern Convention,). Signatory states committed themselves to “take requisite measures to maintain the population of wild flora and

fauna at, or adapt it to, a level which corresponds in particular to ecological, scientific and cultural requirements” (Article 2, Bern Convention) and to “take steps to promote national policies for the conservation of wild flora, wild fauna and natural habitats, with particular attention to endangered and vulnerable species” (Article 3, Bern Convention).

Wolves are listed as a strictly protected fauna species in Appendix II, leading to high protection of wolves: “[A]ll forms of deliberate capture and keeping and deliberate killing” are forbidden and “deliberate damage to or destruction of breeding or resting sites” must be avoided (Article 6, Bern Convention). Furthermore “the possession of and internal trade in these animals” is strictly banned (Article 6, Bern Convention). As wolves are a migratory species, special provisions for migratory species apply to them and member states are required to work together to ensure their protection (Article 10, Bern Convention). Contracting parties may, if permitted, only use means that do not lead to territorial disappearance or severe disturbance of the population (cf.: Article 8, Bern Convention). Annex IV lists such prohibited killing methods, which include, for example, snares, poison and poisoned bait, and booby traps (cf.: Appendix IV Mammals, Bern Convention).

According to the Bern Convention, all contracting parties are obliged to take necessary legislative and administrative measures in order to protect wild fauna species specified in Appendix II. However, there are some exceptions: In case there is no other “satisfactory solution” and “the exception will not be detrimental to the survival” of the wolves’ population, the killing of wolves is allowed e.g. in order “to prevent serious damage to [...] livestock [...] and other forms of property” or “in the interests of public health and safety [...] or other overriding public interests” (Article 6, Bern Convention).

The Stewardship-Model within the *Bern Convention*

(1) The Bern Convention is an international treaty that was signed by elected representatives of Austria in 1983 (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10). Thus, the assignment of responsibility is legitimized by a political majority decision.

(2) The Convention states that wild flora and fauna and their natural habitats shall be conserved, and measures shall be taken to maintain or adapt the populations of wild flora and fauna at levels consistent with ecological, scientific, and cultural requirements (cf.: Article 1&2, Bern Convention). In other words, member states are entitled to manage nature.

(3) Humans take on the active role of stewards, whereas animals and plants are seen as passive and in need of being managed. When looking at Article 6 of the Bern Convention, it becomes clear that the Convention is based on the idea of humans being superior to animals.

Article 6 allows the killing of wolves – among other things – when human interests override the interest of wolves to stay alive, which serves as a clear sign of an unequal relationship (cf.: Article 6, Bern Convention).

The Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES 1973),

Another important multilateral treaty in the field of species conservation is CITES, aiming to protect endangered species of animals and plants by monitoring international trade in these species. It has been in force in Austria since 1982 (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10). The convention was implemented in all member states of the European Union with the EU-regulation No. 338/97 of 1996 which lays down even stricter rules (EU-regulation No. 338/97).

The Washington Convention on International Trade in Endangered Species distinguishes between three categories: Appendix I, II and III, with Appendix I offering the strictest protection. Appendix I includes “all species threatened with extinction which are or may be affected by trade”, Appendix II includes all species that are currently not threatened with extinction, but whose existence would be endangered if trade were not strictly regulated, and Appendix III includes “all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation” (Article II, CITES 1973). As wolves fall under category II (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10), their export requires the prior grant and presentation of an export permit, which shall only be granted when “such export will not be detrimental to the survival of that species (Article IV, CITES 1973). EU-regulation No. 338/97 prohibits “[t]he purchase, offer to purchase, acquisition for commercial purposes, display to the public for commercial gain and sale, keeping for sale, offering for sale or transporting for sale” of wolves unless “it can be proved [...] that such specimens were acquired and, if they originated outside the community, were introduced into it, in accordance with the legislation in force for the conservation of wild fauna and flora” (EU-regulation No. 338/97, Article 8). Wolves are only allowed to be taken away from their habitat in case one of the exceptions in Article 8/3 lit e-g applies (cf.: EU-regulation No. 338/97, Article 8).

The Stewardship-Model within CITES

(1) *The Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora* is an international treaty that was signed by elected representatives of Austria

in 1982 (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10). Thus, the assignment of responsibility according to the treaty is based on a political majority decision.

(2) Contracting member states are instructed to prevent and/or restrict exploitation. However, wolves are still allowed to be managed and taken away from their habitat (cf.: Article 8, EU-regulation No. 338/97).

(3) Although the basic idea of the Washington Convention on International Trade in Endangered Species of Wild Fauna and Flora is laudable, it must be pointed out that some negative aspects of the stewardship model can also be identified here. For example, wolves can be removed from their habitat - albeit only under strict conditions - which again indicates that humans feel – as stewards of the natural world - superior to animals (cf.: Article 8, EU-regulation No. 338/97).

Fauna-Flora-Habitat Directive

At the level of European law, the Fauna-Flora-Habitat Directive, which implements the Bern Convention at EU level, is of great importance. The Habitats Directive enacted by the European Union in 1992 and aiming to regulate the conservation of habitats and wildlife throughout the European Union must be implemented into national law by the member states (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 11). "[T]he main aim of this Directive [is] to promote the maintenance of biodiversity, taking account of economic, social, cultural and regional requirements" (Fauna-Flora-Habitat Directive 1992: Preamble).

Wolves are listed as a "species of community interest whose conservation requires the designation of special areas of conservation" in annex II (Fauna-Flora-Habitat Directive 1992: Annex II) and as a "species of community interest in need of strict protection" in annex IV (Fauna-Flora-Habitat Directive 1992: Annex IV). Thus, Natura 2000 protected areas to protect wolf habitats have to be established and killings of wolves are only permissible under conditions laid down in Article 16. In case "there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range [...]" the killing of wolves is allowed "in the interest of protecting wild fauna and flora and conserving natural habitats", to prevent serious damage, in particular "to [...] livestock [...] and other types of property [and] in the interests of public health and public safety" (Fauna-Flora-Habitat Directive 1992: Article 16).

Furthermore, member states must make sure to monitor illegal killings of wolves and take countermeasures to prevent significant impacts on wolf populations (Fauna-Flora-Habitat Directive 1992: Article 12).

The Stewardship-Model within the Fauna-Flora-Habitat Directive

(1) With Austria's accession to the European Union, which followed a favourable vote by the National Council, the Federal Council and a referendum, the Flora and Fauna Directive also became applicable in Austria. The assignment of responsibility - as specified in the directive - is thus based on a political majority decision (cf.: Paar et al. 1998: p. 1).

(2) The Fauna-Flora-Habitat Directive assigns the member states the task of advancing species protection and nature conservation (cf.: Preamble, Fauna-Flora-Habitat Directive 1992). The member states subsequently transfer this task to hunters and nature conservation officials within the framework of national legislation.

(3) The European Habitat Directive views the wolf as a vulnerable animal that needs protection against human inflicted harms and promotes a model of stewardship for wolves. Wolves are portrayed as passive living beings. This becomes explicit when looking at regulations regarding the creation of "special areas of conservation" where "necessary measures" have to be implemented (cf.: Preamble, Fauna-Flora-Habitat Directive 1992). According to the European Habitat Directive, humans are entitled to create special areas which are managed by humans acting as stewards. Such areas have been criticized by Donaldson and Kymlicka (2011), as humans lack the justification of acting as stewards in designated areas.

The analysis of legal regulations has revealed the two faces of the stewardship model: On one hand, it puts a stop to boundless exploitation of nature and animals by humans. On the other hand, it emphasizes the subordinate status of animals and nature. In the following chapter I will argue that this subordination of animals ultimately leads to us perceiving them as passive beings and not adequately considering their agency.

4. 2 Stewardship Model Denying Wolves' Agency

After having shown that the stewardship model serves as a basis for legal regulations regarding wolves, I now want to put another aspect forward that has to be critically analysed - namely the fact that this model fails to take animal agency seriously. In the concept of stewardship humans are portrayed as active agents accepting the responsibility of stewardship, in contrast to animals that are portrayed as passive beings that have to be managed. Thus, the approach leads to an unequal human-animal relation (cf. Donaldson,

Kymlicka 2011: p. 157, 167; Drenthen 2021: p. 430-431). First, it will be shown that animal agency generally receives little attention in legal regulations. Then, an examination will be conducted on international regulations concerning wolves, revealing the insufficient consideration given to animal agency within these regulations.

Charlotte E. Blattner (2021) argues that while people do attribute agency to individual animals, animals are generally denied this ability. For example, pet owners enthusiastically report that their pets demand certain things that are important to them - such as their favourite food. Individual observations, however, rarely influence people's attitudes about animals in general, that are frequently assumed to be without agency. Overall, animals are still seen to react to natural stimuli in a thoughtless and predictable manner, guided "by scripts" predetermined "by their genes or species membership" (cf.: Blattner 2021: p. 68-69).

Blattner argues that it can be inferred from our very language that we deny animals their agency. Thus, animals are domesticated, farm animals are bred and used to produce food; laboratory animals are used for research. We define animals based on the benefits they have for us and perceive them as passive things that we can freely dispose of. Our everyday language renders their agency unrecognizable and leaves little room for possible future recognition, according Blattner. We are constantly confronted with settings in which animals are systematically oppressed. Perceiving animals primarily in restrictive environments, leads us to disallow them agency. In addition, Blattner points out that we ascribe certain roles to animals that we subsequently seek to enforce. Animals are only supposed to perform simple and monotonous actions that are predictable (cf.: Blattner 2021: p. 69; Špinka & Wemelsfelder 2011: p. 27).

In the case of the wolves, too, it can be deduced from our use of language that we reject their agency: They are managed. Moreover, they are understood by our laws as a species to be protected. However, if individual wolves break free from the passive role of the animal to be protected - and e.g. attack farm animals - we label them as problem wolves that have to be killed.

In this context, Blattner discusses the relationship between humans, animal agency and law. The concept of human agency is of fundamental importance both for the justification of individual human rights and for community organization. Human agency is recognized in various norms and is protected by them. Among the most important legal regulations in this respect is the Universal Declaration of Human Rights of the United Nations. The Declaration

of Human Rights includes, among other rights, the right to life, freedom of expression and the freedom to enter into personal relationships. The aforementioned rights are intended to ensure that human agency is enabled and protected and are intended to defend human beings from oppression and tyranny. In contrast, animal agency is not enshrined in law. Blattner states that within the legal framework as well as in society in general, animals' capacity of having agency is underestimated, ignoring findings of recent studies that have shown that animals indeed are able to make judgments, to choose and to act, and to organize themselves separately and collectively. All the above findings indicate that animals do have agency (cf.: Blattner 2021: p. 65). According to Blattner, "most laws offer no guarantee that animals' agency will be respected and fail to respond when animals resist the human systems that govern them" (Blattner 2021: p. 65). Blattner attributes the reasons for these outdated beliefs to anthropocentric beliefs (cf.: Blattner 2021: p. 65).

Blattner's assumptions can also be applied to Austrian legal regulations that relate to the wolf. As shown in chapter 2. 2. 1 *The Bern Convention*, *The Washington* and *Habitats Directive* are based on the concept of human wildlife stewardship – a concept which has been criticised by several scholars in the past as being anthropocentric (cf. Berry 2006: p. 81; Palmer 1992: p. 85). The far-reaching legal regulations concerning the wolf reflect the conflicts that have arisen from the coexistence between humans and wolves in the past, which have resulted in wolves being nearly eradicated, but at the same time, they themselves contribute to these conflicts, as they insist on a concept that does not offer the possibility to sufficiently consider animal agency.

In the following relevant sections of the above-mentioned legal regulations are to be discussed to show that current law does not take wolves' agency seriously. To do so, I want to recall the animal agency model of Edelblutte et al. (2022):

- (1) Non-human animals (e.g. wolves) have agency, i.e. the ability to actively influence wildlife management outcomes
- (2) Non-human animals and humans are agents able to interact with each other
- (3) Non-human animals' and humans' agency is a possible tool to solve human-animal-conflicts

The stated goal of ***The Bern Convention*** is "to conserve wild flora and fauna and their natural habitats [...]" (Bern Convention, Article 1). However, this does not mean that it takes animals' agency into consideration. According to Blattner, concepts such as welfare, protection and

conservation do not necessarily include aspects such as animal agency and often the laws' basically exclusive focus on human needs thwarts its attempts to be just, equal, and fair (cf.: Blattner 2021: p. 67). This assumption seems to apply to the *Bern Convention* as well, as the preamble states that wild flora and fauna should be preserved "to be handed on to future generations" (and not be protected for their own sake) (Preamble, Bern Convention).

By putting human agency and interests first, the Bern Convention fails to understand animals as "as actors with their own will and deserving of individual or communal rights that secure their agency" (Blattner 2021: p. 67).

The Washington Convention aims to protect endangered species of animals and plants by restricting (but not entirely) banning trade in these species (cf.: EU-regulation No. 338/97, Article 8). As the convention does not ban trade in these species entirely, it portrays animals as mere resources which are denied any agency.

The European Habitat Directive defines the wolf as a vulnerable animal that needs protection (cf.: Fauna-Flora-Habitat Directive 1992: Annex IV). Wolves are portrayed as passive living beings lacking agency. By doing that, animals become "victims in need of rescue" and "voiceless beings that need a human voice" (Blattner 2021: p. 65). Clearly this approach fails to take into account that wolves do have agency and even eventually may pose a danger to human interests and livestock animals.

(1) The basic prerequisite for the application of the agency model is to attribute agency to animals. Since this basic requirement is not fulfilled by any of the legal regulations mentioned and analysed above, the two further assumptions of the agency model - namely, (2) that human and animal agents can interact with each other and (3) that conflicts can be resolved through this interaction - are not taken into account either.

The previous chapters have demonstrated that the stewardship model - which can be described as anthropocentric and as placing human interests above the vital interests of animals - is reflected in key legal regulations regarding wolves (cf. Berry 2006: p. 81; Palmer 1992: p. 85). Furthermore, it has been criticized that animal agency is not sufficiently taken into account within the stewardship concept and thus in relevant legal texts.

4. 2. 1 The Stewardship Model's Insufficiency regarding Human-Animal Conflicts

Despite all the criticism mentioned, it needs to be emphasized, once again, that the understanding of humans as stewards of nature and animals has led to a more responsible approach to the environment. As the previous analysis has shown, European conservation law, particularly the *Bern Convention* and the *European Union's Habitats Directive*, which incorporate aspects of the stewardship model, have contributed to improving habitat conditions and, consequently, the return of wolves to areas where they had been eradicated in recent decades (cf.: Linnell & Cretois 2019: p. 9).

The aforementioned legal texts largely deal with the protection of endangered species, which are understood as passive beings and should, to the greatest extent possible, be allowed to live without negative human interference (cf. Drenthen 2021: p. 431). Only in isolated cases are regulations provided for situations where human interests are restricted by wildlife. For example, Article 16 of the Habitats Directive allows for the killing of wolves if "there is no satisfactory alternative and the derogation is not detrimental to the maintenance of the populations of the species concerned at a favourable conservation status in their natural range," i.e. if it is "in the interest of protecting wild fauna and flora and conserving natural habitats," to prevent serious damage, particularly "to [...] livestock [...] and other types of property [and] in the interests of public health and public safety." Since the favorable conservation status has not been achieved in Austria (approximately 1100 wolves), this regulation does not apply (cf.: protect 2021: p.15).

The strict protection regulations regarding endangered species, such as the wolf, were largely uncontroversial for a long time. The wolf population in many European countries was low, and there were only a few encounters between wolves and humans or livestock animals. Compliance with the Habitats Directive was therefore largely unproblematic, and the handling of wolves was not a topic of societal debate (cf.: Redpath et al. 2017; Drenthen 2021: p. 431). However, the understanding of wild animals as passive beings and as deserving protection, who should ideally reside in an environment free from human disturbances, becomes questionable when instances occur where wolves, for example, hunt and kill livestock animals. In these situations, they are no longer perceived as passive, but rather their agency comes to the fore, and they are seen as opponents of human interests (cf.: Drenthen 2021: p. 431).

With the increasing wolf population in Europe, the European legislation has been criticized by the rural population, particularly by livestock owners affected by wolf attacks, as being

unrealistic. Once again, social conflicts become evident. I have already discussed the social tensions associated with the human-wolf conflict in the first main chapter of this thesis. Now, I will revisit this topic, specifically focusing on the divide between rural and urban areas in relation to the return of the wolf. While the urban population generally embraces the return of the wolf, the rural population living in wolf territories is concerned about the growing number of wolves (cf.: Drenthen 2021: p. 426; Skogen & Krangle 2003: p. 309; Zscheischler & Friedrich 2022: p. 1052)

Drenthen points out that the rural population not only fears financial losses, such as livestock being killed by wolves, but also sees their way of life in general as being endangered. As an example, he mentions compensation payments made by the government to those whose sheep have been killed by wolves. Such compensation payments also exist in some Austrian regions (cf.: Österreichzentrum Bär, Luchs, Wolf 2023). Drenthen argues that farmers in rural areas highly value their independence and feel restricted when they become dependent on state payments (cf.: Drenthen 2021: p. 428-429). Furthermore, Drenthen states that it is not only fear that leads to the rejection of the wolf's return, but also "unease about the overall societal movement that welcomes the wolves" and advocates for their protection (Drenthen 2021: p. 429).

"People have no idea what it looks like when a wolf attacks a flock of sheep. It is a massacre [...]. If society, whether it be WWF, conservationists, or urban people, wants to have wolves or other predators, it is not fair for the farmer to bear the consequences."

Interview with a sheep farmer (Nimmervoll 2022, my own translation)

This quote of an Austrian farmer reflects such a dissatisfaction. It conveys a sense of not being taken seriously. Parts of the rural population feel excluded from the political discourse and hold politicians and the urban population responsible for the return of the wolf, which they perceive as bringing only disadvantages (cf.: van Eden et al. 2020: p. 2).

They express their discontent through protests and organize citizens' initiatives to represent their interests. One of their central demands is the downgrading of the protection status of wolves (cf.: Hrdina 2021; Rohrhofer 2023). This dissatisfaction also has implications for the negative treatment of wolves in practice, which ranges from rejecting proposed

environmental protection measures to (illegal) killing of wolves as a form of protest (cf. Von Essen et al. 2014: p. 200).

Large parts of the EU Conservation Laws, which, as shown, are partly based on the stewardship model, consider wolves as passive beings in need of protection. However, the rural population, especially farmers who fear material damages (e.g., livestock kills) or immaterial damages (e.g., loss of independence) due to the return of the wolf, perceive them as dangerous animals. This discrepancy leads to the feeling of being disadvantaged among the population in areas where wolves are sighted. They feel overlooked by the urban population, which largely supports the return of wolves, and abandoned by European institutions. This is evident not only in interviews and social-media-comments but also in protests and the formation of citizens' initiatives, demanding a tough approach against wolves (cf.: Hrdina 2021; Rohrhofer 2023; Nimmervoll 2022; Arora & Rohrhofer 2022).

This dissatisfaction among the rural population has far-reaching consequences for wolf conservation policies. In particular, the concept of political legitimacy needs to be highlighted. Political legitimacy exists when the population follows political measures not only to avoid punishment but because they attribute moral authority to the state and believe that the mandated actions are right (cf. Barker 1990: p. 11; Firlein 2018: p. 337; Redpath et al. 2017: p. 2159). In the field of nature conservation or animal protection policies, it is especially important that measures are "socially acceptable at a local level" (Redpath et al. 2017: p. 2159). However, in the context of wolf conservation, it becomes apparent that "local communities perceive that large, dangerous predators are imposed on them and they have to bear the risks of living with such species only to benefit distant elites" (Redpath et al. 2017: p. 2159). This subsequently leads to a rejection of the acceptability of conservation policies and a limitation of political legitimacy (cf.: Firlein 2018: p. 337; Redpath et al. 2017: p. 2159).

The limited political legitimacy is evident both in the non-implementation of measures and in the deliberate violation of conservation laws. In Austria, for example, there is a reported phenomenon known as the "3-S rule" in relation to the recurring presence of wolves: Schießen, Schaufeln, Schweigen (shoot, dig, and remain silent) (cf.: Ruep & Rohrhofer 2023). The illegal shooting of wolves, which has also been documented in Austria, can be understood to some extent as a form of protest (cf.: Von Essen et al. 2014: p. 199; Kotrschal 2022: p. 4).

According to Firlein (2018), the dissatisfied rural population also demands changes at the political level. With these demands, they are particularly successful at lower political levels, where the voice of the rural population holds more value and political representatives are more reliant on the approval of the rural population (Firlein 2018: p. 341). "[T]he political system

encourages a more radical response to the passions of the electorate," which leads to smaller government units implementing measures that are not in line with European conservation law and, for example, promote the killing of wolves (Firlein 2018: p. 340-341). Therefore, wolves are not only killed by individual citizens as acts of protest but also as part of policies implemented by smaller governmental units (cf.: Firlein 2018: p. 340-341; Von Essen et al. 2014: p. 199). In the following, I will analyse whether the removal of wolves can actually help resolve human-animal conflicts.

Bruns et al. (2020) compared different livestock protection measures against wolves: lethal control, calving control, deterrents, fencing, mixed measures, guarding dogs, herding, and translocation (cf.: Bruns et al. 2020: p.3). They found that lethal measures were least successful (cf.: Bruns et al. 2020: p.6). This can be explained by various factors. It is assumed that the remaining, depleted pack after the killing of individual members is limited in its ability to hunt wild animals and therefore resorts to livestock animals (Bruns et al. 2020: p.6). Another possible reason for lethal measures being less successful is that wolves, in a compensatory manner, may reproduce at a higher rate in response to peer-mortality (cf. Wielgus & Peebles 2014: p. 1). A further difficulty with lethal measures is that it can be challenging to identify and kill the specific "problem-wolf" that previously killed livestock. If this fails and a wolf is killed that did not previously kill any livestock animals, the shooting turns out to be completely ineffective (cf.: Eklund et al. 2017: p. 5). Killing the entire wolf pack to bypass this problem has proven to be only temporarily successful, as the vacant territory is quickly taken over by another pack (cf.: Brandley et al. 2015: p. 1343). Furthermore, it should be noted that lethal measures are not in line with the *EU Habitat Directive* and, therefore, legal sanctions are to be expected for those states that extensively employ lethal measures (cf.: Bruns et al. 2020: p.6). Thus, there is abundant evidence that lethal measures are not a suitable method to protect livestock animals and therefore cannot contribute to minimizing human-animal conflicts in the long term.

In summary, it can be said that the stewardship model perceives the wolf as a passive being that needs protection. As European conservation law, such as the *Habitat Directive*, is based on the understanding of humans as stewards and wild animals as passive beings to be managed, there are numerous regulations that generally protect wolves but few regulations that regulate the handling of potential human-animal conflicts.

This lack of recognition of the wolf as an agent capable of causing harm to humans, such as livestock owners, leads to the affected rural population feeling overlooked and less

inclined to comply with European Union regulations, or even resorting to measures such as the illegal killing of wolves. Additionally, smaller government units attempt to bridge the alienation between the rural population and larger governmental units by implementing measures demanded by the affected rural population. Both of these factors contribute to an increased (illegal) removal of wolves. This is problematic for two reasons: Firstly, studies have shown that killing wolves appears to be ineffective in providing sustainable protection for livestock animals and reducing human-animal conflicts. Secondly, by killing wolves, we fail to fulfill the duty identified in the first part of my work to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship by taking their agency into account.

In the following, I will support my argumentation using the example of Tyrol, demonstrating how the insufficient consideration of the wolf as an agent in European conservation law has led to political alienation of the rural population, resulting in the illegal removal of wolves based on removal ordinances.

4. 2. 2 A Case-Study of Tyrol

The prevailing stewardship model, due to the rejection of animal agency, contains hardly any solution proposals in case of human-wolf conflicts. This becomes problematic when wolves, attacking livestock animals, break free from the role ascribed to them as victims to be protected. Then they are quickly seen by the affected rural population as *problem wolves* that should be hunted (cf. Amt der Tiroler Landesregierung 2021: p. 23). Because wolves are perceived as passive beings lacking agency in conservation law on the one hand and by the affected rural population and farmers underestimating their ability to “to actively influence wildlife management outcomes through their adaptive, context-specific, and complex behaviours that are predicated on their sentience, individuality, lived experiences, cognition, sociality, and cultures [...]” (Edelblutte et al. 2022: p. 9) on the other hand, we miss the chance to solve human-wolf conflicts non-lethally.

Within in today’s legal regulations wolves are e.g. mistakenly understood as voiceless creatures, so to speak. In doing so, we miss the potential opportunity to communicate with wolves, which would help prevent or resolve conflicts (cf. Boonman-Berson: p. 70-72; Drenthen 2021: p. 430-431; 437). As soon as wolves do not behave in line with the role assigned to them, shooting the animal appears, in the current system, basically as the only way of conflict resolution. This is highly problematic as non-violent approaches are omitted per se.

Some EU countries, including Austria, have responded to the return of wolves and the lack of conflict resolution strategies with laws and regulations that facilitate the shooting of wolves, sometimes in violation of EU law. Although wolves are protected by international and national laws and enjoy a high protection status in Austria, some federal states, such as Tyrol, have enacted ordinances to allow the shooting of wolves (cf. Fachkuratorium Wolf-Bär-Luchs 2021; Amt der Tiroler Landesregierung 2021: p. 23). These new regulations acknowledge the agency of wolves, but only as destructive, violent agency and not as constructive agency.

This will now be explained in more detail using the example of Tyrol, starting with a brief overview of the distribution of political and legal responsibility regarding wolves in Austria, followed by an examination of how parts of the Tyrolean Hunting Laws are based on the stewardship-model. Finally, a critical analysis will be provided of recent changes in the law that treat the wolf as a destructive agent.

At federal level two ministries are responsible for matters concerning the wolf in Austria: According to the Federal Ministries Act (BMG 1986), the sphere of action of the Federal Ministry for Climate Protection, Environment, Energy, Mobility, Innovation and Technology (BMK) includes, among others, "matters of species protection" and "matters of nature and landscape protection as well as natural caves" (§ 2/1/2 in connection with letter J Z 3 and 4 in Part 2 of the Annex to the Bundesministeriengesetz 1986, BGBl. Nr. 76/1986 idF BGBl. I Nr. 98/2022) while "matters relating to hunting and fishing" are in the sphere of action of the Federal Ministry of Agriculture, Regions and Tourism (section 2/1/2 in conjunction with letter L(14) in Part 2 of the Annex to the BMG).

The *Österreichzentrum Bär, Wolf, Luchs* was created in order to coordinate the management of the large carnivores – such as the wolf – between the federal states of Austria and was founded in 2019 following a decision by the Provincial Conference of Agricultural Officials with the support of the Nature Conservation Officials (cf.: Österreichzentrum Bär, Wolf, Luchs 2020a). It is supported by all provinces and the relevant ministries as full members and is staffed with representatives of the respective provincial governments and ministries from the fields of agriculture and nature conservation, each sending two representatives as full members to the General Assembly (cf.: Österreichzentrum Bär, Wolf, Luchs 2020b, §4-5). Currently, the BMLRT - Federal Ministry of Agriculture, Regions and Tourism sends one representative and the BMK- Federal Ministry for Climate Protection, Environment, Energy Mobility, Innovation and Technology sends one representative. In addition, extraordinary members, such as the WWF, the Austrian National Parks and the Austrian Federal Forests

participate in achieving the association's objective. The tasks of the *Österreichzentrum Bär, Wolf, Luchs* include, among others, the development of recommendations for herd protection measures, the coordination of compensation payments, the monitoring of large carnivores and providing/developing training measures for farmers (cf.: *Österreichzentrum Bär, Wolf, Luchs* 2020b, §2).

The *Bern Convention* and the *Washington Convention*, as described earlier, also apply in Austria. The *Habitats Directive* must be implemented into national law by all EU member states. In Austria, this is achieved through the hunting and/or nature conservation laws of the federal states. Additionally, there are regulations found in federal laws. Anyone who unlawfully kills a protected animal species in Austria may face a prison sentence of up to two years. This regulation is stated in §181f *Bundesgesetz über die mit gerichtlicher Strafe bedrohten Handlungen (Strafgesetzbuch - StGB)*, BGBl. Nr. 60/1974 idF 100/2023 (*StGB – Austrian Criminal Code*) and since the Austrian Criminal Code refers to the *Habitat Directive* of the European Union, the wolf is also included among the protected animal species (cf. *StGB* 1974, §181f/1&2). As hunting and nature conservation fall under the jurisdiction of the federal states in Austria, the international obligations for wolf protection have been incorporated into provincial hunting and nature conservation laws. The implementation of these regulations is entrusted to the provincial governments, district administrative authorities, and hunters' associations (cf.: *Österreichzentrum Bär, Wolf, Luchs* 2021b: p. 11).

As the Tyrolean Hunting Law is based, among other things, on the *Habitats Directive*, it includes central elements of the stewardship model: (1) Responsibility is assigned by an authority (2) to someone to manage an object or entity, (3) that is understood as passive and expected to be manageable:

(1) The Tyrolean State Parliament passed the Tyrolean Hunting Law, thus the responsibility was assigned by an authority that consists of elected representatives of the people and decides per majority vote (cf.: preamble, Tyrol Hunting Law 2004).

(2) Furthermore, responsibility is assigned to hunters (§11).

(3) The Tyrolean Hunting Law understands wolves as passive and to be managed. This becomes clear when looking at its aims and underlying concept. The stated goal is to achieve, maintain and promote an adequate wildlife stock in Tyrol, taking into account other interests such as the national culture, protection from damage caused by game animals, conservation of nature for game animals and the avoidance of impairment of the proper agricultural and forestry

use (§1a). As mentioned above the concept of animal stewardship places a responsibility on humans to care for and protect animals, but still ensures that animals are submissive to them. In the Tyrol Hunting Law humans are thought of as stewards of wildlife who are obliged to protect wild animals, but at the same time obliged to make sure that human interests (such as forestry use) are not impaired. Humans act as active agents, whereas animals act as passive beings that need to be managed either via protection or via restriction (cf. Tyrol Hunting Law).

Although the Tyrolean Hunting Law aims to promote biodiversity, a shift towards a more aggressive approach against wolves has been observed in recent years. In this context, the responsibility to consider animal welfare, which is inherent in the stewardship model, has taken a backseat, and the perception of wolves as dangerous and harmful animals that are not worthy of protection has come to the forefront. With the increasing wolf population, parts of the farming community and rural society have increasingly called for changing/lifting the wolf's protected status and for more legal possibilities for wolf removal (cf.: Österreichische Bauernzeitung 2023).

„People with no knowledge of animal husbandry are giving us advice.”

Interview with a Tyrolean farmer protesting against wolves (Hrdina 2021, my own translation)

"There is a completely wrong perception. The wolf is not a cute little creature, it is a predator."

Interview with the mayor of Brixental (Tyrol) (Arora & Rohrhofer 2022, my own translation)

As the number of livestock predation incidents by wolves rose, the rural population became more and more dissatisfied with regulations regarding wolves that were in force at that time, as these quotes demonstrate. Subsequently, the Tyrolean regional government felt compelled to revise regulations concerning wolves. On April 1, 2023, an amendment to the Tyrolean Hunting Law (TJG) came into effect: Alpine pastures were defined as so-called alpine protection areas, where herd protection measures are deemed impractical, disproportionate, or unfeasible (cf.: Klimmer 2023). Now, wolves that kill protected livestock or repeatedly attack livestock in alpine protection areas are allowed to be shot (cf.: §2(18) TJG). If there is only one attack, but at least

five goats/sheep or one donkey/horse/cattle are killed, an authorization for shooting can also be granted. The previous requirement for DNA evidence is no longer necessary (cf.: Klimmer 2023).

As studies have shown that lethal measures are less effective than non-lethal measures in protecting livestock animals in the long term (cf.: Bruns et al. 2020: p.6), regulations like those in Tyrol that promote lethal measures and place less emphasis on non-lethal measures are not to be supported.

This shows that the stewardship model's lack of providing solutions for human-wolf conflicts indirectly leads to a legal regulation that is disadvantageous for the wolf and (thus) leads to an overall unsatisfactory "resolution" of the human-animal conflict. To overcome this deficit, I will propose a revision of the stewardship model in the following subchapter.

4. 3 Revising the Stewardship Model

The stewardship model has been criticized in a variety of ways in the course of this thesis. It has been described as anthropocentric and criticised for placing human interests above the vital interests of animals. (cf. Berry 2006: p. 81; Palmer 1992: p. 85). Furthermore, it has been criticised that the stewardship model within conservation law leads to political alienation of the rural population and indirectly to the promotion of lethal protection measures of livestock animals.

Despite these and other criticisms, however, it is important to bear in mind that the stewardship model - although its roots are in the idea of humans being superior to non-human animals - put a stop to the boundless exploitation of animals, as it imposes a responsibility upon man to take animal welfare into consideration (cf. Seamer 1998: p. 205; Palmer 1992: p. 85). It is for this reason that I do not advocate for the complete abolition of the stewardship model, but only for its revision.

Drenthen (2020) has identified the stewardship-model as the underlying cause of human-animal conflict. The current system of animal protection and conservation primarily focuses on ensuring that wild animals can live largely without human interference. Drenthen argues that the emphasis on human wrongs proves inadequate when wild animals pose a threat to humans or livestock animals. Therefore, he advocates for a model that takes into account the agency of the wolf but does not frame the wolf as an enemy. In this context, he proposes the sovereignty model formulated by Donaldson and Kymlicka in *Zoopolis* (2011) (cf.: Drenthen 2021: p. 430-432). This model particularly emphasizes the autonomy of wild animals, who are

said to live in their own sovereign territories, similar to independent nation-states. In these territories, humans would then have the role of visitors, not stewards (cf.: Donaldson & Kymlicka 2011: p. 170). Keulartz (2021) criticizes the sovereignty model and argues that in the Anthropocene, this model, which limits human intervention to disaster relief and individual acts of compassion, is inappropriate (cf.: Keulartz 2021: p. 116). Additionally, in situations where human-animal conflicts arise, this model seems to be of little use as it conceives of human responsibilities in a narrow way. Therefore, I oppose the sovereignty model as a replacement for the stewardship model.

However, I also consider a pure agency model, in which humans and animals are completely equal in rights and obligations, to be inappropriate. Komi and Nyygren (2023) note that without distinguishing between humans and animals, there may be detrimental developments for animals at the political decision-making level. This is due to the animals' inability to participate in political decisions. Therefore, they call for an appropriate distribution of responsibility (cf.: Komi & Nygren 2023: p. 4-5). Hence, a pure agency model also does not seem desirable.

In the previous chapter it has been argued that due to the denial of animal agency, the current stewardship paradigm includes very few suggestions for how to resolve problems between wolves and humans. Wolves are immediately regarded as problematic wolves who need to be hunted, if they deviate from the role as victims to be protected that has been assigned to them (cf. Amt der Tiroler Landesregierung 2021: p. 23). The opportunity is missed to find non-lethal solutions to human-wolf conflicts, because wolves are predominantly conceived of as passive, helpless creatures. Furthermore, their capacity "to actively influence wildlife management outcomes through their adaptive, context-specific, and complex behaviours that are predicated on their sentience, individuality, lived experiences, cognition, sociality, and cultures [...]" is underestimated (Edelblutte et al. 2022: p. 9).

However, the aspect of human responsibility towards animals should not be forgotten in the revision of the stewardship model. When applying the stewardship model to animal welfare, it follows that humans are responsible for the care and welfare of animals (Seamer 1998: p. 204).

Throughout this thesis, it has been argued that animals possess agency, which includes the ability to influence the outcome of human-animal conflicts and relations. However, it cannot be said that humans and animals possess this ability to the same extent. For example, animals cannot participate in political decisions (cf.: Komi & Nygren 2023: p. 4-5). Therefore, animal

agency should be taken into account, but in an adequate manner. Under no circumstances should the consideration of animal agency lead to humans evading their responsibility for the care and welfare of animals.

Referring to Martha Nussbaum (2006), McFarland and Hediger (2009) note that as soon as we understand “the animal itself as an agent and a subject, a creature to whom something is due, a creature who is itself an end” (Nussbaum 2006: p. 336), “a new set of obligations becomes incumbent upon us” (McFarland, Hediger 2009: p.16). Marion Mangelsdorf argues that with acknowledging animals’ agency new responsibilities of actors, “who can be partners, even if they are significant others for each other”, arise (Mangelsdorf: p. 209). Thus, taking animals’ agency seriously does not only lead to new obligations and/or responsibilities, but also to new solution approaches to human-animal conflicts.

To fulfil the responsibility to enable the resolution of conflicts between humans and animals, stewardship must be expanded to include the aspects mentioned above. A comparison of the stewardship model and the agency-model will show which aspects of the stewardship model have to be discarded and which aspects of the agency model have to be adopted.

The basic principles of the Animal Stewardship model are as follows:

- (1a) Responsibility „for the care and welfare of animals” is assigned by an authority (Seamer 1998: p. 204)
- (2a) to someone (e.g. hunters) to manage animals,
- (3a) who are understood as manageable passive beings

Of great importance is the elimination of Assumptions 2a and 3a which state that animals are merely objects that are considered passive and manageable. These assumptions are problematic for two reasons. Firstly, by primarily viewing wild animals as passive beings, one denies to some extent that they can come into conflict with human interests (such as the interests of livestock owners). This understanding of wild animals as passive beings in the stewardship model (and thus in conservation law) contradicts the perceived reality of livestock owners who experience wolves as dangerous agents. This difference can, as shown in previous chapters, lead affected populations to feel ignored by policymakers and result in non-compliance with proposed conservation measures and/or the implementation of illegal actions. Additionally, smaller government units also issue orders that contradict European law, as demonstrated in the case of Tyrol. Therefore, the understanding of wild animals as passive

beings in conservation law indirectly leads to actions that contradict the goals of conservation laws.

Secondly, the application of lethal measures also violates the duty, as identified in the first part of this work, to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship by taking their agency into account. This could be achieved, for example, by implementing herd protection measures that consider the wolf's ability to learn and adapt.

Thus, it is necessary to no longer ascribe to wolves solely the role of passive beings in need of protection. Instead, it is necessary to expand stewardship to include elements of the agency model. For this purpose, I would like to recall the animal agency model, which is based on Edelblutte et al. and is applied within this thesis:

(1b) Non-human animals and humans are agents.

(2b) Non-human animals (e.g. wolves) have agency, i.e. the ability to actively influence wildlife management outcomes

(3b) Non-human animals' and humans' agency are possible tools to solve human-animal-conflicts.

The assumption that wild animals are agents has two advantages.

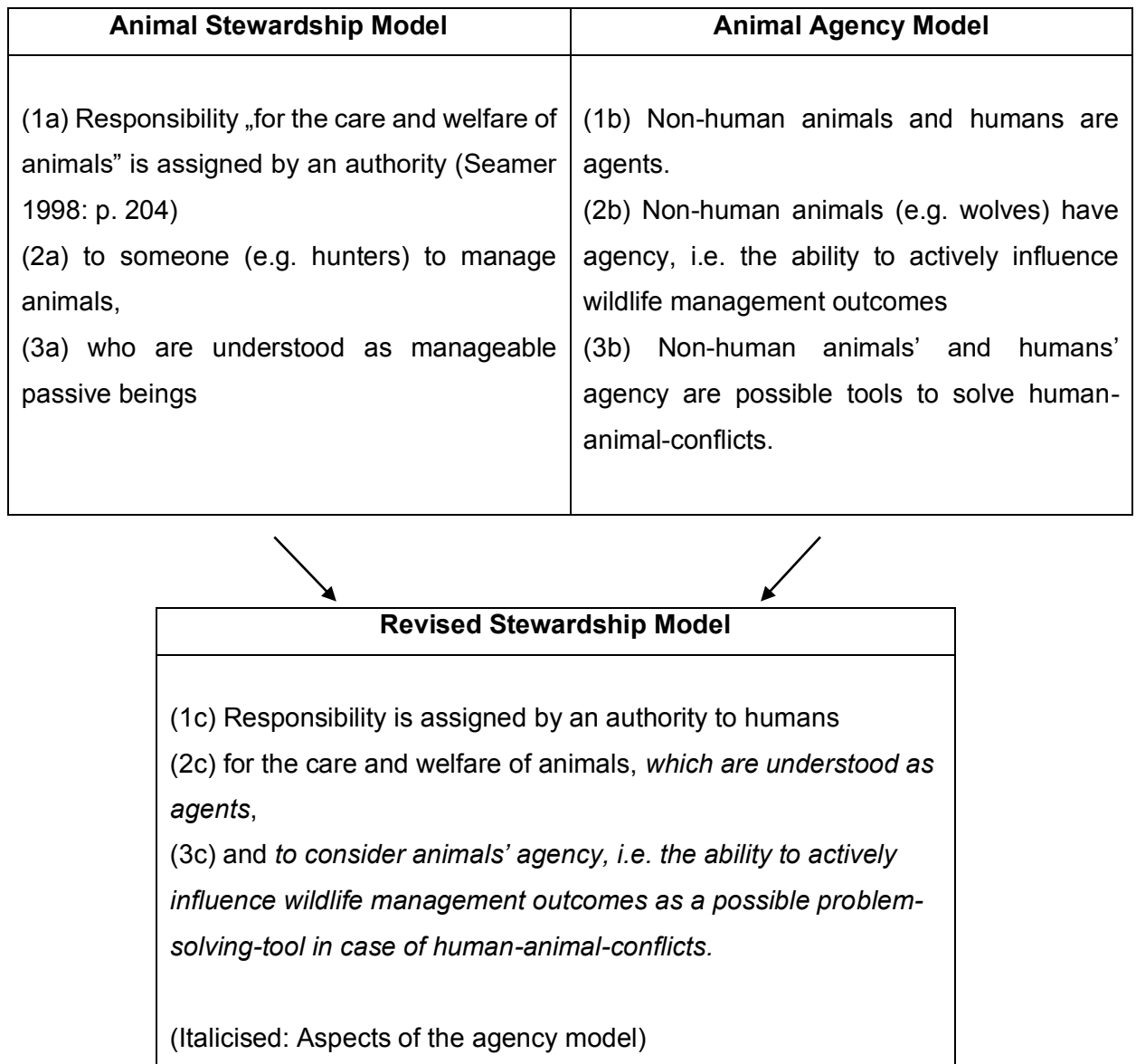
Firstly, by understanding wild animals as agents (assumption 1b), the model acknowledges that the interests of wild animals as agents can come into conflict with those of humans.

Secondly, it recognizes that humans and animals can communicate as agents. Furthermore, assuming that wild animals (e.g. wolves) possess agency, meaning the ability to actively influence wildlife management outcomes through their adaptability and learning abilities (assumption 2b), and that this agency can be utilized to sustainably resolve human-animal conflicts (assumption 3b), new possible livestock protection measures emerge that are more successful in resolving conflicts compared to lethal methods.

However, as argued before, the pure agency model lacks the necessary consideration of human responsibility for the care and welfare of animals. While it is necessary, in my view, to consider wild animals as possessing agency that can be utilized to resolve human-animal conflicts, it does not seem productive to attribute agency to humans and animals in just the

same way. Undoubtedly, humans have more capabilities to influence human-animal conflicts, and so they have a responsibility to use this ability wisely.

Therefore, a revision of the stewardship model, incorporating key aspects of the agency model, appears desirable. I will now propose such a revision.



Of great importance is the elimination of assumptions 2a and 3a which state that animals are merely objects that are considered passive and manageable. It is necessary to no longer ascribe wolves the role of passive beings, as this ensures that animals are understood not as objects but rather as agents that can interact with humans.

By taking animal agency into account, we may build a more equal relationship with wolves and use it as a tool to resolve problems between humans and wolves. A model that views the wolf as an actor with agency is required as opposed to one that views wolves either as passive actors with no agency or as actors whose agency is deemed merely destructive. However, this approach must not hide the fact that animals and humans are not completely on an equal footing. It is important to emphasize that humans have a special responsibility: On the one hand, we have the obligation not to harm wild animals, and should damage nevertheless occur, we have to provide compensation. On the other hand, we must create the appropriate conditions that allow consideration and use of animal agency, especially when human-animal conflicts are human-caused.

The revised stewardship model offers three central advantages in the context of human-wolf conflicts:

(1) It understands the wolf as an agent and thus aligns more with the lived reality of those affected by wolf damage, preventing political alienation of rural populations.

(2) Furthermore, it requires the consideration of animal agency in situations of human-animal conflicts, thereby incorporating the duty to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship.

(3) By including animal agency, the revised stewardship model also focuses on non-lethal livestock protection measures, which studies have shown to be more successful than lethal methods, thus contributing to a proper resolution of human-wolf conflicts.

In the following, I will now delve deeper into the aforementioned advantages:

(1) Parts of the rural population, especially those directly affected by the return of wolves, predominantly see the wolf as a dangerous animal (cf.: Drenthen 2021: p. 426) and do not agree with the perception of the wolf as a passive being, which is the basis of the stewardship model and thus also reflected in European Conservation Law. The discrepancy between the perception of the wolf by the affected rural population and the conception of the wolf in conservation policies sometimes leads to proposed conservation policies not being adequately implemented. The revised stewardship model attempts to address this discrepancy by understanding the wolf neither as a purely passive being nor as a dangerous beast, but as an agent, whose agency ought to be constructively taken into account. By assigning to wolves the status of agent, it acknowledges that they pursue their own interests, which can sometimes conflict with human interests. This helps to refute accusations from farmers that the wolf is mistakenly seen only as a "cute little creature" (Arora & Rohrhofer 2022, my own translation).

It can be assumed that the feeling of political alienation of the rural population can be reduced in this way.

(2) Building on Palmer's conception of a *prima facie* duty not to harm wild animals and her notion of special obligations to assist animals harmed by humans, in the first part of my thesis, I argued that farmers have a special obligation to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship. This very duty is also found in the revised stewardship model. In the revised stewardship model, this obligation is derived from the general obligation to care for wild animals and can be seen as a kind of subcategory of this general duty.

(3) In the first part of my work, I pointed out that fulfilling this duty can contribute to the long-term resolution of human-animal conflicts. By recognizing the agency of the wolf, the focus is placed on the adaptability and learning ability of the wolf, and non-lethal measures to solve human-animal conflicts outweigh lethal measures. Fences can be given as such an example: Undoubtedly, there are few fences that wolves cannot, in principle, overcome due to their physical abilities. However, it would be problematic to exclude fences as reasonable livestock protection measures by *only* focusing on their *physical abilities*. Instead, wolves' agency - namely, their adaptability and learning ability - must be taken into account. According to Drenthen (2021), studies have shown that wolves in areas where livestock owners have set up long-term, difficult-to-overcome fences have changed their behaviour and attack fewer livestock animals. Drenthen assumes that young wolves follow the hunting behavior of the adult wolves - if the adult wolves do not hunt livestock animals due to fences, their offspring will also refrain from doing so, resulting in the development of a wolf culture over time that avoids preying on livestock animals (cf.: Drenthen 2021: p. 437).

In previous chapters, I have already pointed out that lethal measures to protect livestock animals are not effective (cf.: Bruns et al., 2020: p.6). Without proper consideration of animal agency, shooting the animal appears to many as almost the only way of conflict resolution in the current system. By taking animal agency seriously, it will become possible to take full advantage of the opportunity to communicate and engage with wolves, which would help prevent or resolve conflicts (cf. Boonman-Berson: p. 70-72; Drenthen 2021: p. 430-431; 437).

In summary, it can be said that the revised stewardship model, by understanding the wolf as an agent, acknowledges the possibility of human-animal conflicts but also presents meaningful strategies for resolving these conflicts precisely through the recognition of animal agency.

4. 4 Interim Discussion

The aim of the second part of my thesis was to answer the question of whether animal agency, particularly wolves' agency, is considered in relevant legal regulations. To address this question, I analyzed legal texts pertaining to wolves and concluded that the stewardship model, found in these relevant legal texts, does not sufficiently acknowledge the agency of wolves. To overcome this deficiency, I proposed a revised stewardship model.

At this point, limitations need to be noted regarding the second part of my thesis. Although it has successfully demonstrated that the stewardship model needs to be revised and aspects of the agency model need to be included, it is not, strictly speaking, concerned with its practical implementation on legal and political level. It is beyond the scope of this thesis to examine in detail concrete possible political policies that are based on the revised stewardship model. Thus, I will only briefly discuss some of these policies.

The rural population, especially livestock owners, play an essential role in dealing with the return of wolves (cf.: Firlein 2018: p. 337) and acknowledging their agency. However, livestock owners should not bear the sole responsibility for adequately considering wolves' agency, such as through non-lethal herd protection measures. Instead, they should be supported by government funding. The promotion of herd protection measures is not uniformly regulated in Austria. For example, there are no subsidies for prevention measures against wolf attacks in Burgenland, Carinthia, Styria, and Vienna, while herd protection is at least partially subsidized in the other federal states (cf.: Österreich Zentrum Bär, Wolf, Luchs 2023c). The European Union provides financial support for individual member states through the *European Regional Development Fund* and the *European Agricultural Fund for Rural Development* (cf.: European Commission 2023), but this support has not yet reached Austrian livestock owners. To promote the consideration of animal agency and, consequently, herd protection measures, comprehensive financial support for affected livestock owners would be desirable.

To support livestock owners in considering animal agency, it is not enough to provide only financial assistance; practical support is also necessary. While there are already some instances of such support, further development is required. A positive example is the EU-funded project *Life Wolfalps EU*, which provides support to livestock owners affected by wolf attacks through Wolf Prevention Intervention Units. These units assist affected farmers with expertise and herd protection equipment (cf.: Agricultural Research and Education Centre

2021). Projects like this should be further promoted as they recognize the potential conflicts of interest between humans and wolves while also advancing solutions.

In addition to policies that support livestock owners in adequately considering the agency of wolves and implementing non-lethal herd protection measures, it is also important to involve livestock owners in decision-making processes regarding wolf conservation to prevent the perceived alienation of the rural population. In this regard, Redpath et al. suggest adopting collaborative governance (cf.: Redpath et al. 2017: p. 2159-2160). Collaborative governance refers to an “arrangement where one or more public agencies directly engage non-state stakeholders in a collective decision-making process [...] that aims to create or implement public policy” (Ansell & Gash 2008: p.544). For example, Norway has regional large carnivore committees, and Sweden has regional wildlife management delegations (cf.: Redpath et al. 2017: p. 2159). Such active involvement of the rural population can lead to a reduced sense of being overlooked and increase the likelihood of implementing agreed-upon measures.

Another weakness of this thesis, apart from the only brief description of possible concrete implementation options of the revised stewardship model, is that it does not include interviews that would be conducted with affected rural residents specifically for this thesis. Further research in this field would be of great help in understanding what prevents livestock owners from using non-lethal herd protection measures in Austria. However, despite its theoretical nature, this thesis contributes to our understanding of the practical aspects of human-wolf conflicts by drawing on the public debate on how to deal with wolves killing livestock animals as well as on statements from the farmer's association.

CONCLUSION

As I have shown at the beginning of my master's thesis, the human-wolf conflict takes place on economic, social, and/or political levels (cf.: Messmer 2009: p. 10), and a variety of stakeholders are involved (cf. Lin et al. 2021: p. 6). It was beyond the scope of this thesis to consider the conflict from every possible perspective, which is why the first part of my master's thesis specifically focused on the role and perspectives of livestock owners. This focus seems justified, as farmers play a central role in the human-animal conflict. On one hand, they suffer concrete damages caused by wolves, and on the other hand, they are responsible for implementing herd protection measures.

In the first part of my work, I specifically examined the question of whether it is ethically justifiable for a farmer to keep sheep without implementing herd protection measures in areas where wolves exist. To answer this question, I applied Grimm's ethical method of solving moral problems using a fictional example of an Austrian sheep farmer in a region where wolves are present. In the process of applying the method, I found that the sheep farmer, based on Palmer's *prima facie* duty not to harm wild animals and special obligations to assist animals harmed by humans, has a special obligation to assist wolves. This arises from the fact that wolves face human-caused harms (such as being killed) when they attack livestock animals. In order to protect them from these harms, the farmer has a special obligation to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship.

In a further discussion, I have addressed various herd protection measures, through the implementation of which the sheep farmer could fulfill his special obligation. In particular, I have focused on fences, biofences, shepherds, livestock guarding dogs, and llamas.

I have come to the conclusion that herd protection measures that consider the agency of the wolf are suitable for preventing livestock killings and can thus contribute to minimizing human-animal conflicts. In this context, I have pointed out that the proposed measures come with sometimes high costs. I have emphasized that the implementation of herd protection measures and the consideration of animal agency also depend on government financial support and supportive legal and institutional frameworks.

In the second part of my thesis, I have therefore examined whether animal agency - specifically wolves' agency - is adequately considered in relevant legal texts.

By ratifying the *Bern Convention*, the *Washington Convention* on and the *EU Habitats Directive*, Austria has committed itself to restoring a favorable conservation status for large carnivores. I have argued that these legislative acts are based on the assumption that humans do not only have the privilege but also the responsibility to act as stewards when it comes to wild animals. Moreover, I have criticized that the concept of stewardship implies that animals are subordinate to humans and fails to take animal agency seriously (cf.: Österreichzentrum Bär, Wolf, Luchs 2021b: p. 10-11; Drenthen 2021: p. 430-431). According to the stewardship model animals are primarily passive receivers of human care. This is problematic in times of human-animal conflict as wolves do potentially represent a threat to human interests (cf.: Drenthen 2021: p. 431). The wolf is not an innocent victim to those whose interests are affected, e.g. by livestock kills, but a potentially harmful agent. This discrepancy between legal regulations and the perceived reality of affected rural residents leads to them feeling overlooked and, as a result, to non-compliance with existing regulations and to illegal wolf killings. Furthermore, governments of individual federal states in Austria - as I have shown, using the example of Tyrol, - have enacted ordinances to facilitate the killing of so-called problem wolves and are portraying wolves as an enemy (cf. Drenthen 2021: p. 431; Wedenigg, Stirn 2022).

Both approaches - understanding the wolf as a passive being worthy of protection and understanding the wolf as a harmful actor – are not suitable to solving human-animal conflicts adequately, as both accounts fail to take animals' agency seriously. I have argued that taking animal agency into consideration enables us to establish a more symmetrical relation to wolves and can be a helpful tool to solve human-wolf conflicts. Instead of a model that understands the wolf as a passive actor, lacking agency, or exclusively as a harmful actor, a model that understands the wolf as an actor having agency is needed.

Thus, I proposed a revised stewardship model that takes animals' agency into consideration, which helps to improve wolf-human coexistence:

(1c) Responsibility is assigned by an authority to humans

(2c) for the care and welfare of animals, which are understood as agents,

(3c) and to consider animals' agency, i.e., the ability to actively influence wildlife management outcomes as a possible problem-solving-tool in case of human-animal-conflicts.

The research question posed at the beginning of the thesis, regarding how revising the stewardship model by taking wolves' agency into account can help improve human-wolf coexistence, can be answered as follows:

The revised stewardship model is helpful in the context of human-wolf conflicts: (1) It aligns more with the perception of those affected by wolf damage, as it conceives of wolves not as passive beings but as actors, which prevents the political alienation of rural residents. (2) Additionally, it incorporates the duty to assist wolves in avoiding conflicts with humans and to allow them to actively participate in the human-wolf relationship by requiring the consideration of their agency with regard to situations of human-animal conflicts. (3) Furthermore, by considering animal agency, it shifts the focus towards non-lethal methods of protecting livestock that prove to be more effective than lethal ones. As a result, the revised stewardship model contributes to resolving human-wolf conflicts.

The findings of the present thesis clearly indicate that taking animal agency into account can help to reduce human-animal conflicts. However, it must be noted that even the proposed livestock protection measures cannot completely prevent wolf attacks. But increased wolf culling would not prevent livestock killings either, as studies have shown that other wolves will fill the vacant territories left by killed wolves (Bruns et al., 2020: p.6-7). The increasing wolf populations across Europe demonstrate that wolves are here to stay (cf.: Kotrschal 2022: p. 6). Therefore, there is no way around striving for a conflict-free coexistence with wolves, even though it may not be entirely conflict-free. As Drenthen (2016) puts it, "practicing tolerance - the virtue of enduring those things that are difficult to endure" is needed in our relationship with wolves (Drenthen 2017: p. 331). Undoubtedly, not all population groups need to exert the same level of tolerance, as it is primarily the affected farmers who have to bear the damages. Throughout this thesis, it has been emphasized multiple times that promoting livestock protection measures is necessary. At the same time, it is important to provide compensation payments to affected farmers in cases where proposed livestock protection measures could not prevent wolf attacks and to acknowledge their efforts. A conflict-reduced coexistence requires efforts from both humans and wolves. On one hand, wolves should not be attracted by humans, for example, with food leftovers, and on the other hand, wolves need to learn to stay away from humans and livestock animals (cf.: Kotrschal 2022: p. 74-75). As this thesis has shown, it is the responsibility of humans to facilitate this learning process for wolves. Only through suitable livestock protection measures that take into account the constructive agency

of the wolf can wolves actually contribute to conflict avoidance through their learning and adaptability.

In the context of the human-wolf conflict, it is important to be aware that the conflict is not only about the actual damages that wolves inflict on humans, such as livestock killings. Rather, the societal debates about how to deal with wolves reveal other social differences. For instance, this study examined the urban-rural divide, which delineates disparities between urban and rural communities (cf.: Zscheischler & Friedrich 2022: p. 1052)

At the beginning of the study, it was pointed out that the heated debate surrounding the management of wolf-reintroduction does not necessarily correspond to the actual damages caused by wolves. In 2022, for example, only 8.8% of all deceased sheep were killed by wolf attacks, while the majority died due to rockfall, diseases, falls, or severe weather (cf. Austrian Center for Bear, Wolf, Lynx 2023a). However, this low percentage does not diminish the importance of resolving the human-wolf conflict. If left unresolved, it leads to both illegal killings of wolves and polarization among population groups who feel ignored and disadvantaged (cf.: Zscheischler & Friedrich 2022: p. 1052; Von Essen et al. 2014: p. 200).

In the context of the human-wolf conflict, it is important to question our own preconceptions of wolves. Our understanding of this animal is often influenced by cultural factors and is more symbolic than realistic (cf.: Fritts et al. 2003: p. 294; Linnell et al. 2016: p. 365-366). This deviation from reality can lead to viewing wolves as harmless and sometimes cute creatures, in need of protection, or on the other hand, as dangerous beasts. Both perspectives prove problematic when dealing with the return of wolves (cf.: Drenthen 2015: p. 323-326). It is up to us to perceive wolves for what they truly are: wild animals that may prey on livestock but that are not unpredictable beasts that attack humans (cf.: Linnell et al. 2016: p. 357).

Instead, a comprehension of wolves based on scientific facts is necessary. Such an understanding allows us to recognize that the wolf's agency - its ability to learn and adapt - can be utilized to effectively minimize human-animal conflicts in a sustainable manner.

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