



**University of  
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**Liminal Animals: Ethics, Politics, and Practices**

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## Executive Summary

This thesis argues that liminal animals, defined as wild animals who live in spaces with significant human presence, are owed positive duties. To do so, it uses the methodology of analytical philosophy, using an ecumenical approach to show that this conclusion follows from a variety of theories.

The thesis is divided into three main parts. In the first one I argue that three ethical theories lead to the view that there are positive duties towards liminal animals. Chapter 1 argues that is the case using *consequentialist theories*. In it, I argue that according to them, if there is a *possibility* to improve the lives of liminal animals, then there is a *duty* to do so. In Chapter 2, I argue that *autonomy-based theories* can ground positive duties to improve the autonomy of liminal animals by providing them with more choices and of better quality. Chapter 3 explores how *relational theories*, which ground positive duties on morally relevant relationships, also entail that there are positive duties towards liminal animals.

In Part 2, devoted to principles of political inclusion, I explore how according to three of these principles (the All-Affected Interests Principle, the All-Subjected Principle, and the Social Membership Principle), liminal animals should be considered full members of our political communities, which would entitle them to positive duties stemming from political institutions.

Lastly, in Part 3, I explore the practical implications of the idea that there are positive duties towards liminal animals. In it, I first claim that population control programmes can be a form of assisting liminal animals, and therefore of fulfilling our positive duties towards them. Then, I argue that the interests of liminal animals should be included in urban planning decisions, and then show what this implies for decisions that harm them and for those that potentially benefit them.

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“Em cada esquina, um amigo

Em cada rosto, igualdade”

("On every corner, a friend

In every face, equality")

– Zeca Afonso, *Grândola, Vila Morena* (1971)

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## Introduction

Many wild animals live amongst us. Pigeons fly around our cities, rats dwell in our neighbourhoods, foxes and squirrels live in our parks, and mice eat our crops. These animals, to whom I will refer to as *liminal animals*, are not rare visitors, but our cohabitants. Many of them benefit from living in and near human spaces by finding food and shelter, avoiding predators, and encountering compassionate people that help them when they are in need. However, many also face risks specific to their condition as human neighbours. Humans expel them from their homes and cities, kill them when they are considered “pests”, design infrastructures that pose a risk to their survival, hit them with our cars, and harm them through harvesting and food processing technologies.

These are all direct harms that humans cause to animals who inhabit spaces they share with us, such as cities, parks, lakes, freeways, arable lands, or power plants. In some cases, humans have the option of refraining from doing this harm without much cost (like stopping hunting), but in others, such alternatives pose challenges to our ways of behaving (like deciding not to drive at night or refraining from using automated harvesting technologies). There are, also, certain cases in which we could not only refrain from harming them, but also assist those animals to make their lives better or to save them from death. We can feed the animals that struggle to find food, vaccinate those who are vulnerable to illnesses, treat those who have been injured, or control their reproduction to prevent the misfortunes of overpopulation, including disease transmission, violence, and resource scarcity.

The situation of this group of animals raises important normative questions. Take, for example, the cases mentioned above in which in order to reduce the harm we cause to these animals we may need to stop doing things we like or need, such as driving. Or times in which we could help these animals when they are in need but it would cost public money that could be devoted to other causes, such as in decisions regarding whether to implement an animal vaccination programme, or to set up a rescue center. These issues have not only received little attention from scholars working in ethics and political theory, but are tackled by people and institutions with little ethical or political reflection. Indeed, many people see these animals as “pests”, “vermin”, or “nuisance”. As a consequence, in many cases, they are characterised as problem animals who do not belong among us, and who therefore can be exterminated. This often justifies the use of painful methods of population control such as kill-traps or poison, both by individuals and institutions. In other cases, these animals are simply ignored, which

leads us to build infrastructure in places in which they live or in ways that are harmful for them, such as in cases in which roads cut through their habitats. And the idea that public spending should be directed towards their care is usually ignored or considered a symbolic gesture rather than a priority for a public institution, such as when dovecotes are installed in certain parks.

In contrast to these prevailing ideas and practices, this thesis will argue that we, as individuals and institutions, have strong duties not only to refrain from causing harm to liminal animals, but to help them live better lives. To do so, I will take an ecumenical approach, showing how this idea follows from several ethical theories and principles of political inclusion. That is, I will argue that there are *positive duties of assistance* towards these animals, and that this follows from premises and theories that are widely accepted. In doing so, this thesis will also respond to many objections that can be raised to this view, including those that claim that these animals may not want to be helped by us, that the autonomy of animals forces us to refrain from interfering with their lives, or that we do not have morally relevant relations that trigger these positive duties. Furthermore, besides showing that we have a duty to assist these animals *in theory*, this thesis will also defend two ways in which this can be done *in practice*, through the use of painless population control methods and urban planning projects that take into account their interests.

In doing so, this thesis will fulfil two objectives. First of all, it aims to contribute to a scarce pool of publications dealing with our duties towards liminal animals. Authors have not devoted much attention to this subset of animals, and the relevant questions our coexistence with them raises deserves more engagement by those working in normative fields such as ethics and political theory. Secondly, this thesis also aims to lead to a review of the ways in which we treat these animals. By providing strong arguments in defence of the view that we should refrain from harming and also help them, I aim to make readers, stakeholders, and institutions reflect on their behaviour, and with some hope, change it.

This Introduction will lay the theoretical groundwork of the thesis, clarifying concepts, justifying certain assumptions that will be accepted throughout the thesis, and reviewing the current normative literature dealing with these animals. In Section 1, I provide a set of criteria to identify liminal animals and differentiate them from other groups of animals, such as those considered *domestic* or *wild animals living in nature*. Section 2 explains the main characteristics of the lives of liminal animals, and shows how their lives are

shaped by their coexistence with humans. Section 3 clarifies what I mean by *positive duties of assistance* and how these duties are different from *negative* ones. In Section 4 I offer a literature review of the work in normative philosophical disciplines discussing our duties towards liminal animals. Section 5 explains the contents of the thesis, and how they contribute to the literature reviewed in the previous section. Finally, Section 6 acknowledges the assumptions that I will necessarily make along the main chapters of the thesis, and briefly justifies each of them.

## 1. Liminal Animals

Rats and magpies living near urban canals, squirrels and crows in parks, pigeons and sparrows in cities, or foxes and raccoons in suburban areas. This subset of animals to whom I am referring to have received several names. If they live in cities, they are commonly called “urban animals” (see Brighenti & Pavoni, 2021). Scientists use the term “synanthropic animals” to refer to those who live in close proximity to humans and benefit from our activities (Klegarth, 2017). Some philosophers have also used different names to refer to them. Clare Palmer (2010) calls them “contact zone animals”, for Josh Milburn (2022) they are our “animal neighbours”, and Sue Donaldson and Will Kymlicka (2011) call them “liminal animals”.

Providing clear criteria to identify these animals is crucial from a normative perspective because, in order to argue that they are recipients of certain duties, it is necessary to determine who exactly they are, so we can know where those duties should be directed. The philosophers mentioned above have developed different criteria to include these animals in the categories they created. Palmer defines “contact zone animals” as those animals who usually engage in relations of mutualism, commensalism and contramensalism with humans (Palmer, 2010, p. 66). Milburn characterises “animal neighbours” similarly, as those who “live around our homes and spaces, interacting with us or the objects we have shaped to a greater or lesser degree” (Milburn, 2022, p. 88). Donaldson & Kymlicka’s “liminal animals” are those who

have adapted to life amongst humans, without being under the direct care of humans, (...) in evolutionary terms, they have been able to survive, and in many cases flourish, by exploiting the opportunities of living near humans-for shelter and food, safety from predators, or simply because we've colonized the best water

sources and microclimates. (...) Liminal animals are those who are drawn to, or adapt to, human settlement, rather than avoiding or fleeing it (or being destroyed by it), and this results in forms of dependency and vulnerability that distinguish them from both domesticated animals and truly wild animals. (Donaldson & Kymlicka, 2011, p. 217)

I will use the concept of “liminal animals” to refer to this subset of animals due to the growing literature in ethics and political theory using this concept (see, for example, Brouwer, 2018; Pepper & Healey, 2024; van Gerwen et al., 2023), as well as the use of the concept by several animal welfare organisations (see OIPA, 2024; PAZ, n.d.).<sup>1</sup> Despite the acceptance of the concept, I will provide my own criteria of inclusion in the category of liminal animals. The reason for this is that the criteria already proposed by other authors are problematic. In the case of Palmer and Milburn, the excessive focus on our *relations* with these animals excludes many of them who live around us but with whom we do not develop any specific relation, such as pigeons that do not rest in our windows, or foxes that never come to our door asking for food but who still live around us and engage with the infrastructure we have built. Donaldson & Kymlicka’s grounding is unclear, as it includes aspects such as having adapted to human settlements, exploiting our opportunities, being drawn to the spaces we have created, or displaying specific dependencies and vulnerabilities, but they do not clarify which of these characteristics are necessary or sufficient to consider an animal a member of the liminal group.

Instead of focusing on relationships, I will ground the concept of liminal animals on their location. For the purposes of this thesis, liminal animals are *wild animals that live in environments in which there is significant human presence*, including the physical presence of humans and of human activity. This does not presuppose a relationship between the humans and the animals for them to be considered liminal, but merely their location in spaces in which there is human presence. To better understand my characterisation of liminal animals, take each part of the definition:

First of all, liminal animals are “wild animals”. In this thesis, I understand the “wilderness” of an animal to be a function of the extent to which their life is *directly controlled* by humans. In this sense, *wild animals* would be defined as:

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<sup>1</sup> Eurogroup for Animals also uses the concept of liminal animals internally, and will soon publish a report recommending humane population control policies for them titled *Conflict and Coexistence with Liminal Animals in the EU: A Classification of Conflicts, Possible Solutions, and Recommendations*.

*Wild animals*: animals whose lives are not or only minimally controlled by humans.<sup>2</sup>

By having their life controlled by humans, I am referring to active and intentional dominance of most or all the aspects of their lives. Some wild animals are subject to some degree of control, such as when their movements are restrained by fences, or when their reproduction is controlled. However, in these cases, while their *degree of wilderness* may be affected, they would not lose their *wild* status, as not most or all the aspects of their life will be controlled by humans. Animals whose life is controlled in this way would be considered *domestic animals*:

*Domestic animals*: animals whose life is mostly or entirely controlled by humans.

Examples of domestic animals include *companion* animals (with whom we live in our homes), *farmed* animals (those we use for food or clothing), *laboratory* animals (those used for scientific experiments), or *zoo* animals (those living in confinement to be seen by humans).

According to these definitions, then, liminal animals belong to the wild category, as their lives are mostly uncontrolled by humans (they are “free-roaming”). In many cases, authors identify wild animals with those wild animals *living in nature*. However, if one follows my understanding of wilderness, based on the extent to which there is human control over an animal’s life, then the category of wild animals also includes liminal animals. Under this classification, some animals typically considered wild would fall in the category of domestic, such as confined tigers in zoos or farmed deers. This, again, is a consequence of understanding the concept of “wilderness” based on *control*, rather than on other aspects such as the degree of domestication of these animals.<sup>3</sup>

The other part of the definition of liminal animals concerns “living in environments with significant human presence”. By “living”, I mean spending an important portion of their time in these environments. And by “significant human presence”, I mean both the physical presence of humans, as happens in crowded cities in which liminal animals coexist with humans; and the presence of human activity, such as human-built infrastructure. The latter

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<sup>2</sup> Some authors have defined wild animals similarly (see Animal Ethics, 2020, pp. 9–15; Rolston III, 2004, p. 73).

<sup>3</sup> Surely, some wild animals will be subjected to some levels of control over their lives, such as when we condition whether they can reproduce or restrict their movements. However, in these contexts, their degree of wilderness will be conditioned, but not their status as wild animals, as their lives will not be *entirely controlled* by us as per the definition of control given above. For a discussion about the grounds of “wilderness” of wild animals and the extent to which it can be affected, see Palmer (2016).

case includes examples like heavily modified natural environments, such as in places around wind turbines or national parks where roads are present, and industrial settings with barely any humans, such as in agricultural lands in which harvesting processes are heavily automated and human presence is scarce. The relevance of human presence to determine the category to which these animals belong is grounded on the extent to which the lives of animals are influenced by it. So, while liminal animals may be considered members of the broader category of wild animals, their lives are significantly different to the lives of wild animals living in nature due to their living around humans. This justifies locating them in another category not only for *ecological* and *ethological* reasons (as I will explain in the next section of this Introduction), but also for *normative* reasons, as the fact that their lives are conditioned by us can change the duties they are owed.

Liminal animals, then, are characterised by their wild status, while at the same time living around humans, which significantly influences their lives. In some cases, however, animals will not be immediately classifiable as liminal, domestic, or wild living in nature. Take the three following problematic issues. First of all, many animals live in the boundary of wilderness, in the sense that their life is not directly controlled by humans, but there is some large degree of control or potential control. This is the case, for example, of cats who spend large portions of time outside their home and only come back for food or when they need to rest. In a way, these cats are liminal, as they are wild in the sense that no one exerts direct control over their life but live in human environments. In another, they can be considered domestic, as their guardian could at any time when the cats come in, lock the door and prevent them from going out. In problematic cases like these, the degree of wilderness of and control over the animal must be evaluated to decide to which category they belong. However, as it was mentioned above, *some* degree of control (such as the one exerted on animals under contraceptive programmes) does not entail that they lose their wild status, as not *most* or *all* aspects of their life will be controlled, and they would retain their free-roaming status (see Palmer, 2016). Another problematic realm in classifying liminal animals regards the *length of time* animals live in environments in which there is human presence. Migrant animals, for example, such as geese, spend large portions of the year in human environments, such as in public parks, but when they migrate they also spend large periods of time in nature, which makes them difficult to classify under one category only. These animals may be considered liminal when they live alongside humans and wild but not liminal when they live fully away from humans. Thirdly, in some cases it is difficult to determine what can be considered an

environment with significant human presence. On one side of the spectrum we encounter cities, which are full of humans and human-built infrastructure, and on the other side, there are spaces without or almost no human presence, such as some forests or seas.<sup>4</sup> But in between there is a variety of areas in the grey zone, which include abandoned cities or industrial areas, natural parks with occasional human presence, or reservoirs that open seasonally for humans. Animals living in these spaces are not easily classifiable, and each case should be evaluated independently to determine the degree of human presence in the animals' environment. All these problematic cases represent the boundaries of my classification of liminal animals. In many cases, animals we consider domestic will be considered liminal under my definition, such as in the case of feral domestic dogs. And in many other cases, animals we consider wild, but not liminal, such as deers living in natural parks or breams living in reservoirs that are highly managed and populated by humans, will be considered liminal.

Having acknowledged these difficulties, it must be recognised that those not easily classifiable are a minority. For the proposed criteria makes it very easy to identify animals who fit very clearly into the liminal category. We can easily identify many animals who live with no or little human control inhabiting environments where there is significant human presence, such as cities, residential areas, industrial zones, or agricultural lands; and we can thus include them in the liminal category. Typical liminal animals, then, would include pigeons, squirrels, rats, mice, foxes, racoons, magpies, seagulls, and crows.

Despite often referring to liminal animals by their species (as done immediately above), it is important to note that the categories I am dealing with (wild, domestic, liminal) do not classify animal species. Rather, they classify *individuals*. Many pigeons of the *Columba livia* species who live freely in cities are liminal. However, many of them also live in confinement and are used for racing, and they would be better categorised as domestic. But some of them also live in rocky cliffs near the sea in a wild but not liminal state. These categorisations, then, are not based on species membership, but rather on the degree of control to which specific individuals are subjected and their location in environments where there is human presence. The category to which they belong does not also depend on whether the animal has been *domesticated* or not, meaning the process of selective breeding to

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<sup>4</sup> Some authors, such as Bill McKibben (2014) have questioned the idea that “nature”, understood as “untouched nature” still exists. This is only tangentially relevant for this discussion, as my classification of wild animals does not depend on them remaining a “natural” status, but only being free of human presence.

develop certain desired characteristics (see Purugganan, 2022). There are domesticated and non-domesticated animals throughout the three categories I have identified. There are wild animals living in nature who are domesticated, such as in cat colonies living in nature. There are also domestic animals who have *not* been domesticated, as it is the case for most animals living in zoos. And in the case of liminal animals, there is a variety of domesticated (pigeons or cats) and non-domesticated (squirrels or foxes) animals belonging to this category.

## **2. The Characteristics of the Lives of Liminal Animals**

After identifying who these animals are, and before doing any normative work defending the idea that certain duties apply to them, one needs to understand how these animals tend to live. This is not only important contextually, to differentiate liminal animals from other wild animals, but also normatively: the characteristics of their lives, including whether they suffer or live happily, whether they are affected by human activities, or if our presence changes their behaviour, are relevant to analyse what kinds of duties we owe them. In what follows, then, I will briefly explain some of the common characteristics of liminal animal lives.

The lives of liminal animals are very clearly different from those of many domestic animals, who tend to have secure food provision by their guardians, are often taken to the vet when they get sick, and in many cases are protected from the attacks of predators. Importantly, however, liminal animals also live different lives to other wild animals living in nature, having to face specific challenges and benefits to their condition. Liminal animals encounter unprecedented mortality risks from anthropogenic sources, including increased competition and injuries, more disease and parasite prevalence, extreme weather conditions intensified by urban features, noise and light pollution, crashes against infrastructure, low quality diets provided by human leftovers, and direct harm caused by humans who may hunt, poison, or trap them (Animal Ethics, 2021). Data from a rescue center in Somerset, UK, between 2012 and 2021, shows that the main reasons for admission of liminal animals included orphaned animals, followed by injuries, including injuries resulting from vehicle and window collisions, falls from height, and trauma from garden or farming equipment (Mullineaux & Pawson, 2024).

Conversely, liminal animals also experience several benefits from living in close proximity to humans. They gain access to abundant and predictable anthropogenic food sources, including food waste, pet food, bird feeders, and agricultural products. The

predictability of human-provided resources is a massive advantage, offering consistency throughout the year compared to the fluctuations of natural food sources (Fehlmann et al., 2020). This reliability allows for more efficient energy allocation, potentially leading to higher reproductive rates and better individual health. Additionally, urban environments offer shelter in human-built structures, providing protection from extreme weather. Liminal animals also benefit from reduced populations of natural predators in urban areas. This decreased predation pressure allows them to modify anti-predator behaviors and allocate more energy to other activities (Eötvös et al., 2018).

It is important to note that despite all these specificities of liminal animals' lives, they share with other wild animals the fact that their populations are, most of the time, regulated naturally. This means that their population growth is determined by factors such as access to food, diseases, and attacks from other animals. In many cases, their populations will be limited by food availability. In these cases, if parents have more offspring than the environment can provide for, animals will die after a period of starvation. This ecological tendency has been documented in the cases of squirrels in Yukon, Canada which, in the period 1989-2015, juvenile mortality reached 74% (Fisher et al., 2017). Similarly, it was proven that in the period between 1994 to 1995 juvenile pigeons in Barcelona, Spain, often starved to death (Sol et al., 1998). These, however, are not exceptions, but the norm for those liminal animals whose populations are limited by resource availability.

### **3. Positive Duties of Assistance Towards Liminal Animals**

In order to examine what kind of duties are owed to liminal animals in virtue of their life conditions, we first need to clarify what a duty is. In this thesis, I will understand a duty as a normative obligation to behave in some particular way, supported by reasons justifying such obligation. I am accepting that a duty corresponds with someone being entitled to the protections or benefits of such duty (see Feinberg, 1966; Hart, 1958). For example, if there is a duty to protect pedestrians from the risks caused by traffic, then this means that pedestrians (meaning specific people) are entitled to being protected from the risks of traffic.<sup>5</sup>

Among the kind of duties that can be owed to liminal animals, there are mainly two different options available. I have stated before that this thesis will argue in favour of the

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<sup>5</sup> As a consequence of the ecumenical approach taken in this thesis, based on reviewing the implications of several theories (more on this in the Methodology section), I will refrain from using the language of rights to refer to these kinds of entitlements.

view that we have positive duties of assistance towards liminal animals. This follows a traditional distinction in ethics and political theory between negative and positive duties (Bellotti, 1987; 1981; Lichtenberg, 2010; Singer, 1965). The former are obligations to refrain from harming or interfering with others in ways that are detrimental for them. Having certain negative duties towards liminal animals may imply letting them live without being interfered by our actions, which may entail not using harmful methods of population control, not hitting them with our cars, not hunting them, or not building infrastructure against which they can easily collide.

Positive duties are obligations to make individuals better off, to repair past harms, or to help individuals in other different ways. Having positive duties towards liminal animals may imply, for example, implementing feeding programmes for starving animals, setting up rescue and veterinary centers for injured ones, developing vaccination campaigns for diseased animals, building dedicated spaces for them in cities, or reducing competition for food by humanely reducing their populations. Two specific examples of positive duties will be discussed in chapter 7 and 8. The former will claim that population control is a form of assistance for liminal animals, and the latter will argue that the interests of liminal animals should be included in planning decisions.

The reason for focusing on positive duties, rather than on negative ones, or both, has to do with the fact that it is widely accepted in the literature in ethics and political theory that there are negative duties towards all sentient beings, which would include liminal animals. However, there is far from a consensus on the idea that there are also positive duties towards them (see Section 4 and 6.3 of this Introduction). For this reason, in this thesis I am focusing on this latter issue, aiming to contribute to an ongoing discussion in the literature. This does not mean, however, that I will not be discussing negative duties at all. In many parts of the thesis, I will be dealing with, for example, how negative duties can be made compatible with positive duties that may minimally harm animals (such as in the case of some population control methods), or how liminal animals' negative entitlements can be reconciled with human claims to positive benefits that may harm animals (such as when the construction of hospital may imply displacing liminal animals from their habitats). Still, the central focus of the thesis will be on positive duties towards liminal animals.

It must be acknowledged that despite the commonly used distinction between negative and positive duties, a trend of publications has been defending the idea that such

distinction does not hold (see Ashford, 2011; Shue, 2020). The reason behind this is that often, it is impossible to enact one of the duties without enacting the other as well. So, for example, for a negative duty not to harm others to be implemented, one may also need to provide individuals with the positive duty of civic education. Similarly, for a positive duty to improve people's health, one also needs to implement the negative duty not to harm others' health through, for example, smoking indoors. Despite these criticisms, I will still keep the distinction, for several reasons. The first of all is that while the distinction may not hold in practice, it is possible to keep it for analytical purposes. There are many other distinctions we know are problematic in practice (public/private, nature/culture, ideal/non ideal) that are kept because they help structure the discussion of a certain topic. Similarly, keeping the negative/positive duties distinction will allow me to focus on specific types of duties that, while they may come with other negative duties associated, would probably be left undiscussed if the debate concerned duties in general. An example of this is the topic of Chapter 7, that discusses population control. In it, the distinction allows me to distinguish between the negative duty not to harm animals through methods of population control and the positive duty that can be fulfilled if a painless method of population control allows animals to live better off. Secondly, another reason to accept the distinction is that it is widely accepted in the literature I am dealing with (see Section 4 below). Keeping the distinction, then, helps me engage with the work of other authors consistently. And thirdly, there is a content-related reason to keep the distinction. One of the main contributions of this thesis has to do with arguing that *there are* positive duties towards liminal animals, and not only negative ones, as many authors claim. In order to do so, it helps significantly to keep the distinction, maintain the discussion in the terms in which it has been kept in recent times, and argue against those who hold the view that there are not positive duties towards liminal animals. In short, I acknowledge that the distinction comes with significant problems, but there are convenience reasons that justify keeping it for normative purposes.

I have defined positive duties as those that mandate improving the situation of others, making them better-off. I will use the concepts such as *assistance*, *benefiting others*, *aiding others*, or *helping others* to refer to these kinds of situation-improving actions. Now, whether an action is considered a form of assistance depends on what it means to make others better off. In this thesis, I am going to focus on making others better off as either: (i) improving their well-being; or (ii) improving their autonomy. Importantly, in this thesis I will consider assistance to be *person-affecting* (Arrhenius, 2003; Holtug, 2004). This means that for an

action to count as a form of assistance, it needs to benefit specific individuals, and not only raise the total amount of well-being in a certain group of individuals. In order to illustrate this idea, consider the following situation. Imagine 10 pigeons doing fine. Their level of well-being is not very high, but it is enough for them to have a life worth living. There are two actions one can do. First, one can improve the well-being of each individual pigeon by, for example, giving them easier access to food. Second, one can increase the number of existing pigeons while keeping their levels of well-being intact. In this case, only the first will be considered a form of assistance, as only in the first case are individuals made better off. In the second case, the total amount of well-being is increased, but no individual is benefitted from that. This will become relevant in Chapter 1, where I discuss consequentialist duties towards liminal animals, and in cases of population control discussed in Chapter 7.

#### **4. Existing Normative Approaches to Liminal Animals in the Literature**

The question of our duties towards liminal animals has not received much attention in the history of animal ethics and animal politics. While other disciplines, such as geography, sociology, or critical theory have engaged and keep engaging with the specific questions raised by the condition of these animals,<sup>6</sup> only a few authors in normative disciplines have discussed what duties they are owed. In what follows, I will provide a literature review of the existing discussions of our duties towards liminal animals. I divide the review into those contributions that claim that there are distinct duties towards liminal animals different to those owed to other wild animals, and those that think that duties towards liminal animals are the same as those owed to all other wild animals. The former views are characterised by the idea that there is something morally relevant in the living conditions of liminal animals (such as their relations with us) that trigger certain duties that are not present in the case of other wild animals. For the latter, however, liminal animals, by virtue of their status as wild animals, are owed the same duties as any other wild animal, including those living in nature.

##### **4.1. *Distinct Duties Towards Liminal Animals***

Authors who think that there are distinct duties that apply to liminal animals usually ground those duties on certain morally relevant relations we have with them. As such, these authors tend to think that if there are positive duties towards liminal animals, they are either restricted to certain special scenarios, or they are very limited compared to the positive duties owed to

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<sup>6</sup> Examples of this can be found in Acampora (2004), Emel et al. (2002), Sheikh et al. (2023), Shingne (2022), Shingne & Reese (2022) and Zask (2022).

other animals, such as domestic ones. Among these authors, Clare Palmer, Josh Milburn, and Sue Donaldson and Will Kymlicka have provided the three most discussed approaches.

According to Palmer (2010), there is a general negative duty not to cause unjustified harm to animals in general. Specifically about wild animals, she considers that a "*laissez-faire*" intuition is justified: their fate, when shaped by natural events, is generally not our moral responsibility, and we should typically refrain from intervening to help them. We do not have, in principle, positive duties towards them (pp. 63–66).

Positive duties towards animals, however, could be triggered by certain morally relevant relations we may have with them. According to her, these relations are present with domestic animals, and therefore we have positive duties towards them. However, she also argues that these relations *can* be present with “contact zone” ones (which is a similar subset of animals to liminal animals). While Palmer does not develop a specific account of our duties towards this specific subset of animals, she does provide a set of reasons that would justify the triggering of positive duties towards them. According to her, both the creation of *vulnerabilities and dependencies*, and the *past infliction of human-caused harms* lead to these animals being owed positive duties; such as, for example, a duty to alleviate their suffering even if it has a natural cause (pp. 96–114). Situations in which positive duties towards these “contact zone” animals are triggered, include, for example, when coyotes are displaced from their habitats and duties to restore their situation are created (pp. 102–106). However, in many other cases, these relations will not be present, and therefore, positive duties towards liminal animals will not be triggered. According to Palmer, there are even situations in which it can be said that there is a relation with liminal animals, but where a positive duty is not triggered, as the relation may not be considered morally relevant. An example of this is finding a family of newborn rats living in a dumpster that will likely die if they are not helped. Following Palmer, since one has no responsibility for creating their situation, such a case would not trigger positive duties toward the rats (pp. 106–114).

Milburn (2022) defends a similar relational view in the context of *feeding* animals, which can be considered a positive duty. According to Milburn, there is no positive duty to feed all our “animal neighbours” (again, a category similar to that of liminal animals), but our relationships with them may ground duties to do so. Depending on whether these animal neighbours are our “friends” or “foes” (depending on whether we welcome them into our spaces and choose to feed or not), the dependency relation we have with them, and the degree

of familiarity we have developed with them, feeding them may be considered impermissible, permissible, or obligatory (which would mean that one would have a positive duty towards them). For example, for Milburn, if someone is responsible for becoming the sole source of food of an “animal friend” (a subcategory of animal neighbours), making them dependent on such food provision for survival, that animal would become something akin to a family member, which would carry with it positive duties to feed them (see pp. 84–95). A similar structure occurs when it comes to protection from predation. According to Milburn, we have a duty to protect our “animal friends” from predators, derived from our “hospitality” in welcoming them to engage with us. However, no duty of this kind exists with our “animal foes” (another subcategory of animal neighbours), as we have not extended “hospitality” to them. This means that, for example, we have a duty to protect the house sparrows we welcome into our garden from predators such as hawks, but we are not obliged to protect the crows we expel from our bird feeder (see pp. 95–104).

Finally, Donaldson & Kymlicka (2011; 2016) have developed a specific framework to derive different duties towards animals depending on whether they belong to the category of “domesticated”, wild, or liminal.<sup>7</sup> What differentiates this approach from the previous relational ones is its specific *political* focus. According to them, domesticated animals, by virtue of them being *members of society*, should be granted *citizenship* status, which entitles them to extensive negative and positive duties (2011, pp. 101–155). Contrarily, wild animals, for them, live in *sovereign wild animal communities*, and argue that the primary duties owed by humans are negative, with positive ones only arising in very specific cases, such as to save them from natural catastrophes (2011, pp. 179–187).

According to Donaldson & Kymlicka, however, liminal animals do not qualify for *citizenship* as domesticated animals, nor can they be granted separate *sovereignty*, as wild animals due to them not forming their own communities. Instead, they think liminal animals, due to their societal status akin to migrant workers, should be considered *denizens* (pp. 210–251). As such, they would be primarily owed negative duties, and a limited set of positive ones, including: ensuring their secure residency (i.e., protecting their habitats and allowing them to live in them); safeguarding them from stigma; and proactively considering them in the planning and design of shared environments to facilitate coexistence and

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<sup>7</sup> Their classification differs from mine, among other things, in that they refer to “domesticated” animals, not “domestic” ones, as they think that animals in this category should have gone through a process of domestication (see pp. 73–155). As I will not be dealing with duties towards domesticated or domestic animals, this will not affect the arguments or my engagement with their theory.

minimise conflict. These duties, while they might involve creating friendly urban infrastructure or developing fair protocols for managing human-animal encounters, do not include other extensive positive duties to which animal *citizens* (domesticated ones) are entitled to, such as medical care or providing them with an appropriate diet.

#### **4.2. Duties Towards Wild Animals in General**

Another set of authors working on duties towards non-domestic animals do not consider that distinct duties exist towards liminal animals. Rather, they simply focus on exploring our duties towards all wild animals, irrespective of their situation with regards to humans. While many of them specify that their conclusions apply to wild animals living in nature, many of their arguments would also apply to liminal animals, as the *grounding* of their arguments tends to be independent of whether the animals live in nature or in close proximity to humans. In this sense, many of the conclusions of their theories apply similarly or equally to liminal animals. Many of these authors, contrary to the tendency of the group of authors discussed above, argue that these positive duties are wide-ranging, meaning not limited to certain contexts. In this sense, they challenge the idea that wild animals are primarily owed negative duties (what Palmer calls “the *laissez-faire* intuition”)<sup>8</sup>, and do so from different theoretical perspectives.

Catia Faria (2022) and Oscar Horta (2017), following a *consequentialist approach*, are leading proponents of the view that humans have positive duties to intervene in the lives of wild animals to reduce their suffering, provided we can do so confidently to avoid unintended consequences. A consequentialist view like theirs, is grounded in the sentience and suffering of wild animals, and so is independent of the proximity of wild animals to humans. For this reason, it also justifies positive duties towards liminal animals. These views also support strong negative duties not to harm them, grounded on the increase in suffering that would bring.

Their justification for these duties rests on several interconnected arguments. Firstly, they systematically challenge the “idyllic view” of nature, arguing against the romanticised notion that wild animals live predominantly happy and fulfilling lives when left undisturbed by humans. Faria (2022, pp. 60–84) and Horta (2010) argue that the overwhelming majority of wild animals endure short lives characterised by starvation, predation, disease, accidents,

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<sup>8</sup> Which is a widespread intuition held and argued for in the history of animal ethics and politics. See, for example, Donaldson & Kymlicka (2011), Francione (2008), Palmer (2010) and Regan (1983).

and harsh environmental conditions. As I mentioned earlier, this is also often the case for liminal animals, since they are subject to the same natural processes and challenges as wild animals (see *Animal Ethics*, 2021). Secondly, their positions are rooted in a rejection of speciesism, which implies that the suffering of an animal should be given the same moral weight as comparable suffering experienced by a human. And thirdly, the primary driver of their arguments is the consequentialist imperative to minimise preventable suffering. Given the amount of suffering experienced by wild animals, they argue that there is a moral obligation not only to refrain from causing additional harm (a negative duty) but also to actively help animals and reduce their suffering, including from human and nature-caused events, provided such interventions can be expected to be effective (see Horta, 2017; Faria, 2022, pp. 85–87). I will explore the specific implications of this view for liminal animals in Chapter 1 of this thesis.

Other authors have reached the same conclusion, but from *non-consequentialist* premises. First of all, Kyle Johannsen (2020, pp. 29–47) offers an argument based on a non-consequentialist general duty of beneficence to assist wild animals in need. According to him, the vast amount of suffering in the wild triggers a duty to help others, but which is severely constrained by the priority of negative duties over positive ones. This means that while there is a positive duty to help wild animals, the negative duty not to harm them may make any assistance impermissible if in order to help animals one has to harm them. Applying this theory to liminal animals leads to similar conclusions to the consequentialist approach: if animals are in need, we have a duty of beneficence towards them, and we should help them, independently of their location with regards to humans.

Secondly, Tristan Katz (2023) advocates for the application of *principism* to determining the duties owed to wild animals. This model is based on four principles widely accepted in other ethical domains, such as medical ethics, including *non-maleficence*, *beneficence*, *respect for autonomy*, and *justice*. The principle of non-maleficence grounds negative duties to avoid causing harm to animals. The principle of beneficence supports positive duties to act for the benefit of animals, contributing to their welfare and alleviating their suffering. According to Katz, it should be balanced against non-maleficence so that we intervene only in ways that we can be confident will reduce suffering and do not cause harmful unintended consequences. Respect for autonomy suggests that interventions should, where feasible, support or enhance the autonomous choices and flourishing of animals.

Finally, the principle of justice calls for the fair treatment and equitable consideration of their interests. Katz argues that these principles, when applied consistently and in a non-speciesist fashion, lead to the recognition of both negative and positive duties towards wild animals. The grounding of these principles, again, is not based on our relations with wild animals, but on the independent justification of each principle. For this reason, then, if liminal animals are considered wild animals, these principles also apply to them.

Finally, Alasdair Cochrane (2018) develops an *interest-based rights approach* to animal politics, arguing that animals possess rights grounded in their interests as sentient beings. For Cochrane, the most significant interests are the interest in not suffering and the interest in not being killed, as continued life and freedom from pain are prerequisites for the fulfillment of almost any other interest an animal might have. These interests generate strong reasons to consider all sentient animals members of our political communities and to organise our political institutions in ways that protect animals from suffering and death (a negative duty), but also to use such institutions to proactively help animals live better lives (a positive duty) (pp. 80–99). Following from this, Cochrane rejects the idea that wild, domestic, and liminal animals would be owed different duties and argues that recognising them as members of our communities entails that all of them would be entitled to an extensive range of positive protections, including, for example, to healthcare (2013).

## 5. Contents and Contribution

As I have just shown, there are roughly two approaches to assigning duties towards liminal animals. On the one hand, those who argue that there are *distinct* positive duties towards these animals tend to think that these are limited to certain contexts (such as in cases where we have morally relevant relations with them, in the cases of Palmer and Milburn), or that they are limited in comparison to the positive duties owed to other individuals (in the case of Donaldson and Kymlicka). On the other hand, those who claim that there are no specific positive duties towards liminal animals, but only to wild animals in general, tend to argue that these are widespread (not restricted to specific contexts) and extensive, meaning that they require a lot from those who have the duty, including protecting their health, providing them with adequate food, and constructing specific infrastructure for them.

This thesis sits in between these two approaches, and will argue that there are *distinct* duties towards liminal animals, and that at the same time, they are widespread and extensive.

In doing so, it will cover the existing gap between the two approaches reviewed above. To do so, it will not focus on defending such idea from a single theory. Rather, it will show that this view follows from three widely accepted ethical theories and from three principles of political inclusion. In doing so, this thesis will not commit to the correctness of any of these theories (although they will be properly justified), and instead it will demonstrate that the idea that there are positive duties towards liminal animals does not depend on holding any specific view in ethics or politics (such as consequentialism), but rather follows from theories that have traditionally argued that positive duties towards liminal animals either do not exist or are very limited.

This thesis also contributes to the literature in a different and even more novel way: it examines the practical implications that follow from accepting that there are positive duties towards liminal animals. Very often, the academic discussion of what we owe wild and liminal animals discusses this only in passing, as a way of illustrating the arguments in favour or against helping non-domestic animals. In this sense, authors often defend that there are ways to help non-domestic animals, but deep reflections about these practical ways of helping them are often missing from the literature.<sup>9</sup> This thesis develops an analysis of ways of realising the positive duties owed to liminal animals, specifically in the context of population control and urban planning. In doing so, it enriches this body of literature, not only showing that these duties are justified in theory, but that they can also be realised in practice.

To organise this contribution, this thesis is divided into three parts. Part 1 deals with *ethical theories*. In it, I show how three widely accepted theories lead to the view that we have positive duties towards liminal animals. Chapter 1 argues that *consequentialist theories* justify these positive duties, grounded on our capacity to effectively improve their lives. In it, I also argue that most objections directed against the consequentialist argument according to which we have duties to help wild animals in general do not work when they are directed at liminal animals. Chapter 2 argues that the same conclusions are reached by analysing *autonomy-based theories*. In this chapter, I argue that valuing autonomy intrinsically not only leads to a negative duty to respect individuals' choices, but also to a positive one to improve their autonomy by enhancing their choice-options. In doing so, it provides a novel autonomy-based way of justifying positive duties towards liminal animals. Chapter 3 examines *relational theories*, and argues that we are related to many liminal animals in four

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<sup>9</sup> There are exceptions to this. See, for example, Brouwer (2018), Horta & Terán (2023), Johannsen (2020, Chapter 5), Murado Carballo (2025) and Palmer (2021).

different ways that are considered morally relevant by different authors, which leads to more extensive positive duties towards them than traditionally thought. As I explain in the introduction to Part 1, the choice of these theories responds to a combination of the alignment with the way in which I am understanding duties, and the relevance they have gained in the literature applied to liminal and wild animals. This part, then, contributes *both* to the often neglected ethical discussion about liminal animals, examining our obligations towards these specific group of animals with whom we coexist daily; but also to the literature about wild animals in general, showing that the idea that there are positive duties towards them (as liminal animals are part of the broader group of wild animals) can be defended from positions different from the ones which have received most attention, such as consequentialism.

Part 2 is devoted to *principles of political inclusion*. In this part, I offer a different approach to analysing our duties towards liminal animals. Instead of examining the conclusions of ethical theories, I tackle the question of whether liminal animals should be considered *full members of our political communities*, and if so, what positive duties that triggers for political institutions. In it, I examine three of these principles of political inclusion and argue that according to them, liminal animals should be considered full members of political communities, and owed similar positive duties to other members, such as public provision or access to state benefits. This part starts with Chapter 4, where I argue that the All-Affected Interests Principle can be applied to liminal animals, showing that it leads to the view that they should be considered full members of our political communities, which entitles them to a range of positive benefits. Chapter 5 argues that the same is the case with the All-Subjected Principle, claiming that by virtue of liminal animals being bound by laws and coerced by political institutions, they should also be considered full members of our political institutions. Chapter 6, then, closes Part 2 by turning to the Social Membership Principle. In it, drawing on Donaldson & Kymlicka's (2011) interpretation, I show that animals are members of society, and that therefore, they are entitled to either an extended form of denizenship or to citizenship status. Again, the justification for the choice of these three principles, which is laid out in the introduction to Part 2, has to do with the extent to which they are discussed in the literature applied to animals. This part, then, adds a layer to the contribution provided in Part 1 and the thesis overall: it not only shows that there are other theoretical approaches that can justify positive duties towards liminal animals, but does so from an explicitly *political* approach. In doing so, it develops new arguments to show that the three principles justify the inclusion of liminal animals as full members of political

communities, and argues that this inclusion triggers positive duties towards them. As such, it contributes to the field of *animal politics* (see Garner & O'Sullivan, 2016)

Finally, Part 3 is devoted to *practices*. In it, I explore two practical ways in which the positive duties owed to liminal animals could be applied in practice. Chapter 7 discusses *population control* and defends it as a form of assistance towards liminal animals by, among other things, reducing competition for food and disease transmission. The reason for choosing this topic has to do with the fact that population control methods are already widely applied to liminal animals, but with no or little regard for the interests of the animals concerned. In most cases, painful and ineffective methods are used, for reasons that have to do with human preferences, rather than with the intention to help animals. By arguing that certain methods of population control not only *can*, but *should* be used for the benefit of animals, this thesis is making an original contribution not only to normative fields dealing with animals, but also to advocacy and policy groups that aim to improve the living conditions of liminal animals. Finally, Chapter 8 discusses our duties towards liminal animals in the context of *urban planning*. In it, I argue that liminal animals' interests should be included in planning decisions, propose a protocol to eliminate or minimise harm to animals in planning processes, and use the framework of livability to claim that authorities should benefit liminal animals by making urban areas more livable for them. The selection of this topic is for several reasons. First of all, cities are one of the main places of human-liminal animal coexistence. By reflecting and proposing new avenues of behaviour to reduce harm and benefit animals in cities, I am tackling one of the key strategic sites to change our harmful relations with liminal animals. Secondly, the context of urban planning allows me to directly engage with the *burdens* created by the idea that there are positive duties towards liminal animals. As mentioned above, for example, arguing that a certain area should be left for liminal animals to live can mean that it is not possible to build something in it for the direct benefit of humans. The topic of urban planning, then, will allow me to focus on the demandingness of the idea that there are positive duties towards liminal animals, and explore how this demandingness can be tackled. And thirdly, focusing on urban planning allows me to engage with the aforementioned contributions in geography, planning, and architecture that deal with liminal animals. In doing so, then, this thesis does not only contribute to the normative literature discussing our practical duties towards liminal animals, but it also contributes to these adjacent fields by providing a distinct approach and novel conclusions.

## 6. General Assumptions

In a work that covers so many different topics, several assumptions will need to be accepted throughout the text to avoid making it too long and difficult to follow. To end this Introduction, then, I will review the assumptions I will be accepting, and briefly justify each of them to avoid relying on uncritically assumed intuitions or premises.

### 6.1. *Animals Matter Morally*

The first assumption I will make is that nonhuman animals matter morally. In other words, they have *moral standing* or *moral consideration*, meaning that we should take them into account for actions that would affect them. I assume that sentience is sufficient to be a subject of moral concern (see Horta, 2013). There is now scientific consensus on the fact that many animals, including all vertebrates, are sentient, that is, capable of having interests and a well-being of their own (Andrews et al., 2024; Low, 2012), and therefore, their interests should be taken into account for ethical decision-making.

In line with this, I will also assume that what we take well-being to be does not alter the idea that animals should be granted moral consideration. Different authors have accepted that well-being consists of different things. *Experientialists* or *hedonists* claim that the well-being of animals consists in the set of positive and negative mental states they can experience (Bramble, 2016). *Preferentialists* consider that well-being is formed by the set of their satisfied and frustrated preferences (Bykvist, 2016). And *objectivists* or *perfectionists* think that well-being consists of an objective list of things that are in itself good and bad for individuals (Rice, 2013). But whichever account is adopted, the claim that animals matter morally would not be altered, as it is compatible with any of these theories. It can be argued that, for example, that pigeons' interests should be taken into account in deciding whether to use poison to control their populations because doing so may make them *experience* suffering, because it goes against their *preferences*, or because it is *objectively bad* for them to be poisoned.

I will also assume that it is not necessary to think that well-being is what matters in order to be a subject of moral consideration. Other approaches, for example, those that ground moral consideration in *agency* (see Sebo, 2017), are also compatible with the contents of this thesis as they support the assumption that many animals (and for the purposes of this

thesis, most liminal animals) matter morally. I will justify in detail the idea liminal animals are agents or *autonomous beings* in Chapter 2.

I will also assume that not granting animals with *moral consideration* or giving their comparable interests *less weight* merely because they belong to a certain species would be a form of *wrongful discrimination*, often called *speciesism*. Instances of speciesism can occur between different species of non-human animals, such as when we give more consideration to the interests of dogs than to similar ones held by pigeons. Many instances of speciesism, however, occur between humans and other non-human animals. In cases like these, this would be considered a form of speciesism called *anthropocentrism* (Horta, 2010d). A clear example of anthropocentrism in the context of this thesis involves the use of painful methods of population control to reduce the populations of rats, which is something we would never do in the case of humans. What makes instances of speciesism a wrongful discrimination is that they *unjustifiedly* lead to treating individuals differently in ways that are harmful for them. If we could give strong and satisfactory reasons for not taking into account the interests of some nonhuman animals or for giving their similar interests less weight, then there would be no problem in treating them differently, other things being equal. However, it seems that all reasons we can give in defence of speciesism fail for many different reasons (see Horta, 2022). There is one reason, however, that is common to most of these justifications. Most arguments in defence of speciesism, and specifically anthropocentrism, are based on the idea that humans possess a certain characteristic C that other animals do not possess, that is relevant in giving humans a special moral consideration. For example, it has been argued that the fact that humans possess a complex language justifies morally considering our interests, but not those of other animals.<sup>10</sup> Every justification that follows this structure, however, would be vulnerable to the objection from *species overlap* (Dombrowski, 1997; Horta, 2010b, 2010c, 2014). What this objection says is that for a characteristic C to be relevant for moral consideration, such characteristic C must be shared by all members of the species who should be given moral consideration. In case of the justification of anthropocentrism based on the possession of complex language, then, this objection would point out here that this claim is unsatisfactory, as it excludes, for example, children of young age (Horta, 2010b; 2010c).

Making the assumption that animals matter morally, however, does not mean that all animals and all humans should be *treated* equally. Rather, it means that *similar interests*

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<sup>10</sup> This argument, as well as others in defence of anthropocentrism, can be found in Carruthers (1992), Scruton (2006) and Kagan (2019).

should be given *similar weight* in moral terms. For example, if a pigeon and a human have a conflict, and in the process of resolving it both would suffer equally from being poisoned, there would be no reason to give poison to the pigeon. But often, humans and many animals do not have *comparable interests* to avoid being subjected to the same treatment. As I will argue in Chapter 7, for example, many liminal animals do not have the same interests as humans in autonomous reproduction. This would justify using *some* methods of population control in *some* liminal animals, but not in humans.

## **6.2. *Death Harms Individuals who Would Otherwise Have a Life Worth Living***

To say that animals have a well-being of their own, however, does not say anything about the extent to which they are harmed by death. This is an important issue, as many parts of this thesis would be concerned with the wrongness of killing animals or with obligations to save animals from death. This includes, for example, analysing whether lethal methods of population control should be used, or whether one should help a baby bird who has fallen out of their nest and will likely die if they are not assisted. There are three main theories that explain why death is a harm for individuals. I will not explicitly defend any of them. But I will explain why they all agree that death is a harm for animals.

The first theory is the *deprivationist* account of the harm of death (Broome, 2012; Nagel, 2012). According to this view, death harms individuals because it deprives them of all the positive well-being that they could have enjoyed if they had not died. If one accepts that animals have a well-being of their own, then this theory leads to the view that killing animals harms them by depriving them of future positive well-being.

The second theory is the *preferentialist* account of the harm of death (Singer, 1993 83–134). This view follows from accepting that well-being consists in the set of satisfied or frustrated preferences individuals have. So, having a preference satisfied is what makes someone's life go well, and having a preference frustrated is what makes someone's life go badly. Death makes it impossible for individuals to satisfy their preferences. Therefore, according to this view, death harms individuals by not allowing them to satisfy their preferences or by frustrating their preference in a continued life.

For its part, the *time-relative interests* account of the harm of death (McMahan, 2002) mixes and refines the two theories exposed above. It claims that death harms individuals not only because it deprives them of future goods, but also because it thwarts the future-directed

interests that individuals have. For example, if someone has the interest of going out on a hike on the weekend and dies during the week, death would frustrate the future interest of doing the hike, and therefore would harm that individual. According to this theory, then, those individuals more highly connected to their future are more harmed by death. Although some people have argued that many animals are not or less connected to their future, and therefore cannot be harmed by death (McMahan, 2021), two things must be noted. The first is that this account of the harm of death does not reject the *deprivationist* one. Rather, it maintains that the harm of death is a function of both the deprivation of future goods, and the frustration of future interests. Therefore, animals would be harmed by being deprived of well-being even if they do not have future-directed interests or if these are very weak. But it must also be noted that others have argued that animals can have strong interests directed to the future (like the interest of going out on a walk tomorrow morning or of continuing existing) and that therefore, can be harmed by death in this sense (see Redshaw & Bulley, 2018).

These three theories agree that death is sometimes positive for individuals. For the *deprivationist view*, this would be the case if the life of an individual is going to contain more negative well-being than positive well-being. The *preferentialist* and *time-relative* theories would also consider that it is not negative to be deprived of a life not worth living, but would also argue that this is the case because individuals would not have a preference or interest in continued existence in the future if it is not going to be worth living.

Note that none of these theories say *why it is wrong to kill individuals*. They just say that death *harms* individuals. However, if one thinks that we have at least a pro tanto reason to avoid harming individuals (a negative duty), then it follows that we also have a pro tanto reason to avoid killing them.

### **6.3. *We Have General Negative Duties Towards Most Animals***

I have assumed that most animals matter morally, that is, that we should take their interests into account for ethical decision-making. I will assume that this grounds negative duties towards every sentient being. That is, we have obligations to refrain from doing certain things that would harm animals if we lack justified countervailing reasons to do so. There are many ways in which this can be defended: from consequentialist approaches (Singer, 2023), contractualist ones (Garner, 2013; Regan, 1983), cosmopolitan ones (Cochrane, 2018; Pepper,

2016), relational ones (Palmer, 2010), Kantian ones (Franklin, 2004; Korsgaard, 2017; Muller, 2022), and virtue-ethics ones (Donovan & Adams, 2007). Here, it is only necessary to say that having negative duties towards animals is the bare minimum obligation that follows from accepting that animals matter morally. If animals matter, then it seems that we should care about how the things we do affect them negatively.

## Methodology

In order to argue for the idea that liminal animals are owed positive duties, I will use the methods of *analytical philosophy* (see Blau, 2017). Although the methodology of this discipline is much less determined than the methodology of social or natural science, it is worth making some clarifications regarding the conceptual and methodological approaches I will use.

More specifically, this thesis is inside the academic areas of analytical *ethics* and *political philosophy* (also often referred to as *political theory*). These two disciplines are similar in the topics they analyse, as well as in the methods they use, but they also have relevant differences that must be considered:

*Ethics*: philosophical second-order reflection about the rightness of morals.<sup>11</sup>

The discipline of ethics studies the extent to which morals (that is, people's ultimate goals) are right or wrong, correct or incorrect, and therefore proposes courses of action and behaviour that may be permissible or obligatory. Relevantly for this thesis, as mentioned earlier, the discipline of ethics commonly proposes duties, that is, mandatory courses of action. Political philosophy, while also proposing courses of action, often does it with a different focus. It does not target morals, but political institutions:

*Political philosophy*: philosophical second-order reflection about the behaviour and structure of political institutions.<sup>12</sup>

Political philosophy is often considered a subdiscipline of ethics (List & Valentini, 2016) that deals explicitly with political institutions. The given definition depends, of course, on how we define *political institutions*. Here, I will maintain a very broad definition of political institutions, meaning any collective organisation with power over individuals. Political philosophy reflects on how political institutions should be designed, organised, and implemented, whom they should protect, what their scope should be, how they should distribute resources, and many other issues.

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<sup>11</sup> For discussions on what ethics is, see Rachels & Rachels (2012) and Shafer-Landau (2010).

<sup>12</sup> For an analysis of the definition, aim, and object of political philosophy, see Larmore (2020) and Strauss (1988).

It is not easy, however, to distinguish ethics and political philosophy. Often, the distinction is located in their scope: it is believed that duties derived from ethics fall on individuals, while duties that arise from political philosophy fall on collectives such as political institutions. And, it must be acknowledged, in many cases, this is true. However, this is also an oversimplification. The difference in scope of these disciplines is blurry, and in many cases duties proposed by ethical theories will fall on institutions, and duties proposed by political theories will lie on individuals (Baderin, 2021). To illustrate, consider the two following cases. First of all, the often discussed ethical positive duty to help the needy does not only apply to individuals, who may help by donating to charity, but also to states and other political institutions with the organisational capacity to scale up aid (see Singer, 1972). Similarly, many duties arising from political theories will lie on individuals, such as the duty to respect just laws arising from Rawls' theory of justice (see Rawls, 1999). Despite this, the scope of political philosophy tends to be more easily identifiable, as the focus is primarily with the duties of political institutions. In this thesis, while Part 1 may be associated only with ethics and Part 2 with political philosophy, I do not commit to keep each part watertight. Part 1, which is devoted to ethical theories will contain elements and discussions that may be associated with political philosophy (such as discussions about the moral relevance of political relations, or about certain ethical duties falling on collectives), and Part 2, which discusses principles of political inclusion, will focus explicitly on the duties of political institutions, but it will also be informed by ethical theories (including, for example, the idea of the relevance of interests or the value of autonomy). This non-strict separation of the parts of the thesis, then, responds to the blurry distinction between the disciplines of ethics and political philosophy. Despite this blurry distinction, Part 1 and Part 2 are still different in several respects. First, and most importantly, they use a different approach to grounding positive duties. Part 1 does so by appealing to properties individuals have or relations among relevant actors. For example, according to autonomy-based theories (Chapter 2), positive duties towards liminal animals are grounded on them having the capacity for autonomy. Part 2, however, examines whether positive duties are owed to liminal animals by discussing whether they are entitled to becoming full members of the political communities within which they reside. Secondly, while Part 1 is agnostic to where the positive duties would fall (on individuals or collectives), Part 2 specifically examines the duties of political institutions towards liminal animals. And thirdly, Part 1 and Part 2, for the most part, engage with different literatures, which is a reflection of them grounding duties differently.

What both parts have in common is the use of *deductive logical arguments*: a logical structure formed by a set of *premises* that lead to a *conclusion*. This will be the primary method of the thesis. I will make arguments to defend that a certain conclusion (that there are positive duties towards liminal animals) follows from certain premises. In doing so, I will make sure my arguments are consistent (meaning that it is impossible to deduct from its premises a contradiction), valid (meaning that it is impossible that the argument leads to a false conclusion if the premises are true), and that each of the premises of the argument is correctly justified. In order to justify the premises of my arguments, I will recur to empirical data (to show that, for example, liminal animals are commonly harmed by urban infrastructure) and to other arguments (to claim that, for example, we are in a morally relevant relation with many liminal animals) (see Burgess, 2016).

Much of the work of this thesis will involve analysing the implications of different *sets of arguments*, often called *theories*. In doing so, I will be following their premises to their conclusions, and showing that some of these conclusions are different from those typically discussed in the literature. In this sense, I will be taking an *ecumenical approach*, meaning a methodology whereby I do not commit to the correctness of any of the theories I discuss (i.e. them being the right way in which duties are triggered). Instead, I will explore the implications of the theory provided the arguments on which the theory is based are consistent. To do so, then, I will explain the normative foundations of each theory and the justification that authors have given for them. Then, I will construct an argument from those normative foundations showing that it leads to the conclusion that liminal animals are owed positive duties. In this sense, I will ensure that my arguments are consistent, valid, and that each premise is adequately justified.

This ecumenical methodology is far from being a novel approach to examining a normative problem. Several examples of this can be found in the literature. The most paradigmatic example of this is exemplified by the work of Derek Parfit, who argued that consequentialism, deontology, and contractualism led to the similar conclusions in typical moral dilemmas. He referred to this situation as if these theories were “climbing the same mountain on different sides” (Parfit, 2011, p. 385). Similarly, in the realm of animal ethics, Jeff Sebo regularly employs this method in several of his works. For example, he has argued that in the Anthropocene, both consequentialism and rights-based theories lead to similar conclusions regarding our duties towards animals in the context of climate change,

pandemics, and other natural catastrophes (2022). He has also argued that moral consideration towards potentially morally considerable beings, such as AI systems, could be grounded in different normative frameworks, including care and virtue ethics, consequentialism, and rights-based theories (2025). Using a similar strategy, Paula Casal (2018) has claimed that rights towards great apes are justified from a variety of rights-triggering theories.

The reason for taking this method is motivated by the recognition that the literature grounding positive duties towards non-domestic animals employs, in most cases, a consequentialist approach. This, however, limits the acceptability of the idea that these duties exist to readers who accept that consequentialist framework. By using this ecumenical method, this thesis shows that it is not necessary to be a consequentialist to accept such duties towards liminal animals exist, but that rather, they also follow from theories considered antithetic to consequentialism, such as those grounded in autonomy or relations. This does not mean that everything has already been said about how consequentialism triggers duties towards liminal animals, and precisely for this reason, this is one of the theories that I examine. Instead, this thesis shows that these duties can be accepted following this theory or the others that I discuss. In order to take this ecumenical approach, then, I will have to examine the premises used by each theory and their justification, and analyse whether following them leads to the conclusion that there are positive duties towards liminal animals.

## PART 1: Ethical theories

We all make decisions that influence how the lives of liminal animals go. We sometimes act in ways that harm them, such as when we put traps for mice in our homes or drive through a road where birds tend to cross. We also may help them, such as when we give water to thirsty pigeons, or when we support the implementation of programmes to vaccinate urban animals. This first part of the thesis will argue that three ethical theories lead to the view that we have good reasons to do the latter and help liminal animals when it is in our power to do so. In other words, it will claim that we have positive duties towards them.

The academic literature on animal ethics applied to non-domestic animals has mostly focused on discussions of our duties to avoid harming them: what are traditionally called negative duties. The possibility that we may also have positive duties towards them has received less attention, and while in recent times, there has been a debate about our positive duties towards wild animals in general, as it was shown in the Introduction, these discussions applied to liminal animals have been scarce. This part aims to contribute to this scarce literature by arguing that three mainstream, widely accepted, ethical frameworks lead to the view that we have positive duties towards liminal animals. As said before, this strategy responds to the ecumenical approach taken in this thesis, based on not only showing that this conclusion can be consistently argued for, but also that it is not necessary to accept a certain niche theory for this conclusion to follow. In order to do this, I will deal with consequentialist theories (Chapter 1), autonomy-based theories (Chapter 2), and relational theories (Chapter 3). It is important to acknowledge that despite not committing to the correctness of any of these theories, their normative foundations will be justified in order to prove that they are sound. Each of these frameworks, while different in structure and focus, leads to the conclusion that assisting liminal animals is not merely supererogatory (praiseworthy but optional), but morally required.

Other ethical theories could have been included in this thesis, such as specific rights-based ones (Hadley, 2015), virtue or care ones (Hursthouse, 2012), or those arising from critical theory (Crary & Gruen, 2022). Some of these approaches have been incorporated into some of the chapters of the thesis. For example, many rights-based theories take an autonomy-based approach (Healey & Pepper, 2020). Others, however, have been excluded for reasons that have to do with their putting less emphasis on grounding duties as mandatory courses of action, such as virtue, care, and critical theories. In the interest of

discussing the most relevant theories within the word-limits of the thesis, then, consequentialism, autonomy, and relation-based theories have been chosen. This, however, also serves as an invitation for other authors to examine what other theories have to say about our obligations towards liminal animals.

Each of these theories, then, follow their own specific arguments to derive duties towards individuals. Consequentialist theories are those that claim that what one should do is solely determined by the value of the consequences of one's actions. According to autonomy-based theories, one should behave in ways that respect the autonomy of others. And relation-based theories are those that derive duties towards others based on the relation the agent has with them. Positive duties towards liminal animals follow almost automatically from consequentialist theories if one assumes that helping them would bring about better consequences than acting otherwise. However, as I will show, not everything has been said in the context of this theory and how it grounds duties towards non-domestic animals. As I will argue, while some of the objections presented to the idea that there are positive duties towards wild animals living in nature may have force, they become much weaker when applied to liminal animals. Arguing that these positive duties follow from autonomy and relation-based theories, however, is not so straightforward. In fact, these theories have been used to defend the contrary: that either we *do not* have positive duties towards liminal and wild animals, or that these duties are restricted to very specific contexts. In the case of autonomy-based theories, it has been argued that respect for their autonomy grounds duties to refrain from interfering with their lives (Pepper & Healey, 2024). And relational theorists have claimed that in many cases, we lack the appropriate relations with liminal animals to trigger positive duties towards them, or that these duties only arise in certain specific situations (Milburn, 2022; Palmer, 2010). In the chapters devoted to each of these theories, I will argue that this is not the case, and that both autonomy and relation-based theories imply that we have extensive duties to assist liminal animals. To do this, each chapter in this part will explore one of these theories in depth. They will begin by clarifying the internal logic and normative commitments of the theory in question, and then they will show how these generate positive duties towards liminal animals.

As it was mentioned in the Introduction and in the Methodology, while this part may be associated with the discipline of ethics, it is not committed to keeping the discussion within its realms, or to imply that the duties arising from these theories will only apply to

individuals. As such, these theories will also discuss political issues, and some of the duties that will emerge from them will fall on individuals (such as the individual duty to rescue a baby bird who has fallen out of their nest), and some on collectives (this bird could be taken care by a charity, such as the Royal Society for the Protection of Birds, or by a council-owned rescue center). In doing this, I aim to contribute to the body of literature discussing our duties towards liminal animals through consequentialist, autonomy, and relational-based theories. For some authors, an *explicit* political approach needs to be taken to discuss these issues (see Garner & O'Sullivan, 2016). This approach will be then taken in Part 2.

## **Chapter 1: Consequentialist Duties Towards Liminal Animals**

### **1. Introduction**

According to consequentialist theories, what we should do is determined by the value of the consequences of our actions. That is, duties are generated by the possibility of them bringing about an optimal state of affairs. When we apply this form of reasoning to our duties towards liminal animals, we need to ask ourselves if helping them would bring about a better state of affairs than if we do not do it. This seemingly simple question generates many complications that are in need of a response before one can confidently argue that this form of reasoning triggers duties towards liminal animals. First of all, there are many issues that are in need of clarification. For example, it must be defined what “a better state of affairs” is. Secondly, one must evaluate whether liminal animals are in need of being helped, or if they are already mostly experiencing an optimal situation. If liminal animals are already living good lives, then a consequentialist reasoning like this may point to the fact that no duties to improve their situation would be generated (or perhaps only weak and non-priority duties would be generated), as there may be other individuals doing worse than them towards whom duties would be triggered. Thirdly, if liminal animals’ situation needs to be improved, whether we can confidently help them needs to be analysed. For example, while it may seem obvious that by saving a baby bird who has fallen out of their nest one would be helping them, it may be the case that one is only prolonging their suffering, or preventing their parents from feeding their other offspring.

In this chapter, I will claim that consequentialist theories can overcome these challenges and argue that, according to them, we have positive duties to help liminal animals such as birds who fall from their nests. As I mentioned in the literature review, consequentialism is the standard approach authors have traditionally taken to defend that there are positive duties towards non-domestic animals. For this reason, this chapter will be the briefest, as it is the one that needs less theoretical work in order to make my argument. As a consequence of similar arguments as mine already made by other authors, this chapter will also be the least original of all. Still this chapter serves the function of outlining the standard approach of grounding duties towards liminal animals, to then later contrast it with other different approaches that may lead to similar conclusions. This does not mean, however, that this chapter is not original at all, as it provides novel ways of applying consequentialist arguments to the specific case of liminal animals, as well as innovative responses to

objections to the idea that liminal animals are owed positive duties. This chapter will be structured as follows. I will start by, in Section 2, defining consequentialism and its main characteristics. In Section 3, I will provide an argument in defence of the view that we have positive duties towards liminal animals and justify each of its premises. Finally, in Section 4, I will discuss four objections to this view.

## 2. Consequentialism

Consequentialism is the theory (or set of theories) according to which what we should do is solely determined by the value of the outcome of our actions. Or, more technically defined:

*Consequentialism*: normative duties are solely determined by axiological considerations.

This means that what makes an action or norm correct or incorrect depends on the value of the consequence that the action or norm produces. Consequentialists are concerned with bringing about the best possible state of affairs, and therefore would consider that what we should do is act in ways that produce those best states of affairs. For this theory, the possibility of producing those optimal states of affairs automatically triggers the duty to act in ways that bring them about (see Driver, 2011). Consider, for example, a situation in which one faces the choice of helping a friend with a difficult task. Consequentialists would consider that if helping that friend would lead to a better situation than not helping them, other things being equal, one would have a duty to do it.

As I explained before, it is not my intention to accept consequentialism as the correct theory to derive duties, but just to explain its implications if it is to be accepted. Despite this, to improve the clarity of the argument, it is worth explaining how consequentialists tend to argue in favour of their position. The justification for consequentialism as a theory of generating duties comes, largely, from the fact that it has explanatory power over our intuitions. Consequentialists think that the idea that we are obliged to act in ways that directly improve the state of affairs matches many of our intuitions when it comes to morality. Due to this great reliance on intuitions, arguments in favour of consequentialism tend to be based on the rejection of objections to it, rather than on a direct defence of its normative foundations. In this sense, consequentialists tend to defend their position by rejecting appeals to the relevance of factors that may *constrain* the direct relation between duty and consequence. That is, issues that disrupt the idea that our duties are *always determined* by the value of the

consequences of the actions. For example, the objection to consequentialism based on the idea that we may not want to kill one person to save two is often met by appealing to the fact that most people will accept that it is acceptable to kill one person to save thousands, proving that the non-consequentialist objection lacks specificity, and that consequentialism matches our intuitions about creating the best possible consequences (Kagan, 1989). Similarly, the objection based on that consequentialists are not drawn to accepting promises or to refraining from lying is met by claiming that there are clear cases in which promises should not be kept, or that lies should be told, such as in the well-known example of a SS officer asking you if you are protecting jewish people (Sinnott-Armstrong, 2009). This reliance on intuitions is, however, not specific to consequentialism, but is, as I will show, a main component of the justification of many ethical theories.

A crucial aspect of consequentialist theories has to do with the discussion over what the “best state of affairs” is. This is important because if consequentialism says that with our duties, we should produce the best states of affairs we can, we need to know what those consist of. This question is examined by *axiology*: that is, the discipline concerned with evaluating the *value* of different situations (in other words, what the *best* state of affairs is). Consequentialists tend to believe that value is located in well-being: how well or badly individuals fare. As a general rule, then, for consequentialists, a state of affairs improves when well-being increases (although I will qualify and discuss this later). There are roughly two ways of evaluating well-being increases: *impersonal views* and *person-affecting views*. According to impersonal views, improvements in states of affairs depend on well-being increases that do not track how *specific* individuals fare. For example, according to *totalism*, the best state of affairs is that in which the aggregated amount of well-being held by individuals is maximised (a position usually held by utilitarians). According to *averagism*, a state of affairs improves not when the sum of all well-being held by everyone increases, but when the average of well-being increases. What these positions have in common is that they are not ultimately concerned with individuals. For example, a situation can improve for those accepting *totalism* if the number of individuals increases but their well-being (no matter how low it is) is kept stable (see Zuber et al., 2021). On the other hand, according to *person-affecting views*, as they were defined in the Introduction, situations improve when they get better for *individuals*. This means that improvements in situations must take into account how every individual fares, separately, rather than aggregating the well-being of all of them (see Greaves, 2017; Parfit, 1986). As it was previously mentioned, this thesis will

accept this latter approach to evaluating states of affairs, meaning that only situations in which individuals are made to fare better will count as an improvement of the state of affairs.

Following these foundations, then, consequentialism probably provides the most straightforward justification for positive duties towards liminal animals. This is primarily due to two features commonly found in consequentialist theories: *(i)* their focus on increasing well-being, and *(ii)* their inclusiveness regarding who matters morally. As mentioned earlier, independent of the *axiological* position one holds, consequentialists accept that what makes actions right or wrong depends on *(i)* their effects on the well-being of individuals. Therefore, if an action helps someone fare better, it generates a positive duty to do so, other things being equal. This means that if an action can improve the situation of a liminal animal, it is likely to generate a duty to do so. Moreover, consequentialist theories are generally *(ii)* inclusive in their moral scope, extending concern to all beings capable of well-being. Since most liminal animals are sentient and can experience positive and negative states (Andrews et al., 2024; Low, 2012), they are morally considerable under this framework. That is, because animals have a well-being of their own, they can be beneficiaries of the kinds of duties that consequentialism generates (John & Sebo, 2017). These two characteristics combined, then, make it possible for positive duties towards liminal animals to be generated, at least in principle.

### **3. Consequentialism and Liminal Animals**

Probably due to these convenient characteristics for triggering duties towards animals, most defences of the existence of positive duties towards non-domestic animals come from consequentialist theories. Most of them, however, have been applied to wild animals living in nature, rather than to liminal animals (see Dorado, 2015). This, however, is not necessarily a complication. If I could show that these arguments *also apply* to liminal animals, and these arguments are consistent, I would be showing that according to them, there are positive duties towards liminal animals. Among the group of defenders of these arguments, Catia Faria (2022) provides a clear, rigorous, and parsimonious argument in defence of the view that we should help wild animals living in nature when they need it. In what follows, I will adapt the argument to refer to liminal animals, and then explain why it is justified to do so. According to the argument:

On the assumption that

(i) We ought to aim at preventing or reducing the harms suffered by other individuals, whenever it is in our power to do so.

If

(ii) All sentient individuals, including nonhuman animals, are fully morally considerable

and

(iii) The interests of [liminal] animals are systematically frustrated by different natural [and human-made] events,

then

(iv) We have reasons to (...) [assist liminal animals] so as to prevent (...) [them from having] lives of net suffering or, at least, to reduce their suffering, whenever it is in our power to do so. (Faria, 2022, p. 87)

Take, then, each premise of the argument. Premises (i) and (ii) follow from consequentialism in itself and do not require adaptation to liminal animals. The first one (i) describes how consequentialist reasoning works. Preventing or reducing harms creates a better situation for those individuals who are suffering, as their well-being would be improved. This, for consequentialists, triggers the duty to prevent or reduce such suffering. Premise (ii) is an exemplification of the *inclusiveness* element of consequentialism mentioned earlier, based on the idea that animals have a well-being of their own and therefore matter morally.

Premise (iii), however, is an empirical claim, but as I showed in the Introduction, it is widely supported by disciplines such as biology, zoology, and ecology. In her original formulation, Faria only considers the harm caused by natural events, as she is primarily focusing on wild animals living in nature. However, an empirical premise focused on stipulating that animals are harmed by different events does not necessarily need to include only *naturogenic* harms. By virtue of shifting the focus from wild animals living in nature to liminal animals, a non-normative premise like this, aiming to acknowledge the fact that animals are routinely harmed, reflects better the situation of liminal animals by acknowledging that they are harmed both by *naturogenic* and *anthropogenic* sources.

To recapitulate what was said in Section 2 of the Introduction, where I explained the characteristics of the lives of liminal animals, and with the aim of justifying this premise, consider first how they are harmed by natural events. The harms they have to face are roughly the same as those suffered by wild animals living in nature. First of all, liminal animals can suffer from accidents, like falling from their nests and getting injured. In these cases, if they are not helped by their parents or by a human, they most likely will die as a consequence of the injuries (for example, not being able to get food and water) or they will be easily predated. Liminal animals can also suffer from parasitism and infections. Pigeons, for example, are commonly parasitised by mites, lice, coccidia, or hexamita (Sol et al., 2000). Liminal animals also suffer from predation. Stray cats eat small birds and mice. Magpies and parakeets predate squirrels. And foxes and rats eat pigeons and gulls. Many liminal animals are also harmed by extreme weather conditions like heatwaves, snow storms or heavy rains, floods and droughts. They also suffer from hunger and thirst. This is particularly common in cases of overpopulation, in which the ecosystem is unable to provide for all members of the population that live in a certain territory (see Animal Ethics, 2021).

But liminal animals, unlike many wild animals living in nature, are also harmed by humans or by human-made artefacts. Mice and rats are poisoned or trapped. Stray cats and dogs and squirrels are commonly run over by cars. And seagulls, pigeons, and many other different birds collide against windows and high buildings. Premise *(iii)*, then, is also true for liminal animals as a consequence of the naturogenic and anthropogenic harms they face.

The conclusion of the argument *(iv)*, then, logically follows from each premise. There is a consequentialist-grounded duty to assist liminal animals to prevent them from suffering by virtue of the harms they have to endure. The argument, even if originally built to improve the situation of wild animals living in nature harmed by natural events, also works if one shifts the focus to liminal animals affected by natural and human-caused harms. The reason why it is normatively adequate to adapt the argument to include liminal animals specifically has to do with that the argument, even in Faria's original formulation, is based on the structure of consequentialist reasoning. This structure is not specific to wild animals living in nature, but works to allocate duties to any sentient individual who faces harms. For example, Peter Singer has used a similar argument to derive positive duties towards cases as dissimilar as children who are drowning in a pond to cases of individuals affected by structural famine

(Singer, 1972). In this sense, liminal animals can be included in the argument because they are sentient, and because they are routinely harmed, as justified by premise (iii).

The conclusion of the argument points at something that has been discussed earlier: the agent responsible for fulfilling this duty. According to Faria's conclusion, following again a consequentialist reasoning, we have reasons to help these animals "whenever it is in our power to do so". This reflects that the responsibility for enacting this duty falls in the party with power to improve the situation of the animal or animals that need help. In some cases, individuals will have the responsibility to do so if they, for example, find an injured squirrel on their daily stroll and can take them to a vet. In some cases, however, individuals will not have the power to help animals. For example, most individuals do not have the capacity to improve the situation of animals affected by overpopulation or by extreme weather conditions, but collectives, such as charitable organisations or political institutions do. In these cases, the positive duty to help would lie on them. This part of the conclusion, however, also reveals certain challenges. For it may be the case that there are situations in which it is *not* in our power to help, for different reasons.

#### 4. Objections

The fact that it *may not be in our power* to help non-domestic animals has been traditionally used as an objection to claim that there are no positive duties towards them, at least following a consequentialist reasoning (see Delon & Purves. 2018). If we cannot improve their situation, then there would not be consequentialism-based reasons to act. This objection has traditionally been directed towards wild animals living in nature, but its core claim can also be applied to liminal animals if there are similar reasons to think that we may not be able to help them. In what follows, I will show how this objection lose its weight if it is applied to liminal animals, not being successful in arguing that the argument fails.

The objection based on the idea that it is not in our power to help liminal animals is not univocal. Rather, there are different angles from which this can be argued. Faria (2022) divides these objections into those based on claims about *perversity*, *futility*, *jeopardy*, and *tractability*.<sup>13</sup> I will deal first with (i) perversity, futility, and tractability jointly, as the same

<sup>13</sup> Faria (2022) also considers two other objections: those based on *relationality* (pp. 123–146) and *priority* (pp. 144–167). According to the former, we lack the necessary morally relevant relations for positive duties towards liminal animals to be triggered. And according to the latter, while these duties may exist, other individuals may be faring worse, or it may be easier to help other individuals, making the enactment of the positive duty to help liminal animals less prioritary. These objections, while also relevant for liminal animals, are not specific to a

response will address each of them, and then with *(ii)* jeopardy. Importantly, I will respond to the objections differently than Faria (2022), providing liminal-animal-specific ways to address them.

Take first the objections based on *(i)* perversity, futility, and tractability. I will explain each of them and then provide a common response for the three of them. The objection of perversity (Faria, 2022, pp. 91–96) is based on the idea that our lack of knowledge would make efforts to assist liminal animals have effects opposite to those intended. Our assistance would thus be worse for liminal animals than non-assistance. This means it is *not* in our power to help because by doing so we would be bringing about a worse state of affairs than if we had not acted. This objection can be grounded on the complexity of animal ecosystems and populations. According to this, trying to manage them would only disturb their functioning, leading to negative cascade effects that would lead to a worse situation than the initial one. For example, by saving starving animals from death, we could increase the numbers of starving animals if they manage to reproduce, worsening their situation overall.

According to the futility-based objection (pp. 97-103), our assistance would simply have null effects. Even if we tried to assist liminal animals, we would not be able to do so successfully. This objection is often based on that nature is either fixed, or very difficult to change. According to this view, then, even if we tried we would never be able to change natural processes to make them more benign. We would never be able to stop birds from falling from their nests, or to change population dynamics to stop populations of animals from growing to a point in which individual animals struggle to find food. In this sense, acting would be a waste of resources, as we would never be able to improve the situation.<sup>14</sup>

The objection based on tractability (pp. 168–175) states that interventions to assist animals (especially large-scale interventions) are currently not feasible due to our inability to predict their outcomes reliably. According to Delon & Purves (2018), this "deep epistemic problem" stems from the unpredictability of complex social ecological systems, their constant

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consequentialist argument. The relationality-based objection is specific to relational theories, and for that reason will be discussed in Chapter 3. The priority objection is a practical one, and for that reason will be dealt with in Part 3 of this thesis.

<sup>14</sup> Faria (2022) claims that this objection can also be based on the idea that prolonging the lives of liminal animals would have no positive impact on their well-being. This can be the case if, for example, most liminal animals have lives not worth living. However, in this case, this intervention would be making this worse for animals, rather than having null effects, so this would lie under the objection of perversity, rather than futility.

changes and fluctuations, as well as the added difficulty in predicting outcomes as a result of climate change.

These three objections are very similar in nature. The reason for treating them together is because if it is possible to demonstrate that we *can effectively assist liminal animals*, then the three objections would be rebutted simultaneously. That is, if liminal animals can be assisted, this would prove that interventions to help may not necessarily have worse effects than intended (as the perversity objection claims), that they will not always have null effects (debunking the futility objection), and that in many cases we do have the knowledge to undertake interventions to improve their lives (addressing the tractability objection).

There are many ways in which liminal animals are currently actively helped. Animals in public parks are fed, built shelter, and in many cases their sources of harm are limited (diseases are controlled, water is cleaned, traffic is reduced, passes to cross roads are built, and so on). In many cases, local councils build shelters and give them food, and sometimes they encourage their adoption. Animals that have had accidents are also often helped by compassionate people and organisations by taking them to the vet, who usually help them altruistically. All these assisted animals are having better lives than they would otherwise have, or even are alive because they have been provided help. Many of them would struggle to find food and shelter, would be vulnerable to disease, and would be susceptible to being harmed by other animals, including humans if not helped. This already shows that, from a person-affecting perspective, animals can be helped individually. But there are other interventions that tackle groups of animals, and that therefore have the potential to help many more animals. Examples include mass vaccination programmes, habitat modification to provide animals with more resources, or the installation of shelters, such as dovecotes.

Especially promising, however, is the use of non-lethal population control methods to reduce the number of animals present in a certain territory, sparing resources, reducing disease transmission, and preventing competition. This will be the specific topic of Chapter 7, so for that reason, in what follows I will only briefly explain how population control is a suitable form of assisting liminal animals. This is the case because very often, as it was explained in the Introduction, the number of liminal animals in a certain population exceeds the available resources in the place in which they live. This raises welfare concerns, as many of these animals will starve to death, and overpopulation contributes to the spread of diseases.

At the same time, the animals that make it to maturity will reproduce, maintaining the size of the population, and therefore will bring to existence many animals that will also suffer and die for these causes (Abdulkarim et al., 2021; Wilson & Edwards, 2019). In these cases, a suitable intervention consists of giving contraceptives and food to the animals. This is proven to reduce the size of the population, while improving the well-being of each individual by freeing resources and reducing mortality and painful deaths. Importantly, in many cases, this does not have negative effects for other populations or other species of animals (Eckerström Liedholm et al., 2024; González-Crespo & Lavín, 2022).

The given examples and the specific case of population control show that animals can be (and are being) helped. Assisting them does not necessarily cause counterproductive effects, as the perversity objection claims; it does not necessarily have null consequences, as the futility objection argues; and in many cases, the harms liminal animals suffer can be eliminated or minimised, which defeats the tractability objection.

Before proceeding with the following objection, an important clarification is in order. It must be acknowledged that the perversity, futility, and tractability objections are pointing towards something that is relevant: in *some* cases, we will *not* have the power to assist liminal animals. Currently, for example, we may not know how to prevent foxes from eating birds in a way that does not harm the foxes or other animals that may be eaten instead, such as rodents. Something similar to this is what Delon & Purves (2018) seem to have in mind when discussing their version of the tractability objection: that we do not have the power to *solve* the problem of suffering in the wild. That is, that we cannot help *all animals* that are in need of help. We cannot, for example, re-engineer nature to prevent animals from reproducing even if they will not have enough resources to feed their young. The acknowledgement that in some cases we will not be able to help liminal animals, or that we may not be able to help all liminal animals who are in need of help, however, does not present a threat to my argument in defence of the idea that we have positive duties towards liminal animals or to the way in which I have addressed the objections. This is the case because the fact that it may be impossible to *solve* the problem of liminal animal suffering, does not imply that there is no duty to improve the lives of liminal animals if it is in our power to do so, which is what I have been defending in this chapter. This is because not being able to fully solve a problem does not mean that we do not have a duty to reduce the harm caused by such a problem. For example, the fact that we cannot unfortunately eradicate cancer in humans does not mean that

we do not have a duty to cure people with treatable forms of cancer. The same logic, then, applies to interventions to help liminal animals. The fact that there may be cases in which we may not be able to help them does not mean that there is no duty to help in those cases in which we can do it. This, again, is based on the idea that while in *some* cases we may not be able to help, in *many others*, we do.

Recall, then, that I am addressing objections that deal with the fact that it may not be in our power to help animals. I have already discussed the objections of (*i*) perversity, futility, and tractability. Another way of understanding the idea that we may not be able to assist liminal animals is through the (*ii*) jeopardy objection. According to it, we cannot assist liminal animals without jeopardising other important values. As such, it is not strictly that we *cannot help*, but that if we do it, we risk endangering other things we may consider valuable. The way in which this objection is commonly structured is by saying that by helping non-domestic animals, we may threaten *natural values*, such as the value of nature defended by environmentalism (Rea & Munns, 2017), the value of ecosystems defended by ecocentrism (McShane, 2013), or the value of species diversity defended by conservationism (Baum & Owe, 2024). According to this objection, intervening in the lives of liminal animals would reduce their natural value, as we would be imposing non-natural aspects into their lives (such as rehabilitation). Then, if we are to preserve this natural value, we should not help animals and let them be, even if that means accepting some suffering.

Of course, this objection only works if we accept that, first, natural value exists and is something that should be preserved, and second, that the normative importance of preserving natural value outweighs the importance of the value of helping animals. Faria's approach to meeting this objection tackles these two aspects: she claims both that non-sentient natural entities simply do not have intrinsic value, and that if there is value outside sentient entities, the value of the well-being of individuals greatly outweighs these natural values (2022, pp. 104–125). I will provide, however, a different response specific to the case of liminal animals. This response is agnostic with regards to the existence and strength of natural value, and therefore can be accepted by those who claim that it exists, and that it should be respected. Consider the different environments in which liminal animals live. Most of them are not natural environments, but artificial and modified ones. These spaces are not untouched, but are already greatly managed: cities, parks, arable lands, construction sites, or areas along roads. These places are, in many cases, made for humans: they have roads, paths,

benches, cars, people, and many other human-made artefacts. And it is not only the spaces that have been altered, but also the lives of these animals themselves. It can be doubted that these animals conserve much of their “natural” form of life. As it was mentioned in the Introduction, they eat the leftovers of our processed food, dwell in the infrastructures we have built, their modes of entertainment are mediated by human activities, their reproductive rate is controlled and influenced by our decisions, and they are harmed and benefited by humans. This means helping them, firstly, does not compromise the natural values of the places in which they live, as these may be already compromised. For example, installing a dovecote in a city would not negatively affect the natural value of a city. And secondly, acting to assist them does not reduce the natural value of their lives, as, again, their lives are already greatly influenced by us in ways that reduce their “natural behaviour”. So, by feeding them appropriate food, we would not be damaging the natural value in their life if their alternative is, for example, scavenging leftover chips. The choice, therefore, is not between assisting the animals and compromising natural values. The choice is between assisting the animals and having those values compromised, and not assisting them and also having the natural values compromised. This means that even if we accept the existence and normative significance of natural value, helping liminal animals does not conflict with this value. As such, this objection cannot undermine the duty to assist liminal animals.

## 5. Conclusion

The arguments I presented in this chapter show that consequentialism offers strong support for the existence of positive duties of assistance towards liminal animals. Because consequentialism is concerned with reducing suffering and promoting well-being, and because liminal animals are often subject to harms we can meaningfully mitigate, this framework consistently leads to the view that we should help them. I have argued for this adapting an existing argument about wild animal assistance provided by Faria (2022) and justifying each of its premises in light of the adaptation to cover liminal animals. Furthermore, I have discussed four objections that tackle the conclusion of the argument, based on the idea that we may not have the power to help liminal animals, and provided novel arguments tailored to the case of liminal animals to show that they do not work.

While consequentialism provides a compelling framework for assistance, it is often critiqued for missing important moral considerations beyond consequences. For this reason, many authors favour other kinds of moral theories that derive duties from other aspects they

consider morally relevant, such as autonomy or relations. Importantly, many authors have appealed to these kinds of theories to argue that we do *not* have positive duties towards non-domestic animals such as liminal animals, or that these are very restricted. To respond to these concerns and to explore a different route to similar conclusions, the next chapter turns to non-consequentialist theories based on autonomy. In it, I will examine whether the value of autonomy constrains or supports the duty to assist liminal animals and argue that, far from forbidding intervention, a proper understanding of autonomy can bolster the case for the existence of positive duties towards them.

## Chapter 2: Autonomy-Based Duties Towards Liminal Animals

### 1. Introduction

Liminal animals, in their daily lives, have some decision-making power over some of their choices. These may include where to fly, whom to mate with, where to rest, what to eat, or whether to approach humans. This is one of the key aspects that differentiates them from many domestic animals, for whom others take decisions on their behalf. In this sense, liminal animals may be considered *autonomous decision-makers*. For many non-consequentialist theories, autonomy is what is primarily normatively relevant: that is, autonomy is the key element of individuals' lives that should be protected and enhanced, instead of well-being (Claasen, 2022). In other words, what matters for those concerned with autonomy is not whether animals are happy or suffering, but whether they can make their own decisions or shape their own lives. For theorists who give autonomy primary normative relevance, then, one of our key duties is the negative obligation not to interfere with others' decisions. That is, to let others live their life autonomously, independently of their welfare levels.

Accepting the moral relevance of autonomy, then, raises a puzzle for the idea that there are positive duties towards liminal animals. From a consequentialist perspective, as I argued in the previous chapter, this idea follows relatively straightforwardly: if it is in our power to help liminal animals, then we should do so. But from an autonomy-based perspective, the fact that liminal animals are making their own choices might suggest that we ought to refrain from intervening to respect their choices, irrespective of their well-being or how beneficial our assistance might be.

This chapter deals with this puzzle and argues that taking autonomy as normatively relevant does not exclude, but rather grounds, positive duties towards liminal animals. While it is true that respect for autonomy often creates a negative duty to respect autonomy, it can also require us to help others to preserve or regain their ability to make autonomous choices. In doing so, in line with the general approach of this thesis, I do not commit to one understanding of autonomy, or one explanation of why autonomy generates duties. Instead, I will examine the approach of a range of authors committed to the idea of autonomy being normatively relevant, and explore the implications of those views for liminal animals.

This chapter is structured as follows. Section 2 defines autonomy as it will be used in this chapter. Section 3 argues that animals have the capacity for autonomy. Section 4 shows

how different authors argue that respect for autonomy can justify positive duties in the case of humans. Section 5 claims that the same arguments can apply to many liminal animals by virtue of them valuing autonomy intrinsically. Section 6 then develops the case that we have negative and positive duties towards liminal animals both when they have lost their autonomy and when they retain it. Finally, Section 7 addresses an important objection: that the negative duties arising from autonomy, based on respecting individuals' choices, may be incompatible with the positive duties also arising from autonomy.

## 2. The Definition of Autonomy

Autonomous individuals are, very shortly put, those who can make their own choices. This definition, however, does not clearly capture the different ways in which individuals can be autonomous. Joel Feinberg has distinguished between: (1) autonomy as a *capacity*; and (2) autonomy as a *condition* (1986, pp. 27–43).

(1) Autonomy as a capacity, often also called “agency”, refers to the extent to which individuals can, depending on their cognitive abilities, make their own choices.<sup>15</sup> That is, the extent to which they can weigh different choices and have intentions to pursue one or another. It is widely accepted, for example, that many adult humans *can* be autonomous beings, while plants cannot. Autonomy as a capacity has evoked multiple discussions in moral and political philosophy. There is a discussion in the academic literature on topics including which mental abilities are required to be an autonomous being, and if individuals such as children, people with cognitive disabilities, and animals have the capacity for autonomy (see Steward, 2009).

(2) Autonomy as a condition, on the other hand, refers to a state one can be in depending on contextual factors, not on the cognitive capacities one has. Individuals can, then, have a great (1) capacity for autonomy but be in a (2) condition in which they cannot be autonomous. The case of imprisoned individuals is a clear example of this. Most of them surely have the (1) capacity to be autonomous, but their life is determined by the conditions of imprisonment, which makes them unable to be in a (2) condition in which they can exercise their autonomy. They may have the capacity to make the autonomous decision of

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<sup>15</sup> This is, of course, a very minimal conception of the *capacity* for autonomy. In this sense, it is different from more complex understandings of this capacity, such as those stemming from Kantian theory, that often include the capacity for moral reflection or to form and revise one's conceptions of the good (see Colburn, 2022; Rawls, 1999, pp. 251–257).

going for a run along the beach, for example. But they are in a condition in which they are unable to exercise such autonomy.

Autonomy as a (2) condition can be determined by, at least, two factors. These are: (i) the extent to which an individual can make their own choices without external interference; and (ii) the number and richness of options available for the individual to choose from. Call (i) non-interference, and (ii) adequacy of choice (Raz, 1988, pp. 369–378).

Condition (i), non-interference, affects individuals' autonomy by allowing them or not to make the choice they want to make. Autonomy in this sense can be undermined in two ways. First, an individual can be impeded to make their preferred choice. In the case of the imprisoned individual, this is very clear. As I mentioned earlier, if the prisoner wants to go for a run on the beach and they are not allowed, they would be made less autonomous. Second, individuals can be forced to choose options. This often happens when individuals are forced to behave in a certain way that is considered better for them or for the public good. The former are often considered cases of *paternalism*, and include, for example, situations when cyclists are obliged to wear a helmet. The latter involve cases of mandatory conscription, jury duty, or paying taxes, for example. Altering condition (i), non-interference, then, makes individuals more or less autonomous. The prisoner has their choices curtailed, and the cyclist and conscripted soldier are forced to make a choice they perhaps do not want to make, making them less autonomous as a (2) condition. Allowing the prisoner to go to the beach, the cyclist to decide whether or not to use a helmet, and the soldier to decide whether they want to be enlisted or not would make them more autonomous.

The way in which condition (ii), adequacy of choice, affects the autonomy as a condition of individuals is by changing the quantity and the quality of their possible choices. So, having the choice to decide whether to move to a house in the city, in the countryside, or in a residential area makes me more autonomous than only having the choice to move to a house in one of those options (Hurka, 1987). This second component of autonomy is similar to the idea of *positive freedom*, according to which being free does not only depend on behaving following one's will without being interfered with, but also on having the *opportunity* to act according to one's will, by living in a social context that creates quality choices to pursue one's preferred options (see Berlin, 2002; Crocker, 1980).

I have now settled the first preliminary issue: I have shown that (2) autonomy as a condition can be affected by: (i) the ability of individuals to make their own choices; and (ii) the quantity and quality of choices they have available. This is important, as changes in these conditions will alter individuals' autonomy, grounding different duties depending on their level of autonomy. But before doing that, and showing that positive duties are owed to liminal animals by virtue of the way in which their autonomy is altered by these conditions, I need to settle three different questions. First of all, I need to show that animals have the (1) capacity to be autonomous, and that therefore, their autonomy as a (2) condition can be altered by (i) non-interference and (ii) adequacy of choice. I will do this in the next section. Secondly, I need to show why authors have defended that differences in (2) autonomy as a condition trigger positive duties. And thirdly, I need to show why liminal animals fit in these duty-triggering arguments by virtue of them *valuing autonomy intrinsically*. I will do this in Sections 3 and 4, respectively. After that, then, I will be in a position to put forward an argument claiming that positive duties are owed to liminal animals by virtue of them being autonomous.

### **3. Autonomy and Animals**

Whether animals can have the (1) capacity for autonomy is a crucial question for any attempt to ground duties on autonomy. In this section, then, I will argue that animals have the (1) capacity to be autonomous; which in turn enables them to be more or less autonomous by having their autonomy as a (2) condition altered. If animals lacked the (1) capacity for autonomy, then their behavior would be merely reactive, governed by immediate stimuli or the pursuit of pleasures. If that were the case, autonomy-based theories would not apply to them, making the aim of this chapter impossible to meet. But there is growing evidence that many animals have the (1) capacity to be autonomous, which has been followed by several discussions in the field of ethics. I will claim that this is the case by providing three reasons.

For many autonomy theories, animals do not have the (1) capacity for autonomy, as they cannot *act intentionally*, in the sense required by these theories. According to a standard set by Davidson (1982) as interpreted by Steward (2009) and Paez (2022), autonomy as a capacity requires the capacity to act based on *propositional mental states*, that is, structured thoughts such as “I want to eat an apple” or “I think flying north will bring food.” This standard would exclude animals who do not have the capacity to form these kinds of propositional thoughts. The first reason to defend the claim that many animals have the (1)

capacity for autonomy has to do with that this standard has been recently challenged. Paez (2022) has argued that animals, despite lacking the ability to form propositional thoughts, can *act intentionally through having a will*, grounded in their first person perspective and driven by intentional states such as trying or wanting. As such, intentional behaviour does not need to take propositional form, but only perceiving something as to be pursued, which generates a motivation to act. And intentional action is commonly seen as one of the main components of the capacity for autonomy. Just as we see infants with the capacities to make their own decisions with regards to, for example, whether they want to play with their friends or their parents, many animals also can weigh different options and decide whether to fly to one place or another or decide where to nest.

Secondly, Steward (2009) claims that *(I)* autonomy as a capacity (what she calls “agency”) does not depend on propositional attitude psychology. Drawing from developmental psychology, she shows that even young human infants who lack beliefs and desires in the propositional sense are recognised as beings with the capacity to be autonomous because they can *initiate purposeful action*. The core of the *(I)* capacity for autonomy, she argues, lies in the ability to control one’s body, form intentions, and respond to environmental cues in goal-directed ways, which is a capacity that most animals have through the ability to initiate actions.

According to the arguments put forward by Paez (2022) and Steward (2009), then, many liminal animals have the capacity to both act intentionally and initiate purposeful actions, which are important components of the *(I)* capacity for autonomy. But the capacity to be autonomous, as defined above, not merely includes this, but also the ability to weigh different options beyond determined behaviour (meaning the kind of behaviour that is innate and universal across a certain species, such as behaviour determined by evolutionary drives). An example of this kind of determined behaviour would be plants’ bending towards light. For animals to have the *(I)* capacity to be autonomous, then, they must be able to have the ability to behave not only according to evolutionary drives, but must also be able to weigh different factors in their decision-making and then take intentional action. And this, following a consensus in the field of medical ethics, should be assessed in relation to different domains or choice situations (Beauchamp and Childress, 2013, p. 115). For example, I may have the *(I)* capacity to be autonomous, and therefore the ability to weigh options in deciding whether to go for a run or not, but not to decide when my body craves sugary foods. In this sense, in

order to prove that animals are autonomous, it is sufficient to show that they can make their own decisions with regards to *some* choice-situations. This amounts to showing that at least *some* of their behaviour is a result of weighing different options, rather than simply hardwired or innate. Note, however, that this is not about the kind of *goal* animals follow, but rather about *how they get there*. So, it is not to show that animals *contradict* evolutionary goals, such as survival, but that they do so in ways that are not determined (such as in the example of the plant that, in order to survive, gets closer to the light). If one had to show that animals behave contrary to evolutionary driven goals to prove they are autonomous, this would mean many human decisions would not count as autonomous, because many of them have pleasure-seeking as their goal, which is an evolutionary driven goal.

The fact that animals can achieve their goals in ways that show their capacity to weigh options is widely proven in the field of ethology. For example, rats have been observed to put more effort into a task that offers a larger reward, rather than opting for an easier one with a smaller payoff, which suggests some form of cost-benefit analysis (Salamone et al., 1994). Crows have been seen to select tools that help them access other tools, which in turn allow them to obtain food. This may be an indication of prospective planning (Gruber et al., 2019). Similarly, pigeons have shown a preference for risky options with potentially greater outcomes over guaranteed smaller rewards (Zentall & Stagner, 2011). These examples suggest that animals are capable of something similar to cost-benefit analysis, future-oriented thinking, and flexible learning strategies, all of which defeat the idea that animal behaviour is entirely conditioned by evolutionary determined behaviours. Rather, these behaviours are a result of the animals weighing options and choosing a course of action, which is a key component of autonomy.

I have then shown that animals have the (1) capacity to be autonomous. Given this, it also follows that animals can be made more or less autonomous as a (2) condition depending on the factors outlined above: if animals are, for example, at risk of dying of poisoning, they will be less autonomous as their (i) choices will be interfered with, and if their feeding, mating, or resting options are reduced, their autonomy will be curtailed, as their (ii) choice-options will be constrained. While this may be the case, it is also possible that animals do not *value* their autonomy. That is, it may be true that interfering with their choices or reducing their choice options does reduce their autonomy, but that this does not make them worse off. This is important, as duties derived from autonomy tend to be grounded in its

*intrinsic value* for individuals. In the next section, I will provide an overview of the different ways in which it has been shown that autonomy generates duties in the case of humans, and will in Section 5 argue that these considerations apply to animals by virtue of them valuing autonomy intrinsically.

#### 4. The Moral Relevance of Autonomy for Humans

Different authors have offered different accounts for why autonomy is morally relevant, and how it triggers different duties, at least in the case of humans. All these views have in common the idea that autonomous living is *intrinsically valuable* for humans, which is what triggers duties based on it. There are many defences in the literature for why this is the case. Many of these defences rely on a “perfectionist” or “objective-list” understanding of autonomy as something that is intrinsically valuable, meaning that autonomy will be part of an objective list of something that is always intrinsically good for people. This view is mostly defended by appealing to intuitions (see Varelius, 2006). In this sense, the idea that autonomy is intrinsically valuable has been defended as a reaction against some of the most counterintuitive implications of consequentialism. For example, accepting that the only thing that has intrinsic value is well-being and that duties only emerge from it may lead to accepting the idea that it would be preferable for us to be put into an “experience machine” that simply gives us pleasure; or to force others into acting in a certain way because it would be better for them. As a consequence of these problematic implications of consequentialism, authors have relied on the idea that autonomy has intrinsic value, as accepting this entails that, following the examples above, we should not be connected to an experience machine and that paternalism is impermissible, because making autonomous choices, and not only well-being, would be intrinsically valuable (see Nozick, 1990, pp. 104–117; Rawls, 1999, pp. 19–24). Some authors have put forward arguments in defence of the intrinsic value of autonomy, but these also rely heavily on intuitions. In the case of why making (i) non-interfered choices is valuable, it has been argued that this is intrinsically valuable because it allows individuals to exercise self-determination by directly connecting their *wills* (what they want) with their actions (what they do) (see Oshana, 2003). This still relies on the intuition that it is intrinsically good to connect one’s wills with one’s actions.

In the case of (ii) adequacy of choice, it is also commonly appealed to intuitions to argue that it is good in itself for individuals to have more options and of better quality. This, for example, explains the intuition that having more money is preferable for oneself, even if

one chooses to do the same things with less money. Thomas Hurka (1987), is the only author to provide an argument to justify this intuition. According to him, having *more* choices is better than having fewer, because it allows individuals to determine more facts about the world. For Hurka, then, it is better to choose  $p$  among  $\{p, q, r, s\}$  than to choose  $p$  only among  $\{p\}$ , because in the first case, one is also choosing *not-to-q*, *not-to-r*, and *not-to-s*. In this sense, the fact that  $q$  did not occur would be attributable to the agent, making “a difference in what the world does and does not contain” which is, according to him, intrinsically valuable (p. 366). His argument for why having *better* choices is also intrinsically valuable focuses on the *quality* or *organising importance* of the available options. For Hurka, not all choices are equally valuable: some, like long-term life plans, are more valuable because they *make future intentions and actions possible*. For example, deciding whether to buy a bicycle makes it possible for someone to decide in the future whether to go for a ride, whether to change its tires, to join a cycling club, whereas other choices of lower quality, such as deciding whether to shower today or tomorrow, encompass less future decisions, which makes them less intrinsically valuable (pp. 372–376). As mentioned above, these arguments still rely significantly on intuitions. However, recall that my intention here is to show that each of the theories I am discussing have certain implications for liminal animals. In this sense, each chapter relies on the intuitions held by the authors who developed the theories, but does not intend to argue for the correctness of each of them.

Having clarified how authors have argued that autonomy is intrinsically valuable, at least for humans, now I can proceed to explain why and in which ways (2) autonomy as a condition triggers duties. The duties generated by autonomy can be divided into two. First of all, there are the duties generated by considerations related to (i) non-interference. There is a consensus among different theories that there is a negative duty to respect others’ choices, refraining from interfering with their actions and therefore allowing them to exercise their autonomy without external interference (Claasen, 2022). This is also argued by those who claim that the central aspect of justice is a concern for freedom. Both defenders of liberal conceptions of freedom (Flikschuh, 2007) and republican ones (Pettit, 1997) agree that there is a duty to respect individuals’ freedom by allowing them to make their own choices without being interfered. All these considerations, again, are grounded on the idea that when others interfere with people’s choices, they make them worse off by reducing their autonomy, which is intrinsically valuable for them.

Different authors from different philosophical standpoints have also claimed that autonomy also generates positive duties. To do so, authors focus on considerations related to individuals' *(ii)* adequacy of choice. The general line of argument among these authors has to do with the idea that the quantity and quality of individuals' choice-options affects how good or bad individuals fare. This thus triggers duties to enrich those options, by giving individuals more choices or choices of a higher quality. First of all, Hurka (1987) and Raz (1986) have argued that there is a duty to enrich people's choices as a central aspect of political liberalism. Raz claims that for individuals to be autonomous, they must have "options with long term pervasive consequences as well as short term options of little consequence, and a fair spread in between" (p. 374). In short, he thinks that individuals should "have options which will enable him to develop all his abilities, as well as to concentrate on some of them" (p. 376). Similarly, liberal egalitarians such as Rawls (1999) and Dworkin (2000) also support a duty to enrich the choice-options of individuals. In the case of Rawls, this is mainly based on the first principle of justice. The claim that "(e)ach person is to have an equal right to the most extensive total system of equal basic liberties compatible with a similar system of liberty for all" (p. 220) fundamentally requires giving people as many quality options as possible, constrained by the quality options of others. Republicans such as Pettit (1997) or Paez (2022) have also defended a duty to enrich options. In the case of Pettit (1997), he has argued that not only interferences in one's choices, but also the available alternatives, determine the degree of liberty enjoyed by an individual (which is what should be protected and enhanced from a republican perspective) (p. 53). In this sense, he has proposed sanctions and screens as a way of giving individuals an adequate range of options (pp. 212–214). Left libertarians such as Van Parijs (1995), in a similar line, argue that society must be organised in a way in which "each person has the greatest possible opportunity to do whatever she might want to do" (p. 25). In this sense, free societies are those who give their citizens an adequate range of opportunities to choose from. Beauchamp and Childress (2013), from the standpoint of principlism, have also claimed that respect for autonomy triggers positive obligations to perform "actions that foster autonomous decision making", as "(m)any autonomous actions could not occur without others' material cooperation in making options available" (p. 107). I will not take a stance or defend any of these views. Rather, my intention will be to show what implications follow for liminal animals if one accepts any of these arguments.<sup>16</sup>

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<sup>16</sup> It must be acknowledged that other views, namely libertarianism, will take direct issue with this, and would reject that *(ii)* adequacy of choice leads to positive duties by enriching others' options. This is the case for two reasons. First of all, libertarians' understanding of autonomy is limited to *(i)* non-interference, and would therefore not recognise the idea that improving someone's choices has a direct effect on their autonomy (for a

## 5. The Moral Relevance of Autonomy for Animals

Having explained why authors think that autonomy is intrinsically valuable for humans and how this triggers negative and positive duties, I now need to show how this is the case for animals. To do this, I need to show that autonomy is intrinsically valuable for them: that *(i)* not being interfered with their choices and *(ii)* having an adequate range of choices is *good for them*, independently of their well-being.

Whether autonomy is intrinsically valuable in the case for animals (Giroux, 2016; Wilcox, 2021) or not (Cochrane, 2009) has been a topic of academic debate.<sup>17</sup> To defend that it is, one can follow discussions on autonomy for humans and justify the intuition that autonomy is also intrinsically valuable for animals. A way of doing this can be through showing that, at least in some cases, it is preferable *for animals* to have their autonomy respected rather than to increase their well-being. For example, in the case of an injured bird, many authors would agree that it is preferable to cure their injuries and release them into the wild, rather than to keep them for life in a cage, even if one assumes that their well-being would be higher in the cage. The reason behind this is that their autonomy would be compromised, both as a consequence of *(i)* them having their choices interfered with (e.g. if they want to fly, they would not be able to), and of *(ii)* not having an adequate range of choices (their choices are limited by being inside the cage). Those authors who think that well-being is the only thing that matters ethically (“welfarists”) would probably disagree with this analysis. However, note that they would also disagree with such an analysis in the human case. So my appeal is to those many thinkers who believe that autonomy is intrinsically valuable for humans as the beliefs and intuitions they have for that view in the human case may also apply to, at least, some animals.

But to claim that autonomy is intrinsically valuable for liminal animals, one can also take the arguments I presented previously in its favour and see if they apply to animals. The argument according to which *(i)* non-interference is intrinsically valuable relied on the idea

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discussion of this and its implications, see Zutlevics, 2001). And second, libertarians deny that there are positive duties towards others altogether, and think that duties are limited to negative ones. The first disagreement can be met by referring back to the justification for why *(ii)* adequacy of choice has an effect on people’s autonomy, but the second disagreement is almost insurmountable, as there is almost no room in libertarianism for positive duties. For this reason, libertarians will very likely reject these arguments.

<sup>17</sup> Cochrane (2009) has made the argument that animals do not value autonomy intrinsically. He uses, however, the kind of understanding of autonomy explained in the previous footnote, according to which autonomous beings are those who are able to frame, revise, and pursue their own conceptions of the good, rather than the understanding that I am using here. For this reason, his arguments do not directly tackle my view.

that making choices without external interference allowed humans to connect their wills with their actions. This, however, is not specific to the case of humans, as animals (and specifically many liminal animals) have wills (they have intentions, as per their *(1)* capacity for autonomy) that can also be connected to their actions. Similarly, the arguments relying on the value of *(ii)* adequacy of choice also apply to animals. The idea that having more choices is intrinsically better because it allows individuals to determine more aspects of the world applies to cases in which, for example, pigeons may find it valuable to be able to decide whether they nest in abandoned buildings, dovecotes, or trees. And having *better* choices can also be valuable for animals because it allows them to make more future choices, following Hurka (1987). This is especially salient (as will be discussed earlier) if there are some choices that allow liminal animals to survive or not: the choice to feed on appropriate food (a quality option), for example, may determine whether a pigeon lives or dies, which in turn enables them to make more choices in the future, which may be considered intrinsically valuable for them.

Healey and Pepper (2021) have also put forward an argument that does not rely on the arguments discussed above, but that directly targets the *intuition* that autonomy (what they call “self-determination”) is intrinsically valuable for humans and animals alike:

For example, we value self-determination when deciding whether to engage in physical contact (such as cuddling), whether to go for a run, what to have for dinner, and when to engage in joint activities like playing games or watching a film. Indeed, our ability to pursue or refrain from pursuing such activities represents a significant portion of what is protected by autonomy rights (Shiffrin 2012, p. 380). Yet many animals can engage in analogous forms of decision-making and activity, and plausibly have weighty interests in being able to do so without interference. (p. 1128)

That is, if humans intrinsically value their autonomy in choices that are similar (both in terms of what is being decided and its complexity) to those made by animals, then, by analogy, it is reasonable to think that animals would also intrinsically value their own decision-making in these cases. So, if we think that it is intrinsically valuable for humans to decide autonomously what to eat, for example, then it must be the case that it is also intrinsically valuable for many animals to decide what to eat.

The discussion of whether autonomy is intrinsically valuable for animals is arguably more complex than in the case of humans, as one cannot ask a liminal animal whether they would like to be plugged to an experience machine and expect them to provide a reasoned response, as it happens with humans. However, some animal behaviour points to the view that they value autonomy intrinsically. For example, there are several documented cases of animals caught in leghold or steel-jaw traps chewing off their own paws in order to escape confinement (see Animal Welfare Institute, 2016; Bender, 2025). This behaviour is difficult to explain purely in terms of well-being, since self-amputation is likely to cause more suffering than the trap itself, as well as long-term impairment. The fact that some animals accept immense costs to regain autonomy suggests that escaping the loss of autonomy caused by traps is valued for its own sake. This is also proven by examples such as the Maharaj elephant, who died after repeatedly beating his head and trunk against the sides of the cage to try to break out (Payne, 2016). This, again, supports the view that Maharaj was valuing their autonomy intrinsically, as he was ready to sacrifice his well-being to try to regain his autonomy.<sup>18</sup>

If these arguments are correct, then, it seems that autonomy is also intrinsically valuable for animals, which makes it possible for negative and positive duties to be triggered towards them. I have now done all the preliminary work needed to argue that autonomy grounds positive duties towards liminal animals. I have defined autonomy and its components, have argued that animals have the capacity to be autonomous, have shown how authors have defended that autonomy triggers negative and positive duties, and have justified the idea that humans and animals value autonomy intrinsically. In what follows, then, I will argue that positive duties are owed to liminal animals, and that these duties can vary depending on the extent to which they preserve or not their (2) autonomy as a condition.

## 6. Autonomy-Based Duties Towards Liminal Animals

Several authors have argued that negative duties are owed to animals in virtue of their autonomy (see Blattner, 2021; Donaldson & Kymlicka, 2011; Healey & Pepper, 2021; Korsgaard, 2018; Sebo, 2017; Thomas, 2016). Appeals to animal autonomy have been used

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<sup>18</sup> Other authors have argued that autonomy may be intrinsically valuable in a different sense: meaning that it is a *crucial component of well-being*. That is, that well-being cannot be achieved without autonomy, and that this makes autonomy intrinsically valuable (see Blattner, 2019). These arguments are valuable for the discussion, but in the interest of keeping the argument as parsimonious as possible and within the idea of autonomy in itself being intrinsically valuable, I will leave them aside.

to claim that we have an obligation to refrain from interfering with the lives of wild and liminal animals. Donaldson & Kymlicka (2011), for example, see wild animals as competent individuals who can navigate the risks they encounter in their daily lives. Respecting their autonomy grounds duties to refrain from intervening in their lives. According to these authors, large-scale interventions would be a form of unjustified paternalism that would undermine animal autonomy, through making them dependent on us (pp. 175–177). This argument is supported by the fact that most wild (p. 177) and liminal animals (p. 228–229) resist interference in their lives, including that which assists them. This means that assisting them would in fact go against their *own choices*, undermining their autonomy, and thus making it impermissible.<sup>19</sup> However, and contrary to this view, in what follows, I will argue that a positive duty to assist liminal animals can in fact be grounded in respect for the autonomy of liminal animals.

First of all, it is worth noting that respect for autonomy, and especially respect for (*i*) non-interference grounds a negative duty not to interfere with liminal animals' choices. If liminal animals make autonomous decisions, such as where to fly, what to eat, where to sleep, or whom to mate with, then interfering with those choices reduces their autonomy. Interference restricts their ability to act according to their own preferences and motivations. On autonomy-based grounds, we have duties to refrain from actions that undermine their capacity to choose and make their own decisions. This is particularly relevant if, as some authors have argued, individuals' autonomous decisions are *normatively authoritative*, that is, they give us reasons to respect them just because they are their decisions (Groll, 2012; Healey & Pepper, 2021).

There are many ways in which humans violate these negative duties. Some are direct and violent, such as poisoning, trapping, hunting, or running over animals. Others are structural: when we urbanise an area, destroy habitats, or expel animals from certain territories, we constrain their available options and close off paths they would otherwise be free to pursue. These actions mirror what happens in cases of human violence, where the consequences of aggression, such as injury or fear, prevent a person from making decisions they would otherwise make, thereby undermining their autonomy. The same applies to liminal animals whose ability to act is shaped by the harms we impose. In all these cases,

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<sup>19</sup> Although they acknowledge that small-scale interventions and even some large-scale ones would not be necessarily autonomy-undermining (see Donaldson & Kymlicka, 2011, pp. 179–180).

respect for autonomy requires non-interference. This is, however, not the main focus of this chapter. Rather, my intention, as in the rest of the thesis, is to argue that independently of these negative duties, there are also positive duties towards these animals based on their autonomy. In this section, I will defend this idea. In the next one, I will argue that these positive duties are compatible with the negative ones just defended.

In order to argue that there are these positive duties towards liminal animals, I will distinguish between two groups of liminal animals, according to the extent to which they retain their (2) autonomy as a condition: *competent* ones and *non-competent* ones. Competent liminal animals are those who, at the moment of action, are able to safely make *their own* choices, are not forced to choose among undesirable options, and have an adequate range of choices. That is, they are able to *exercise* their (2) autonomy. An example of a competent liminal animal, for example, is that of Squirrel 1, who lives in a well-resourced public park. Squirrel 1 has access to abundant food and water, safe shelter in tall trees, and opportunities to interact with other squirrels. They can decide where to go, what to eat, when to rest, and how to avoid threats without constant danger or scarcity dictating their actions. In short, they can make their own choices without external interference and are able to choose among a set of adequate options. Non-competent liminal animals, on the contrary, are those whose life is determined by a wretched struggle for survival, not being able to make their own decisions, or/and having to choose unpleasant options. They have their (2) autonomy as a condition severely undermined. An example of this may be that of a pigeon who has been hit by a car and left injured near a road. Their mobility is severely limited, preventing them from finding food, shelter, or escaping from predators. Their choices are not guided by preference or deliberation, but by what their injuries allow. They are forced to hide in unsafe places or risk exposure in search of help. This pigeon's (2) autonomy is greatly constrained: their capacity to choose is interfered with, and the range of available options is reduced to those they would not otherwise choose.

The reason to make this distinction is that some authors may be tempted to argue that, considering that competent liminal animals retain their (2) autonomy, there may not be positive duties to (ii) improve the quality and quantity of their choices. I will first argue against this, and then claim that there are also positive duties towards non-competent liminal animals.

### **6.1. Duties Towards Competent Liminal Animals**

To explain why there are positive duties towards *competent* liminal animals, take first how authors have characterised the lives of these animals. Donaldson & Kymlicka (2011) have defined competent animals as those who

know what foods to eat, where to find them, and how to store them for winter use. They know how to find or construct shelter. They know how to care for their young. They know how to navigate vast distances. They know how to reduce the risk of predation (vigilance, hiding, diversion, counter-attack), and to guard against wastage of energy. (2011, p. 175)

This matches the example I gave earlier about Squirrel 1. They live an autonomous life living in a public park. They have enough food and water, trees to climb and hide, and other squirrels to play with and mate. However, the situation of most competent liminal animals does not seem to be the idealised one given by Donaldson & Kymlicka (2011) or that of Squirrel 1. Competency, often, does not look like this: consider now Squirrel 2: they live an autonomous life in a public park, and have access to all necessary subsistence resources. Squirrel 2, however, is vulnerable to many threats: they need to cross a road to find food, they need to avoid visitors' dogs, certain diseases can harm and kill them, and changes in the environment can cause a lack of food due to overpopulation. Squirrel 2 is still *competent*, as they retain their (2) autonomy, but they are still vulnerable to many threats to their autonomy. The case of Squirrel 2 looks like the life of most autonomous individuals we can think of, and indeed, like that of many humans. We can live autonomously, but we have to face constant threats to our ability to make our own decisions and our pool of options may not be adequate in some contexts. A familiar example illustrates this: commuting to work. Many humans who retain their (2) autonomy (they are competent) find their commuting choices severely curtailed by different factors, such as traffic. While they may be able to make their own decisions with regards to how they go to work, many of their options may include situations that pose a risk to their lives if, for example, they need to walk or cycle through a busy and dangerous road. In cases like these, it follows from the autonomy-based duties discussed above that these individuals should be provided with better choices. This is often done by improving sidewalks by ensuring they are well-maintained, by installing speed bumps, traffic lights, and pedestrian crossings, and by slowing traffic in pedestrian-heavy zones. These interventions do not eliminate the risks to autonomy entirely, but they make sure individuals have an adequate choice if they decide to walk or cycle to their destination.

Similar duties would apply, then, to other cases of autonomous individuals who face threats to their autonomy of a similar type, even if they are competent. The threat of walking through a dangerous street to go to work seems to be similar to the threats endured by Squirrel 2, who has to cross a road to find food and shelter. Even if both humans who have to walk down a dangerous street and Squirrel 2 can make their own decisions (they are competent autonomous decision-makers), it seems that the pool of options available to them is far from adequate, as they both include options that pose a risk to their life. If there are autonomy-based reasons to enrich the options of the pedestrian to an adequate degree, it seems that there would be similar kinds of reasons to enrich the options of Squirrel 2. There are a myriad of ways in which their autonomy could be protected from these kinds of threats by enriching their choices. Bridges and underpasses can be built so they have the choice not to cross roads, having taller trees can allow them to make the decision to hide from other animals, the elimination of diseases from food and water would make their decisions safer, and population control would eliminate the choice between feeding themselves or feeding their offspring. These are all forms of improving their (*ii*) adequacy of choice, and therefore of making them more (*2*) autonomous.

## **6.2. *Duties Towards Non-Competent Liminal Animals***

I have now argued that positive duties to improve choices exist towards liminal animals, even if they retain their (*2*) autonomy. Having argued this, the case for positive duties towards *non-competent* liminal animals follows straightforwardly. To illustrate the situation of the animals I am referring to by using a human example, consider the following case proposed by Raz:

*The Hounded Woman*: A person finds herself on a small desert island. She shares the island with a fierce carnivorous animal which perpetually hunts for her. Her mental stamina, her intellectual ingenuity, her will power and her physical resources are taxed to their limits by her struggle to remain alive. She never has a chance to do or even to think of anything other than how to escape from the beast. (Raz, 1986, p. 374)

Raz claims that *The Hounded Woman* is not autonomous, as she lacks an (*ii*) adequate range of choices. He thinks that for a choice to be autonomous, it “should not be dominated by the need to protect the life one has. A choice is dominated by that need if all options except one

will make the continuation of the life one has rather unlikely" (p. 376). The choice-options of *The Hounded Woman* are very limited and of a poor quality for the risk of being predated. The case of *The Hounded Woman* is an extreme case of autonomy deprivation. But these kinds of situations do not only exist in thought experiments. The situation of *The Hounded Woman* is similar to that of victims of domestic violence, children in wars, or people in extreme poverty. In all these cases it is very clear that one would have autonomy-based reasons to assist them to regain their autonomy, not only by (i) refraining from interfering with them, but also by (ii) enriching their options, providing them with meaningful and safe choices.

The situation of *The Hounded Woman* is very similar to the case of non-competent liminal animals. Examples of these animals can be those affected by floods, droughts, injuries, diseases, and food shortages. To illustrate my case, consider Squirrel 3. They are a squirrel who has been hit by a car and who is now injured. If they are not treated, the consequences of the injury will kill them. Squirrel 3 has their (2) autonomy clearly undermined. Their choices are reduced to what the injuries allow them to do, and therefore they lack an adequate range of choices. Squirrel 3 has lost their (2) autonomy, and is therefore non-competent,

Those authors who ground duties towards wild animals on well-being tend to believe that in cases like that of Squirrel 3, the importance of autonomy is trumped by the suffering that they endure. Duties towards these animals, then, would be entirely based on reducing suffering and not on autonomy-related reasons. In what follows, I will argue that this need not be true. Even in cases where liminal animals are severely non-competent, one still has autonomy-based reasons to assist them, and not only well-being-related reasons. This is because for non-competent animals such as Squirrel 3, curing their injuries is, basically, to give them more and better options than the ones they have. Compare this, again, with *The Hounded Woman*. Recall some of her choice-options: whether to escape North or South, to look for food in a risky spot or not, or to sleep now or later. Imagine one could help her by, for example, moving the predator to another island. In such a case, her options would be enriched: she would be able to decide autonomously whether to go for a run or for a swim, to look for food in a tree or under the ground, or to have a nap or not. *The Hounded Woman* is now more autonomous due to an enrichment of her options. The same is the case with non-competent liminal animals. Curing the injuries of Squirrel 3 would give them more options. If Squirrel 3 lives in Sheffield, they could decide whether to go to Weston Park or to Crookes Valley Park, to eat nuts or seeds, or where to nest. Injuries severely influence

individuals' choice-options, and therefore it seems unlikely that Squirrel 3 would have these options while being injured.

But other forms of assistance would also be justified under the positive duty to enrich options. Many animals are non-competent not because they have been harmed by a human-made artefact, such as a car in the case of Squirrel 3, but because of purely natural causes. These include ecosystemic processes that affect the amount of available food, extreme weather conditions, and diseases. Consider, for example, how a snowstorm can affect the (2) autonomy of some liminal animals. Their decisions about when and where to find food, where to find shelter, and what to do during the day and night would be curtailed. All their decisions would be conditioned by protecting themselves from the snow and cold. In cases like these, just as we have duties to enrich the options of *The Hounded Woman*, so we also have duties to enrich the options of liminal animals as a way of improving their (2) autonomy. In the case of the snowstorm, liminal animals could be made more autonomous by providing them with shelter and food, which would increase the quantity and quality of their choices. They would be freed from the burden of the snowstorm determining all their decisions. Their (2) autonomy would be improved. If there is a duty to enrich individuals' options, then, this grounds a positive duty to improve liminal animals' (2) autonomy.

## **7. The Potential Incompatibility of Autonomy-Based Negative and Positive Duties**

I have now argued that there are both negative and positive duties arising from the respect we ought to have for individuals' autonomy, and that these duties apply to liminal animals. It may be claimed, however, that these duties are incompatible. If respecting (2) autonomy means refraining from interfering with an individual's choices, then acting to enrich their options may involve some degree of interference. If the standard idea in non-consequentialist theory, according to which negative duties always take precedence over positive duties (see Lichtenberg, 2010) is accepted, then this may impede positive duties arising from autonomy to be applied.

This aligns with Donaldson & Kymlicka's (2011) autonomy-based reasons to reject systematically assisting wild and liminal animals. According to them, these kinds of interventions would undermine the autonomy of animals, making them unjustified (for a further elaboration, see Chapter 6). Moreover, as was argued earlier, animals

typically reject our assistance, often indicating that their decision is not to be helped. In what follows, I will give three reasons that show that these negative and positive duties are in fact compatible.

The first reason starts with an acknowledgement that on autonomy-based grounds, *some* forms of assistance may be unjustified. If a form of assistance clashes with the autonomous decisions of competent animals, this model would give us reasons against implementing it. For example, if someone wants to build a better shelter for magpies, but doing that would entail taking them out of their current shelter, significantly harming them in the process, this would probably mean we should not do it. This is just a consequence of taking autonomy seriously, as situations like these happen with humans as well, who, for example, reject certain kinds of medical interventions. However, the fact that some forms of assistance may be unjustified does not mean *all of them* are. There are many ways of helping liminal animals that do not involve interfering with their lives. In the case given earlier, for example, a new shelter may be built in a different place, avoiding having to take the magpies out for its construction. Interventions like these are what Catia Faria (2023) calls *environmental enhancement*: actions to help animals that target non-sentient entities and processes (p. 136). These forms of assistance do not interfere with liminal animals' choices, but simply give them more and better ones. To explain, take a human example. Imagine we want to assist humans by expanding the time they spend outdoors. An incompatible with autonomy way of doing this would involve forcing them to go for walks. However, instead of doing this, one could also improve the conditions of urban parks by adding accessible trails, cafeterias, or organising free activities. In this case, the autonomy of the humans is increased by enriching their (*ii*) adequacy of choice, fulfilling the positive duty arising from autonomy, while not violating the negative duty to (*i*) not interfere with their choices. The same can be the case with liminal animals. Examples of actions that fit within this framework include eliminating parasites through non-invasive means such as giving them food with medicines, building shelter or infrastructure that animals may need, such as bridges, or ensuring that they have access to basic resources. Actions like these make it possible to enact the positive duty arising from autonomy of enriching liminal animals' choices without interfering with their decisions.

There are, however, other reasons why both negative and positive duties are compatible. In some cases, interventions to help animals may interfere with their choices in ways that respect their (2) autonomy. This can be the case in three different instances. First of all, one may be permitted to interfere with the decisions made by liminal animals if they are not autonomous decision-makers on that domain. Earlier, I argued that autonomy should be evaluated in relation to different domains or choice-situations. This means that an individual may have the (1) capacity to make autonomous decisions in one context, but not in others. In my case, for example, I can make the autonomous decision to go for a run or not, but not to choose over the specific surgery technique to be used in an operating theatre. If I am not autonomous to make such a decision, this means that this decision is not *normatively authoritative* (see Groll, 2012). That is, it does not ground duties to respect it. The same, then, is the case for actions concerning liminal animals. Helping them, in some cases, may involve interfering with some of their decisions. But this would be permissible if they are not autonomous with regards to that decision, as their decision would not be normatively authoritative. As I will argue in Chapter 7, for example, many animals may lack the (1) capacity to make autonomous decisions about their reproduction, which may make it permissible to use painless methods of population control. In cases like these, where animals are unable to make their own autonomous decisions, it would be possible to interfere with them to help them increase their autonomy.

Something similar would occur if autonomous liminal animals do not value their autonomy *intrinsically* in a specific context. For example, following the reproductive example, it may be the case that magpies are not made better or worse off by being interfered with their reproductive choices. If magpies do not value autonomy intrinsically, then following the autonomy-based argument put forward above, their decisions on that realm would also not be normatively authoritative, as valuing autonomy intrinsically is a necessary condition for these duties to be triggered. If this is the case, then, it would be possible to interfere with liminal animals' choices to enhance their autonomy in ways that do not violate the negative duties we have towards them.

The third instance in which it may be possible to interfere with liminal animals' decisions in order to help them has to do with cases in which non-competent animals have lost their (2) autonomy completely. In cases like these, their circumstances would

not allow them to make *any* autonomous decisions, in cases where, for example, all of their decisions are conditioned by injuries. This would make it permissible to interfere with their lives to help them regain their (2) autonomy. This, again, can be seen by reflecting on *The Hounded Woman* example. In her case, even if she rejects assistance because she may be afraid of it, or may not understand that someone is trying to help her, it would be permissible to intervene and take them out of the island she shares with the beast. And the reason for this is that her rejection of assistance is not an autonomous decision, as her context has stripped her of her (2) autonomy, and all her decisions are determined by the constant threat to life she is subjected to. The same would be the case with non-competent animals. Injured animals, for example, may reject assistance. However, if their (2) autonomy is completely lacking, this decision cannot be taken as normatively authoritative, meaning that it would be permissible to interfere with them to help them regain it.

These three reasons, then, prove that autonomy-based negative and positive duties can be compatible. While in some instances they may not be, forms of assistance that do not interfere with liminal animals' decisions, as well as interventions that interfere with decisions that are not autonomous, are permissible. This would make it possible to enact negative and positive duties towards liminal animals at the same time.

## 8. Conclusion

In this chapter, I have argued that autonomy-based theories, often cited to argue against a duty to help liminal animals, support a set of positive duties towards them. By distinguishing between autonomy as a (1) capacity and autonomy as a (2) condition, and between the two factors that affect the latter, (i) non-interference, and (ii) adequacy of choice, I showed that respect for autonomy entails not only refraining from interference but also, in many cases, actively supporting the conditions under which autonomy can be exercised. Furthermore, I argued that animals can value autonomy intrinsically, and showed how both competent and non-competent liminal animals can be owed assistance. In the case of the former, to enhance the quality and safety of their choices, and for the latter, to restore the possibility of autonomous action in the face of extremely difficult living conditions. Respecting autonomy, then, is not always a matter of respecting choices, but also requires enabling others to make their own choices.

With this, I have shown that autonomy-based theories, far from excluding duties of assistance, provide strong grounds in support of them. This conclusion parallels the findings of the previous chapter on consequentialism but is derived from an entirely different normative framework. In the next chapter, I turn to yet another framework, relational theories, to show that the same conclusions follow for liminal animals. While, just as with autonomy-based theories, the relational framework has sometimes been invoked to deny the existence of positive duties towards non-domestic animals (or to constrain them), I will argue that the relations we have with them also trigger positive duties.

## Chapter 3: Relational Duties Towards Liminal Animals

### 1. Introduction

In the last two chapters, I have considered *individualist moral theories*. These theories derive negative and positive duties from characteristics that are intrinsic to individuals, such as sentience or autonomy. However, other authors defend non-individualistic theories, such as *relational moral theories*. According to these theories, while we might have negative duties towards every sentient being, positive duties towards others are only triggered by having special relations with them (see Bell, 2024). Defenders of these theories often refer to these positive duties as *special duties*, meaning duties beyond negative ones owed to others by virtue of a morally relevant relation with them. For this reason, in this chapter, *positive duties* will refer to the kind of *special duties* relational theorists deal with. The most well-known case of a morally relevant relation that would ground special duties are *familial*. According to some of these theories, parents have positive duties towards their children (like the duty to feed, care for, or educate) that they do not have towards other children, by virtue of the special relation they have with them (see Seglow, 2019).

This kind of relational reasoning has been applied to animals by different authors. Especially salient are the examples of Clare Palmer (2010, 2011, 2012, 2018, 2019), Sue Donaldson and Will Kymlicka (2011, 2016), and Josh Milburn (2021, 2022). The latter explains the view as follows:

All animal suffering matters. But the extent to which a particular instance of animal suffering grounds a duty for a particular agent to act depends upon the relationship that said agent has to the suffering or the animal experiencing it. To be obligated (or even permitted) to aid, the agent must have a particular kind of normatively salient relationship to the suffering or animal. To put it another way: There is no general obligation to aid animals in need, but facts about our relationships with particular animals may generate special obligations to aid them when they are in need. (Milburn, 2021, p. 33)

These authors agree that we have positive duties towards domestic animals (such as companion animals) by virtue of the relations we have with them. However, according to them, these relations are not present, or are only *minimally* present, in the case of liminal and wild animals. Therefore, we would not have positive duties towards liminal animals; or, more

accurately, we would only have minimal positive duties towards them. In this chapter, I will argue against this view, and show that our relationships with liminal animals are widespread, and that in many cases, they would trigger extensive positive duties towards them.

A crucial aspect of any relational theory has to do with how the concept of *relation* is defined, and what of it is considered *morally relevant* in generating positive duties. Authors have defined this concept differently, and no one has provided a classification of types of morally relevant relations. The structure of this chapter will follow a classification of kinds of morally relevant relations that have been used in the literature. For each of them, I will show how they imply that we are related, in a morally relevant sense, to many liminal animals, grounding positive duties towards them. In Section 2, I discuss the definition of relation as having an effect on others. Section 3 deals with relations as causal responsibility for creation. Section 4 is devoted to political relations. Finally, Section 5 discusses dependency relations. My intention here is not to provide a defence of every conception of relation. I will simply show that accepting their moral relevance will imply that we are related to many liminal animals, which will trigger positive duties towards them. I will also not argue that we are related to *all* liminal animals and that therefore we have positive duties towards *all* liminal animals. My argument here will be much more modest. I will claim that we are related to *many* liminal animals, and that in those cases, we would have positive duties towards those *many* liminal animals.

## 2. Having an Effect on Others

One of the simplest kinds of relation we can have with others is a relation of *effect*. This is the kind of relation that emerges from *doing something* that has an *effect on how someone fares*. There are many ways in which this can trigger positive duties. The most basic one is by *violating a negative entitlement*. It is commonly assumed in normative theories that by violating someone's negative entitlement (for example, by harming them), positive duties to repair that harm are triggered. This idea has been famously defended in the context of global justice, with authors arguing that rich countries are violating the negative rights of poor ones, creating special duties to help those who are in need in those countries (see Caney, 2007).

This definition of relation has already been applied to animals, and authors have argued that it leads to different conclusions. Palmer (2010) explicitly defines this kind of relation as “*having an effect, potentially having an effect, or having had an effect* on another,

or the *existence of an interaction* [emphasis added] between one being and another, such that the effect or interaction makes a difference in states of affairs" (p. 48). According to her, these kinds of relations, in order to be morally relevant relations that may trigger duties, have to happen between moral agents interacting with other moral agents or moral patients. For example, between humans and animals. Palmer does not make explicit what she means by having an "effect" that changes the state of affairs, but considering that the rest of her theory deals significantly with relations when one party harms another, it can be interpreted that Palmer is referring to interactions that make individuals worse off. By following her definition, we would be related to liminal animals if we had, potentially had, or have had, an interaction that harmed them. I will argue that under this definition, we are related to most liminal animals, which triggers certain positive duties towards them.<sup>20</sup>

Consider, first, cases in which we "have an effect" or "have had an effect". We coexist with liminal animals on an ongoing basis. We share spaces and resources. Consequently, as I have been discussing throughout the thesis, we commonly harm them: we run over them, we build infrastructures against which they collide, we locate lights in places that disturb them, we poison and trap them, and we give them food that causes them serious problems. By doing this, we have affected their well-being, and changed the state of affairs for them. Many liminal animals satisfy, at least, that part of the definition.

The other part of the definition applies to liminal animals even more straightforwardly. That is, relations as "potentially having an effect that changes the state of affairs". We surely have potential effects on present and future liminal animals. This means that we *could* harm them if we acted in different ways. This is illustrated by possible planning policies, as well as by the potential effects of climate change and technological development. Several authors have defended a similar idea to the one that potential effects are the kind of special relation that triggers positive duties. In the context of global justice, Smith (2012), Pepper (2016), and Cochrane (2018) argue that human and animal lives are "entangled", meaning that the actions and policies of humans are likely to affect animals, and the way in which animals behave will likely affect humans. This kind of relation makes the scope of positive duties affect all individuals who are in this relation of entanglement. According to the idea of relation as having an effect on others, then, we are related to liminal animals, as

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<sup>20</sup> Palmer's theory includes more morally relevant aspects in the relation besides this definition of relationship, such as the creation of vulnerabilities or dependencies, and the moral responsibility of the agent in creating the relationship (see 2010, pp. 96–158). Many of these questions will be dealt with in subsequent sections.

we have or had had, or potentially have an effect on them that changes the state of affairs for them. If this is the case, and these relations are morally relevant in generating positive duties towards others, then we have positive duties towards all those liminal animals we have, have had, or will have affected.

This argument carries with it an implicit sense of collective responsibility. I have been arguing that humans *in general* affect liminal animals in various ways, and that therefore, this gives rise to duties towards them. This is not unproblematic, and one could object that there are humans that do not affect and have not affected liminal animals in any way, and that therefore they are not related to them. In these cases, then, positive duties would not be triggered.

Before addressing the objection, it must be acknowledged that the idea of collective responsibility is widely accepted in relational ethics (see Palmer, 2010, pp. 111–114; Pogge, 2002, pp. 172–177). As such, many authors will accept the idea that for a morally relevant relation to trigger duties on some individuals, not necessarily must the individuals be involved in the relationship, but rather that such a relation exists between the groups concerned. There may be cases in which those relations do not exist between individuals, but the relation still exists between the groups if, for example, individuals allow for the relation of effect or implicitly consent to it. Examples of this may be driving even if someone never runs over an animal, working in tall buildings even if one is not responsible for the animals that crash against them, or allowing for the existence of traps and poisons in neighbourhoods even if one does not install them. A kind of collective responsibility of this kind seems to exist in many other contexts, such as the responsibility of citizens of countries with a colonial past towards decolonisation, the responsibility of men to end sexist attitudes, and the responsibility of wealthy individuals to help poor ones.

But this may not satisfy everyone. In fact, the discussion of whether collective responsibility justifies helping wild animals is one of the main disagreements between relational animal ethicists (see the discussion in Milburn, 2024 and O'Brien, 2023). And it will not satisfy, especially, those who do not believe in the idea of collective responsibility. So, as a second response to the objection, we can say that if one rejects collective responsibility, the argument still stands, but it only applies to cases of direct relations of effect between individuals. This is compatible with the purpose of this chapter: in the introduction, I stated that my intention was not to show that we are *all* related to liminal animals, but rather,

that many of us are, and that in those cases, positive duties would be triggered. By rejecting collective responsibility, the argument simply applies to fewer people.

Still, it must be noted that fewer people, in this context, still may involve many (or even most) of us. Most humans live in or regularly pass through urban, suburban, or agricultural environments where liminal animals are present, and our everyday activities, such as driving, building, waste disposal, gardening, lighting streets, or feeding animals often have direct impacts on them. Rejecting collective responsibility, then, still implies that many of us would be related to liminal animals in ways that trigger positive duties according to this definition.

Finally, this objection does not affect the part of the definition of relation as “having a potential effect on others”. This form of being related to others is not dependent on collective responsibility, but only on being likely to affect others. And most humans are likely to affect liminal animals, by harming them. Therefore, this second part of the definition also holds even if one rejects collective responsibility.

### **3. Causal Responsibility for Creation**

Another conception of relation is that of *causal responsibility for creation*, understood as being morally related to someone by influencing their creation. For example, parents, by procreating, create a new being. And although the fact that parents create their children is not the only reason why they have positive duties towards them, it is believed that the fact that their parents are *causally related* to the existence of their children triggers positive duties towards them (see Brandt, 2013; Prusak, 2013). The same idea has also been defended with regards to domesticated animals. By breeding animals, we are bringing new beings into existence, and by being causally related to their existence, positive duties are triggered (Donaldson & Kymlicka, 2011; du Toit, 2019; Francione, 2008; Palmer, 2010). For these authors, then, while positive duties are established towards domesticated animals (especially pets and farmed animals), they are not with liminal and wild animals:

Other animals have been “captured for food, domestication, research or other utility” and “transformed by culture” [Rolston III] (1988, 79); they require human action to survive and sometimes to reproduce. In this respect, humans are causally responsible for the existence and situation of domesticated animals in ways that they are not responsible for the existence and situation of wild animals. (...). Wild

animals, then, come into being and live independently of humans. (Palmer, 2010, p. 56)

In what follows, I will argue that in many cases, humans are causally related to the creation of liminal animals. Recall the core of the argument: when we influence the creation of an individual, we are causally related to them, which triggers positive duties towards them. Now, many would argue that these duties are only triggered if that creation is intentional. So, for example, breeders have positive duties towards their animals because they have intentionally bred them to existence. However, intentionality as a necessary condition for these duties to be triggered seems problematic. Many human babies are conceived and born without the intention of their parents. Also, many domestic animals are allowed to leave the house, and it is not uncommon that after a few days out, they come back pregnant or leave others pregnant. In cases like this, there is no intention of creating new individuals, but most people would agree that we are responsible for the offspring of our pets. And the reason for this seems to be that we are responsible for *creating the conditions* that make possible the creation of a new being. If we had not let the animals leave the house, if we had spayed them, if we had not taken care of their health, they would have not gotten pregnant. And while this may not be the only reason why we have positive duties towards the offspring of our pets, it seems to be one of the reasons that grounds these duties. This idea seems even more straightforward if one considers the following case:

*The Animal Shelter:* an animal shelter decides to put fertile male and female dogs together in the same kennel. They provide them with veterinary care, food and water, and comfortable premises. While it is not their intention to breed the dogs, they eventually get pregnant and have puppies.

In this case, it is clear that the shelter has positive duties towards the newborn puppies, and this seems to be, at least partially, because they have *provided* the conditions for them to be able to reproduce. These conditions, that may be relevant from the moral point of view, are that the shelter is effectively deciding: (i) with whom they reproduce, as they decided who to put in what kennel; (ii) when they do it, by putting them in the kennel sooner or later; (iii) the conditions of the pregnancy and influencing whether it is taken to term by providing care, food, and shelter; and (iv) the future of the newborns, by finding suitable adopters or finding a place for them in the shelter. These conditions, when taken together, seem sufficient to lead to a situation in which the agent or agents responsible for creating those conditions are

causally related (in a morally relevant way) to the creation of new beings, as they are not merely influencing who is born, but playing a significant role in deciding who is born, and in what conditions they are born. This aligns with the intuition behind the idea that in the case of *The Animal Shelter*, those who created the conditions that led to the birth of puppies have positive duties towards them. But also explains why, for example, we accept that grandparents can bear some moral responsibility for the existence of their grandchildren: not simply because they exist, but because they provided the enabling conditions for their children's reproduction, raising them, supporting them materially, and so on.

In what follows, then, I will argue that this is also the case with many liminal animals: we create the conditions for them to reproduce, and therefore we are causally related to their existence, which triggers positive duties towards them. To do that, I will show how our causal relations with liminal animals, in many cases, are very similar to those of *The Animal Shelter*, in which we clearly create the conditions for animals to reproduce.

Humans effectively change (*i*) with whom many liminal animals reproduce, and (*ii*) when they do it, in various ways. We actively kill liminal animals to control their populations. We also sometimes help needy liminal animals, saving their life or changing their behaviour. We restrict their access to food, and at other times we feed them. We expel them from certain places, we give them shelter, and we relocate them. This necessarily changes with whom they mate, and therefore with whom they reproduce. Consider, for example, when a council restricts feeding ducks at a public park. By doing this, the council is not only altering the health of the ducks (which will have effects on their reproduction), but also affecting how many ducks are born. Variations in food imply variations in the size of the population for ecological reasons (Adams, 2021, pp. 170–174). And variations in the number of animals imply that different ducks will mate with different ducks. This means that the council is necessarily deciding (even if unintentionally), and therefore having some causal responsibility, in (*i*) with whom and (*ii*) when animals are born. If some ducks exist now it is because, among other things, the conditions the council has allowed or enforced.

We also change (*iii*) the conditions of gestation and incubation. Having or not having a suitable place for incubating means that some animals will or will not be born. The same is the case with having enough food and water, and with the control of predators. These are all factors that humans manage: we build and demolish spaces in which liminal animals dwell, we control their access to food and water, and manage the populations of different predators,

killing them or reintroducing them. Examples of this are building shelters in parks for ducks, allowing or prohibiting feeding them, and bringing them into parks and natural areas. This means that humans have an effect on whether some animals are born or not by affecting the conditions of gestation and incubation.

Finally, we also affect *(iv)* the future of the newborns, by altering the factors already discussed above. Access to food, shelter, water, security, diseases, and other factors change whether juveniles make it to adulthood (and reproduce again) or not. It also changes where the newborns go to live, changing again with whom and when they reproduce. It has been shown, for example, that juvenile survival of pigeons is constrained by access to food (Sol et al., 1998).

In sum, our actions often play a significant role in creating or influencing the conditions under which liminal animals come into existence. By influencing factors such as access to food and shelter, reproductive opportunities, gestation conditions, and juvenile survival, we are frequently causally responsible for their creation in much the same way as in the case of *The Animal Shelter*. This causal responsibility establishes morally relevant connections between humans and many liminal animals. If we accept that such causal relationships generate positive duties in other contexts, including with domestic animals and human offspring, then for consistency, we would also have positive duties towards those many liminal animals whose existence we influence.

Some may claim, however, that this proves *too much*. That is, that this way of understanding the moral responsibility of creation would make us all related in this way to almost everyone, as our actions constantly influence who is getting born. For example, by refusing to have dinner with some friends, we may be allowing them to procreate and have a baby. In this sense, we could be morally responsible for the creation of almost everyone, which would, in a way, banish the specificity in which relational theories operate in allocating duties.

This objection, however, mischaracterises my argument. My claim is not that *any* causal influence on reproduction is sufficient to create a morally relevant relation that triggers positive duties. Rather, the claim is that this morally relevant relation is present when we provide the four conditions mentioned above. Affecting these conditions is a much stronger requirement than simply not having dinner with friends, as this neither *(i)* structures

reproductive opportunities, nor (ii) necessarily determines timing, nor (iii) affects gestational conditions, nor (iv) takes responsibility for the newborn's prospects. In contrast, when humans interact with liminal animals (feeding them, building or destroying nesting sites, or killing predators, for example), as I argued above, we are constantly altering these four factors in ways that change who is born, when, and whether they survive. It is in this sense in which it can be said that we are morally related to the creation of other beings, in a way that triggers positive duties towards them.

#### 4. Political Relations

Another kind of morally relevant relation that can be found in the literature concerns *political relations*. In this section, I will argue that many liminal animals, by virtue of being in a political relation with an authority characterised by them being under the power of the authority, are entitled to positive duties. This is not the way in which authors in political theory have recently grounded duties towards animals. Authors such as Donaldson & Kymlicka (2011) have recently examined whether positive duties exist or do not exist towards animals by analysing whether they should become full members of a certain political community. Being a full member of a political community (i.e., a citizen) implies that positive duties towards that individual are owed by the other members of the community simply by virtue of them being members. I will deal with whether liminal animals should become full members of our political communities in Part 2 of this thesis. However, when it comes to political relations and positive duties, membership is not everything. There are many instances in which non-members of political communities are entitled to positive protection in virtue of certain political relations they stand in with political authorities. This is the case for international students or irregular migrants, for example. In this section, I will deal with how animals standing in *political relations* with certain political authorities are entitled to positive entitlements regardless of their status as members or non-members of a particular political community.

Consider, then, the kinds of political relations we stand in with liminal animals. To do so, it could be useful to recall the definition of liminal animals I gave in the Introduction of this thesis. I defined liminal animals as wild animals who live in environments in which there is significant human presence, including the physical presence of humans and of human activity. This does not presuppose any relationship between the humans and the animals, but merely their location in spaces influenced by human activity, such as cities, agricultural lands,

industrial zones, or public parks. With this definition of liminal animals, then, it is possible to identify a political relation we stand in with liminal animals: a relation of control over their territory and resources. Or, in other words, we stand in a relation of power over liminal animals: we affect the places in which they live and the resources they need, greatly influencing how animals fare, including whether they live or die. And these power relations can be divided into two. First, we can distinguish the kind of control that individual people can exercise over animals. Cases of this include people who put poison outside their houses, who let their cats out, or who expel mice from their homes. I will not deal with these “interpersonal” political relations in this section. The reason for this is that I have dealt with them in several other parts of this chapter, and will do so again in the next chapter. Here, I will only focus on the second way of understanding the political relations we stand in with liminal animals: the relation of power that flows from the state or any other political authority over liminal animals. This kind of political relation includes examples such as plans to urbanise a park, ban the feeding of animals, or to enact mass eradication. These are political relations between a political authority and liminal animals characterised by the power of the former over the latter. In what follows, I will argue that these power relations are morally relevant political relations that trigger positive duties from the political authority towards the animals who are under such power.

As we have seen, political institutions effectively control the well-being of liminal animals, and their decisions often determine whether they can survive or not. In other words, they have power over the lives of animals. The question we need to ask, then, is whether this relation of power is morally relevant in a way in which it triggers duties on the part of the political institutions. As I will argue in Part 2, it can be argued that this is the case because this power relationship entitles liminal animals to full membership in the political community, which entails some protections and benefits for them. However, both moral and political philosophy and existing political practice shows that full membership is not all that counts. Non-members can also be owed positive assistance. And my claim is that these duties are best explained by the relations of power that exist between the actors. Take the examples of, for example, irregular migrants or international students, who are often considered non-members of the political communities in which they live.

In many countries, these individuals are entitled to benefits provided by the political authorities which have power over the territories in which they live, including access to

healthcare, education, career advice, language courses, basic shelter and clothing, legal assistance, or the services of a social worker (see FRA, 2011). When one looks for justification in the literature on why non-members are entitled to such positive duties one of the main reasons authors give is based on the fact that they are physically present in a territory. Being present in a certain jurisdiction, it is argued, grants individuals with certain entitlements (see Bosniak, 2007; 2020; Carens, 2013; Ochoa Espejo, 2016; Song, 2016). And this is not only a philosophical argument, for it is also one of the core principles of international law: physical presence makes institutions responsible for the individuals in their territory and grants them rights to several positive protections, including welfare benefits, due process rights, and access to education. In a historical 1886 ruling by the US Supreme Court, it was established that “[Fundamental rights] are not confined to the protection of citizens (...) These provisions are universal in their application to all persons within the territorial jurisdiction, without regard to any differences of race, of color, or of nationality.” (Yick Wo v. Hopkins, 1886). Now, when one goes one level below and investigates the justification for why territorial presence grounds positive duties, several authors argue that physical presence is normatively relevant because those who are inside a certain territory are under the authority of a political institution (Bosniak, 2007, pp. 407–408; Miller, 2016, p. 121; Song, 2016, pp. 237–240). According to this argument, those who are in a certain territory are under the jurisdiction of its laws. These laws that they have to abide by are massively powerful, and therefore individuals must be protected against possible violations of their rights by being protected by the state. This is how Joseph Carens explains it, applied to the case of children of migrants and their right to education:

To refuse to educate a child in the modern world is to condemn that child to a life of very limited possibilities. Even if it is the parents who are responsible for the child’s presence, the state has a responsibility to see that the actions of parents cause no extreme harm (physical or otherwise) to children within its jurisdiction. That responsibility flows from the state’s claim to be entitled to exercise such enormous powers over those within its jurisdiction. (...). The state controls access to the school system. It has the power to admit or exclude the child, and it has a moral duty to admit her. (Carens, 2013, p. 137)

In this case, the positive duty to educate children, then, follows from the state’s relation of power over the children, which exists because of the physical presence of the children within

the state's jurisdiction. And similar positive duties towards migrants are justified by the same principle: the fact that people are physically present in a territory makes them vulnerable to the power of the state, and they therefore should be entitled to protections and benefits (Bosniak, 2007; Ochoa Espejo, 2016; Song, 2016). But if the relation of power between the political authority and individuals, enabled by their physical presence, grounds positive duties towards them, then the same must be the case for the liminal animals who live in a certain jurisdiction. Just like children, they are in a power relation with a political authority that can massively affect their chances of survival. Similarly as the state has the power to decide whether children get admitted to public schools, massively changing their lives with that decision, they also have the power to decide whether, for example, injured animals are treated in a rehabilitation centre or are left to die in the streets. The responsibility for protecting animals who live in a certain territory will fall, in many cases, under local authorities, as they are the ones who can best enable the kind of protections that liminal animals need, such as veterinary care and urban planning decisions that advance their interests. However, these duties should not be restricted to the local level. National governments can also protect the liminal animals that live in their territories in a wide array of ways, such as passing planning ordinances of general application, starting vaccination campaigns, or educating the population to care about them. Wherever the duty finally falls and is enacted, we can say that those animals who are physically present in a political jurisdiction are entitled to protections from that jurisdiction by virtue of the power relation that flows from the institution to the animal. This, again, means that this understanding of relation also entails that many animals would be owed positive duties by virtue of being in a morally relevant relation with humans.

## **5. Dependency Relations**

Another way of understanding the idea of morally relevant relations is through relations of *dependency*. In other words, if an individual is dependent on another for certain things, then the latter has positive duties towards the former. The idea that dependency is a morally relevant relation has been extensively defended in the literature on ethics and political philosophy in different fields. In the area of the ethics of care and disability, for example, Eva Kittay (1999) has claimed that caring for dependent individuals should be added to Rawls' list of primary goods and that the state has the obligation to provide care to those individuals who are dependent. In the realm of parental duties, the dependency of children has also been appealed to as a reason why we have positive duties towards children (Seglow, 2019). In the

field of global distributive justice, Charles Beitz (1999), Simon Caney (2007), and Thomas Pogge (2002) have argued that positive duties towards distant strangers are grounded in state interdependency. Finally, in the realm of animal and environmental ethics, different authors have argued that relations of dependency create positive duties towards those who are dependent (Callicott, 1989; 1999; Donaldson & Kymlicka, 2011; Donovan & Adams, 2007; Milburn, 2022; Palmer, 2003, 2010; Swart, 2005; Verhoog, 1992; Wenz, 1988). The trend in the group of animal and environmental ethicists, however, is to claim that only domesticated animals are dependent on humans, while liminal and wild animals *tend* to live independently from humans. The duties owed to liminal animals in virtue of their dependence on humans are mostly unexplored. In what follows, I will argue that many liminal animals are dependent on humans and that this triggers positive duties towards them. To do so, in Subsection 5.1, I will define the idea of dependency. In Subsection 5.2, I will explain how the authors above have justified that dependency is a morally relevant relation that triggers positive duties. Then, Subsection 5.3 will argue that many liminal animals are dependent on humans in morally relevant ways, which would trigger positive duties towards them.

### **5.1. *Specifying What Dependency is***

In order to show that someone is in a relation of dependency, it is necessary to specify what dependency is and who is dependent on whom. Despite the extensive work made by different authors on the ethics and politics of dependency, no one has come up with an explicit definition of it. Rather, it is taken for granted. The reason behind this may have to do with the fact that cases dealt with by people in the literature are *very clearly* cases of dependency, and the authors may not consider it necessary to define it. Consider a few paradigmatic cases of dependency:

*The dependent newborn:* Anna is a newborn human. Anna needs the care of their parents and medical services to live and have a meaningful life. Without them, Anna would not survive. Even if they did, their well-being would be severely compromised.

*The dependent adult:* Betty is a human adult. They have to work at a precarious job to earn some money. Without the job or the help of their political institutions, Betty would not survive or would live a life with a severely compromised well-being.

*The dependent dog:* Carol is a dog who lives with their human family. Carol needs to be provided food, to be walked every day, and to be carried to the vet when it is

required. Without those services, Carol would not survive or would live a life with a severely compromised well-being.

In these cases, it seems quite clear that Anna, Betty, and Carol are in a relation of dependency. They depend on someone (their parents, the medical services, their employers, or their guardians) to live a meaningful life or even to survive. What they seem to have in common is that their life or well-being is contingent on the positive actions of another individual or collective. From this, I am deriving a *Sufficient criterion for dependency*:

*Sufficient criterion for dependency*: individual A is dependent on individual or collective B if A's life or well-being is contingent on the positive actions of B.<sup>21</sup>

This criterion is *sufficient* because it only intends to state that *at least those who fit into it* should be considered dependent, but it does not intend to cover all cases of dependency. However, its simplicity has many advantages. Firstly, it can accommodate the most paradigmatic cases of dependency we can think of. This is the case for the three examples I gave earlier. Secondly, it focuses on what is most important for individuals. While it is true that it is neutral to different dependencies, like emotional or economic dependency, it includes all of them in the categories of "life" and "well-being". Being emotionally dependent is, ultimately, having one's well-being dependent on others. And being economically dependent is to be dependent on having a meaningful life or even being able to live. And thirdly, even if simplified, it very clearly locates the dependent individual and who they are dependent on. This allows us to assign duties and responsibilities. The positive duty generated by dependency would lie on those people whose actions are necessary for someone else's survival or to have a meaningful life.

Before examining whether liminal animals fit into this criterion of dependency, I will first show that the theories that derive duties from dependency without defining it are based on a criterion of this kind. More specifically, I will show that this is the case in care and disability ethics, global justice, and animal and environmental ethics.

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<sup>21</sup> Some authors have used a different concept to refer to something which is *very similar*, although *not normatively the same* as dependency: the idea of vulnerability (see Deckha, 2015; Faria, 2023; Goodin, 1985; Mackenzie et al. 2014; Martin, 2023). Despite the similarity, however, both concepts trigger positive duties differently. While dependency does it in a *relational* way, as per the definition given above; vulnerability does it in a *non-relational* way, meaning that the duties emerging from it are grounded in aspects different than relationships, such as suffering or need. For this reason, I am not discussing the idea of vulnerability in this chapter.

## 5.2. *How This Criterion is Used Implicitly*

Disability scholars have extensively examined the moral and political questions posed by dependency. In this field of study, Eva Feder Kittay is especially prominent in her claim that the state has a duty to care for people's dependencies, which is justified by her inclusion of "being cared for in cases of dependency" in the Rawlsian list of primary goods (Kittay, 2019). Kittay has not explicitly defined the concept of dependency, but she states that dependency is characterised by a situation in which "the dependent requires care and caring persons to meet fundamental needs for survival and basic thriving" and in which "the intervention of another is crucial to assure that the needs of the dependent are met" (p. 84). Similarly, Sanaura Taylor (2017) argues that disabled people "are dependent on caregivers for [their] physical wellbeing and often dependent on the government for [their] economic well-being", while at the same time acknowledging that "all of us are dependent. Human beings begin life dependent on others, and most of us will end life dependent on others. We humans rely on each other for services such as clean water, waste management, and electricity" (pp. 198–200). These understandings of dependency seem to have in common the implicit idea that dependency is characterised by someone needing someone else to care for them to meet their basic interests ("fundamental needs for survival and basic thriving" for Kittay and "physical and economic well-being" in the case of Taylor). This is the idea behind my sufficient criterion of dependency, according to which A is dependent on B if A's life or well-being is contingent on the actions of B.

Authors who claim that principles of global justice should apply internationally as a consequence of state interdependency also seem to be implicitly using something similar to the *Sufficient criterion of dependency*. The basic idea behind these global justice theories is that countries are entangled in schemes of cooperation and exploitation that make countries dependent on one another for their own affairs, including economic prosperity and their ability to secure human rights (see Beitz, 1999, Chapter 3; Held, 1995, Chapters 5 & 6; Pogge, 1998). So, the idea is that

citizens of the developed countries enjoy a position of overwhelming political dominance in this system, and, through this system, we also dramatically affect the circumstances of the global poor (...). *Their very survival often depends decisively* (for example, through the price of their foodstuffs or their opportunities to find work) *upon our demand behaviour* [emphasis added],

which may determine things as whether local landowners will grow cash crops (...) for export or food for local consumption. (...) we are causally deeply entangled in the misery of the poor. (Pogge, 1998, pp. 504–505)

So, accepting that poverty is a major driver of well-being decrease and premature death (see Rowley, 2021), the idea of interdependency seems to mean that a set of citizens from a country or countries A have their well-being and life (“their very survival” or “the misery”) contingent on the actions (“our demand behaviour”) on a set of citizens of country or countries B. According to the authors cited above, this interdependency justifies principles of distributive justice to apply internationally. For some, these principles may be framed as a negative duty to stop harming those in non-wealthy countries (Pogge, 2014), while others would frame them as positive duties for wealthy countries to help the global poor (Caney, 2007; Singer, 1972). In any case, what is relevant here is that something like the *Sufficient criterion of dependency* is also doing some normative work in justifying duties to help distant strangers.

And finally, something like my criterion of dependency also seems to be implicit in the defences of duties towards *domestic animals* based on their dependency. Verhoog (1992, p. 274) argues that “by making an animal’s survival and well-being dependent on human action, man has become responsible for it, whereas such responsibility does not exist with respect to wild animals”. Swart (2005, p. 258) claims that “considerations of care are often thought to apply more to domestic animals, which are dependent on us for their welfare and subsistence”. Similarly, Francione (2007) argues that “domestic animals are dependent on us for when and whether they eat, whether they have water, where and when they relieve themselves, when they sleep, whether they get any exercise, etc” (para. 16). And Palmer claims that “what constitutes human responsibility to provide care here, then, is the creation of animal dependence by denying an animal access to other possible options for survival” and that

When humans deliberately create morally considerable, sentient animals who have no other ways of fulfilling their needs and are constitutively profoundly dependent on and permanently vulnerable to humans, then humans create special obligations toward those animals. (2010, pp. 92–93)

The idea behind these arguments is that it may be possible to leave wild and liminal animals alone without compromising their survival. In the case of domesticated animals, however, the situation is different: they need us to feed themselves, to find shelter, and to get protection against external threats. This is very clear in the case of domestic dogs, who need constant care to enjoy an adequate life. So it seems that these understandings of dependency imply that the life of domestic animals is contingent on our actions. If we refrain from feeding our dogs, it is likely that they will die after a period of misery. Thus, once again, it seems that these authors are implicitly using something like the *Sufficient criterion of dependency*.

Now, most authors applying the concept of dependency to animals argue that *only* domestic animals are dependent on humans and that therefore, positive duties are only owed to them. Swart argues that

on the one hand, there is domestic animals' dependence on humans or the human environment, and on the other hand, because ecosystem conditions and population dynamics largely determine their lives, there is wild animals' dependence on the natural environment. (...). Thus characterised by a dependent relationship with wild nature, domesticated animals by a dependent relationship with human society. (2005, p. 257)

According to him, this leads to humans having *non-specific* duties of care towards wild animals, based on preventing alterations to the ecosystem upon which they depend. In contrast, domestic animals would be entitled to *specific* forms of care, based on attending to individual needs and an affective and positive involvement with their well-being.<sup>22</sup> Palmer argues that “where animals are living, as it were, in an independent wild state, these kinds of duties to assist, at least, are not generated” (p. 89), but also that

we do have special obligations to assist and provide for domesticated animals that have either been created to be vulnerable and dependent or placed into situations where they have no other options but to depend wholly or partially on human support. (p. 96)

Donaldson and Kymlicka usefully complicate the discussion, arguing that “the simplistic division of animals into 'free and independent' animals inhabiting the wilderness and 'captive

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<sup>22</sup> Although Swart does not rule out specific care for wild animals, but only in very specific cases (2005, p. 259).

and dependent' domesticated animals living with humans rests on a series of widespread myths that need to be continually guarded against" (2011, p. 65).

After showing that the *Sufficient criterion of dependency* has been extensively implicitly used the literature to generate duties, and that in the context of animal ethics, authors have recurred to it to claim that it grounds duties towards domestic animals, but generally not towards liminal animals, I will argue that in many cases liminal animals fit into the *Sufficient criterion of dependency*. If this is the case, it will mean that dependency is yet another *morally relevant relation* in which liminal animals are immersed that triggers positive duties towards them.

### **5.3. *The Dependency of Liminal Animals***

The dependency of domestic animals on humans is clear and, as I have mentioned above, has been defended as a reason why we have positive duties towards them. If we do not feed and walk our dog, they will probably die. And if they do not, they are likely to live a very impoverished life. This is exemplified by the life expectancy of stray dogs, which is significantly lower than that of dogs who live in houses (Paul et al., 2016). But dependency does not seem to be restricted to domestic animals. Many liminal animals are dependent on us too. If this is the case, and relations of dependency trigger positive duties, this would mean that those liminal animals dependent on humans would be owed positive duties. In what follows, I will show how liminal animals can be dependent on humans for human-made (anthropogenic) reasons, or nature-caused (naturogenic) reasons.

Liminal animals can be harmed by being hit by cars, by crashing against windows and bright lights, by having their ecosystems altered in ways that reduce their access to food or the likelihood they are to be eaten by predators, by drinking polluted water or breathing polluted air, etc. By harming them in this variety of ways, in many cases, we create relations of dependency: situations in which they need help and in which we are able to help. This can be the case with injured pigeons after a crash, starving coyotes after their ecosystem has been altered by urbanisation, or diseased squirrels who have drunk contaminated water. Their life and well-being, in these cases, will be contingent on our positive actions to assist them. We could treat or euthanise the pigeon if their injuries were too severe, we could feed the coyote, bring them to a sanctuary or move them to a suitable ecosystem, and we could give the

squirrel safe drinking water and drain polluted ponds. In all these cases, according to the criterion I have provided, they are dependent on us.

But it is not only that we make liminal animals dependent on us by harming them. Biologists have shown that urbanisation has affected the evolution of many liminal species, changing many of their behaviour traits (see Schilthuizen, 2018). Take the example of pigeons. Urban pigeons are the descendants of the wild rock dove that was domesticated, used for human purposes (as pets, to send messages, to race, and so on), and then went astray and survived as a commensal species. As such, pigeons are completely adapted to living in human environments, and would find it very difficult to live in a fully wild setting. One of the traits that urban birds had modified is predator avoidance. This means that they are less ready to deal with predators in cities, such as falcons and hawks through a reduction in rapid antipredator responses (Geffroy et al., 2020). Also, pigeons have got used to being fed by humans or eating our leftovers, which means that when anthropogenic sources of food are reduced, pigeons will be unable to find food and will starve to death (Sol et al., 1998). In this case, then, pigeons should be considered dependent on humans.

Some people may argue that there is a flaw in my reasoning here, and say that even if there are positive duties towards these liminal animals, it is not in virtue of their dependency, but in virtue of either: *(a)* our having created a dependency; or *(b)* having violated their negative rights. This objection has force because if it is true, it would mean that dependency is, after all, not morally relevant: it would not be what triggers those positive duties. However, even if both *(a)* and *(b)*, *alone*, would provide reasons for positive duties to be triggered, this does not mean that dependency does not also provide reasons for positive duties to be triggered. Consider, for example, the case of children. Many people would argue that positive duties towards our children stem from the fact that *(a)* we have created them, and inevitably, we have created them as dependent beings. However, this does not mean that the fact in itself that they are dependent does not also trigger positive duties towards them. If this was not the case, then, we would seem to lack reasons to care for our adopted children. After all, we have not created them as dependent individuals. However, we do have positive duties towards them. This does not mean that duties towards adopted children exist only by virtue of their dependency on the adopters. But their dependency seems to play a role in the triggering of those positive duties. The same can be the case with *(b)* violations of negative rights. Even if *(b)* alone would provide reasons to assist animals that are in need, their

dependency can provide additional reasons to do so, as there are clear cases in which we have positive duties by virtue of individuals being dependent *even if* that dependency was not created by us harming them. Cases like this, include, for example, situations of disabled humans that depend on others to live a fulfilling life, or even to survive. Here, while we may not have harmed them, according to the arguments presented above, we are still morally related to them in a way that triggers positive duties towards them because they are dependent on us.

Furthermore, there are liminal animal-specific cases where such positive duties are generated by dependency where there is neither (a) responsibility for creation, nor (b) violation of negative rights. Consider the case of three liminal animals: a stranded dolphin<sup>23</sup>, a seagull that crashes against a tree, and a hatchling that falls out of their nest. Positive duties to help these animals cannot stem from (a) nor (b), but they can be triggered by the nature-caused *dependency* of those animals, just as in the case of disabled humans. These animals are dependent on our actions to survive (we can push the dolphin back to the sea, and take the seagull and the hatchling to the vet). If the dependency of adopted children or disabled humans triggers positive duties even if we did not (a) create the dependency, or (b) have harmed the person, then it must be the case that dependency also triggers duties in the cases of liminal animals who are similarly dependent on us and in which (a) and (b) are not present.

## 6. Conclusion

In this chapter, I have examined how various relational frameworks can generate positive duties towards liminal animals. I argued that if the relationships we hold with these animals are morally relevant in triggering duties, and we are related to liminal animals in these ways, then we have duties towards them.

By doing this, I have established that consequentialist, autonomy-based, and relational approaches all converge on the existence of positive duties towards liminal animals. This is important, as it means that the idea that there are positive duties towards liminal animals does not only follow from a single theory, meaning that one does not need to accept a set of

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<sup>23</sup> Some people may find it shocking that I am classifying a dolphin as a liminal animal. But, according to my criterion of a liminal animal as an animal that lives in areas with significant human presence, at least when they are living around human ports, for example, they would be liminal animals.

normative commitments to accept this view. Rather, this idea follows from the premises of three theories that are widely accepted in the literature.

One may claim, however, that while this makes sense, considering that most of these duties will need to be enacted by political institutions, one needs a specific political approach to this issue. That is, an approach that explicitly deals with the duties of political institutions towards these animals. For this reason, the next set of chapters will deal with the extent to which liminal animals should be considered full members of our political communities, and what kind of entitlements they would be owed by virtue of this.

## PART 2: Principles of Political Inclusion

I have argued so far that three ethical theories lead to the view that we have positive duties towards liminal animals. If my arguments are correct, this would mean we do not only have a duty to refrain from acting in ways that harm them but also that we should help them when they need it. Many of the ways of satisfying these positive duties I have mentioned, however, such as building rescue centres, building road crossings, designing cities in ways that take animal interests into account, and using painless methods of population control can hardly be instigated by individuals. Rather, for reasons that have to do with funding and coordination, they are the kind of interventions that need collective and political action to take place.

The intention of this set of chapters, then, will be to show that there are explicitly *political* positive duties owed to liminal animals. In other words, that the political communities we have created, such as municipalities, regions, states, and supranational organisations, have obligations to help liminal animals, care for them, and in general, make them better off. From this point of view, positive duties are often referred to as *benefits* or *public provision*, and in the case of humans tend to cover medical care, access to education, unemployment subsidies, pensions, and any other services emanating from the welfare state. In the case of animals, political positive duties may entail similar provisions, such as access to veterinary care, adequate nutrition, housing, and other benefits such as protection from overpopulation. While these might initially seem far-fetched, there are examples of positive benefits already given to certain animals, including the construction of dovecotes by local councils, the public funding of rescue centers for urban animals, or the implementation of population control programmes for the benefit of animals, such as in the cases of controlled cat colonies (see Moreira Soares, 2024).

Many will question the scope of these positive duties in a political context. This is because if one understands positive duties as an obligation to make others better off, this may imply that the lives of liminal animals should be made *as good as possible*. It may imply, for example, that councils would have to give rats their favourite foods, or that public authorities would have to build luxury shelters for pigeons. This is not only a conclusion that many will find counterintuitive, but it can also lead to situations in which in order to satisfy these animals' expensive tastes one would have to defund human positive provision. An explicit political approach, however, must take into account that in most of our organisational contexts, resources are limited. In this sense, political institutions have to balance the positive

entitlements of different individuals, and provide for them reasonably so that everyone has enough to live well. For this reason, the kind of political positive duties I will be referring to are *basic* positive duties, which include providing access to the necessary services to live a minimally good life. As I mentioned earlier, these, in an analogy with the case of humans, include access to things such as adequate nutrition, veterinary care, and housing (Gilabert, 2006). For these reasons, then, I will not be dealing with *non-basic* positive duties, such as providing expensive food to rats, or luxury accommodation to pigeons.

Despite taking an explicit political approach in this part, as mentioned in the Introduction and Methodology, the distinction between *ethics* and *politics* is blurry and contested. In this sense, many authors think that political principles emerge directly from ethical theories. Following them, the claim that there are political positive duties towards liminal animals will already be established by the conclusions of the previous chapters. However, many others think there is a relevant theoretical difference between both, or at least that while ethical theories may inform the duties of political institutions, they are not enough, and that an explicit approach from the discipline of political philosophy is needed to provide adequate responses to these questions (see Sleat, 2021). In this part, as I established in the Methodology, I will be following this latter view, taking an explicit political approach to the question of the duties owed to liminal animals. This explicit political approach will be characterised by a focus on political institutions, exploring how they should behave in light of the relationship that liminal animals have with them. In these following chapters, then, I will engage with the specific literature in political philosophy that deals with the assignment of positive duties to political institutions, and argue that within this framework, these institutions have positive duties towards liminal animals.

But before doing that, one may rightly ask whether political communities such as states even have *negative duties* towards liminal animals. That is, whether states have an obligation to avoid harming liminal animals. Before showing why this is the case, consider what the existence of such duties might entail. Currently, political institutions harm liminal animals in a variety of ways, directly and indirectly. Directly, for example, local councils often order and fund the eradication of certain species from their neighbourhoods, regularly using very painful population control methods, such as traps, poison, or shootings. They also decide to urbanise areas where animals live, such as parks or forests, necessarily causing the death of some of those animals. But political communities also harm animals indirectly, by

allowing and providing the basis for actions that harm liminal animals. This includes giving permission to build roads without barriers to stop animals from crossing them, or allowing for the construction of buildings in the middle of migration routes of certain birds. If political communities have duties to protect the negative entitlements of liminal animals, they would be obliged to prevent those harmful practices from taking place. In some cases, this may entail *refraining* from acting in ways that harm animals altogether. One such implication may be, for example, shifting from painful to painless methods of population control, such as moving away from the use of poison and substituting it with contraceptives. But in other cases, it would entail *minimising*, rather than eliminating harm inflicted on liminal animals. The reason for this is that almost all political communities are composed of individuals with conflicting interests, meaning that some forms of harm will be inevitable, and decision-makers have to find solutions that minimise that harm instead. Cycling, for example, necessarily harms some animals through collisions. This may not necessarily entail that cycling should be banned, as it would harm those who want to ride from home to work, for example. In cases like this, then, political communities must balance the negative duties they owe to different individuals. For example, in the cycling case, they may choose to install deterrents for liminal animals to avoid roads, or warn cyclists that animals may be in the area. The idea that the positive duties of liminal animals poses a burden to humans will be discussed in Chapter 8.

All of this, however, is conditional on political communities actually owing negative duties to liminal animals, which is dependent on animals mattering politically at all. I do not aim to offer a comprehensive theory of why animals matter politically. Still, it is worth noting a few ideas for why I think this is the case. First, as I mentioned before, although the domains of ethics and politics are not identical, they are closely connected. Given this connection, it would be odd for beings who matter morally not to matter at all politically, given that ethics also informs how individuals should be treated politically. If an individual matters morally, that fact gives political institutions at least *some* reason to take its interests seriously, particularly by refraining from causing harm. And we can see that most political systems already reflect this connection in practice. Across many jurisdictions, animal welfare laws impose duties not to harm sentient animals. These legal protections are far from perfect: they are often limited to domestic animals, and when not so limited, they tend to include animals as members of species or habitats. Nevertheless, their existence suggests that at least some animals are recognised as having some political standing. This is, I think, uncontroversial.

Partly for that reason, the rest of the chapters within this part will deal with a more challenging idea: that political institutions may also have positive duties to assist liminal animals.

### **1. Positive Duties, Political Membership, and Animals**

The method used in political theory to allocate positive entitlements tends to be different from the one used in ethics. One of the approaches used to determining who is entitled to these kinds of *political positive duties* in the case of humans is by looking at the *membership* status of individuals. That is, access to benefits is often dependent on the kind of status individuals have in relation to the political community (meaning a group of individuals organised under shared political institutions –such as municipalities, states, or supranational bodies– that make collective decisions, enforce laws, and provide public goods). There are different ways in which one can be a member of a political community, which affects the kind of duties that are owed. Citizens, for example, tend to have access to more benefits than foreign residents. In fact, one can differentiate between three kinds of membership in a community:

- *Full membership*: individuals are considered full members of a political community (often referred to as *nationals* or *citizens*) when they are entitled to full access to participation (they can vote in local and national elections and referendums as well as take public office) and can enjoy the full range of benefits offered by the community, often emanating from the welfare state, including healthcare, education, subsidies, pensions, unemployment stipends, and other forms of wealth redistribution. Full members also bear some responsibilities towards their communities such as the payment of taxes, jury duty, conscription, and other duties such as election day responsibilities (see Shachar et al., 2017).
- *Demos membership*: another understanding of political membership has to do with being part of the *demos*. That is, the group of individuals which is able to take part in the collective decision-making of a democracy. This form of membership entitles members to make political decisions through voting, taking part in assemblies and consultations, and having one's interests represented by others (see Arrhenius, 2018). Membership in the *demos*, however, is not necessarily linked to the entitlement to positive duties. Migrants with the status of residents, for example, are often able to

vote in local elections, but may be ineligible for public benefits such as pensions or housing subsidies.

- *Denizenship*: lastly, another kind of membership refers to a status in-between full members and demos members. This membership status, often referred to as *denizenship*, includes participation, and a reduced package of benefits and responsibilities towards the state. This form of inclusion is often illustrated by the Amish in certain areas of the U.S.A., who are entitled to voting and to some benefits such as disaster relief programmes and treatment for medical emergencies, but also have a reduced range of duties towards the state compared to full members, mostly through tax, military, and education exemptions (see Donaldson & Kymlicka, 2011, pp. 230–240).

In this context, allocation of political positive duties runs in a continuum, from the most extensive and complete range of positive duties owed to full members, to perhaps no or a very limited amount of positive duties owed to demos members. With this, I do not want to say that extensive positive duties are only owed to full members. Indeed, many individuals without this kind of membership status are sometimes entitled to positive entitlements, such as, for example, those seeking political asylum or irregular migrants, often for humanitarian reasons. My claim, however, is that full membership is *sufficient* (but not necessary) to be entitled to positive duties coming from the political community. In this sense, I am relying on the view that *at least* those who are full members are entitled to access to positive entitlements coming from their political community. This means that if someone is entitled to full membership in a certain community, they would also be entitled to the positive benefits emanating from such community. This is not only widely accepted in political theory by, for example, liberals (see Rawls, 1999, §43) and republicans (1997, Chapter 5)<sup>24</sup>, but it is also the case *in practice* in many countries, where full members (i.e., citizens) are entitled to an extensive range of provisions, including education and healthcare (for a few examples, see Pennings, 2012; Rummery, 2023).

The aim of the next three chapters, then, will be to show that many liminal animals should be considered full members of the political communities we have created, which would grant them an entitlement to public provision. I will also argue that if according to

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<sup>24</sup> Again, libertarians will deny this, but not because they will deny the link between full membership and positive duties, but simply because they will deny the existence of positive duties altogether.

certain principles, they should be considered denizens, the range of positive benefits they would be entitled to should be similar to that owed by *human* denizens. While some of these benefits are already given to some liminal animals, as was mentioned earlier in the case of setting up dovecotes and rescue centres, these still fall well short of what I will argue political institutions are obliged to provide. One reason for this current lack of benefits given to liminal animals has to do with their current political status. Liminal animals are not formally members of any community, which in turn means states do not regard themselves as having any positive duty towards them. To make the case that they should be considered full members of political communities, I will use three principles often used in the literature in democratic theory to determine who should be considered a full member of a certain political community: the *All-Affected Interests Principle*, the *All-Subjected Principle*, and the *Social Membership Principle*.

Of course, other approaches to derive political duties towards others could have been employed. For starters, there is another principle of political inclusion that I do not discuss here: the *Stakeholder Principle*. According to it, those who have a stake (meaning that they depend on) the continued existence of the political communities have a claim to be considered its full members (Bauböck, 2018). The reason for not considering this principle has to do with that it has received considerably less attention in the animal politics literature than the others. This may mean that its conclusions, when applied to liminal animals, would appeal to fewer readers.<sup>25</sup> Consequently, due to the word-limits of this thesis, I have selected the principles that are most relevant in the recent literature on political inclusion. But there are even other, methodologically different approaches to ground political duties. Some of these, for example, do not focus on membership, but on other aspects, such as need (Singer, 1972), past harms (Pogge, 2002), or fairness (Rawls, 1999). And yet, there are others that follow radically different approaches, such as non-liberal theories (meaning those that do not derive duties from the way in which we currently organise politically in most Western countries), including marxist, anarchist, or libertarian theories. It may well be the case that some of these theories lead to different conclusions about our duties towards liminal animals (namely, libertarians do not think there are positive duties towards *anyone*). However, I have decided to work within the realm of principles of political inclusion to evaluate the duties we have towards liminal animals motivated by the recent attention they have received by authors

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<sup>25</sup> For an examination of the implications of the Stakeholder Principle for animals, see Magaña (2022, pp. 105–113).

working in animal politics and for the extent to which liminal animal membership in political communities may radically change the status quo regarding our duties towards them.

## 2. The Structure of This Part

Authors working in the field of animal politics have mostly worked on whether animals should be given demos membership, exploring issues related to the interpretation and representation of animal interests to include them in the framing of the public good and the development of democratic innovation tools to include animals in political decision-making (see Magaña, 2022). Others, however, have worked on determining animals' full membership status and explored the different duties owed to them in virtue of such membership status (see Cochrane, 2018; Donaldson & Kymlicka, 2011). Specifically dealing with liminal animals, Sue Donaldson and Will Kymlicka (2011) have argued that they are entitled to denizenship status, which in their case entails the rights to stay in a certain territory; enjoy certain benefits such as limited forms of assistance; and benefit from anti-stigma protections, meaning in practice education campaigns to increase tolerance towards these animals. This level of protection departs significantly from the *status quo*, but I will argue this is neither consistent, nor enough.

As mentioned earlier, the way in which I will show that liminal animals should be considered as full members of our political communities will be through principles of political inclusion. These are normative tools that demarcate those individuals who should and should not be included in a political community. Often, these principles refer to a specific property individuals must possess to become a member, or a relation between individuals or between the community and certain individuals (see Magaña, 2024a). I will deal with three principles: in Chapter 4 I will discuss the All-Affected Interests Principle (AAP), according to which those individuals affected by the decisions of a political community should become full members of it. In Chapter 5 I will consider the All-Subjected Principle (ASP), which says that all individuals subjected to the laws or coercion of a certain community should be considered as its full members. And in Chapter 6 I will deal with the Social Membership Principle (SMP), according to which only those who can stand in certain social relationships with the rest of society should become full members of the political community that emerges from it. By arguing that these principles imply that liminal animals should be considered full members of certain political communities, I will show that they are owed positive duties by such political communities.

Some readers may want to point out that the AAI and ASP have been developed to give individuals the status of demos membership, which, often, does not grant those with any positive entitlements beyond participation in decision-making (see Goodin, 2007; 2016). Following this, then, they may point out that if I want to claim that liminal animals should be owed further provisions, further arguments are needed. This, I believe, is true. For that reason, in the chapters devoted to the AAI and the ASP, I will not only show that liminal animals fit within the principle, but also that the principle is relevant in granting individuals the status of full members.

## Chapter 4: The All-Affected Interests Principle and Liminal Animals

### 1. Introduction

In this chapter, I will claim that according to the All-Affected Interests Principle, animals should be considered full members of our political communities, which would entitle them to some of the benefits offered by the state and other political institutions. While some authors (Garner, 2017; Magaña, 2024b; Vink, 2020) have already argued that the principle requires the inclusion of animals as members of certain political communities, they have done it for *demos* membership. As such, according to them, animals should be allowed to participate in public decision-making and given the tools to do so. So far, however, no one has *explicitly* argued that the principle implies that animals should be given the kind of membership status that grants them with positive entitlements, such as full membership.

This chapter will run as follows. In Section 2, I will define the principle and some of its main characteristics. Section 3 will argue that while the AAP has been developed to demarcate who is a member of the *demos*, it is also relevant to delineate other forms of membership. Section 4 then argues that animals fit in the AAP, and that therefore they should be considered full members of our political communities, and responds to a number of objections to this view.

### 2. Defining the All-Affected Interests Principle

The “boundary problem” in democratic theory refers to the discussion of how to identify the *demos* of a certain political community: that is, those in a community entitled to participation in decision-making. The All-Affected Interests Principle (AAP) has been proposed as a relevant way of answering this problem (Goodin, 2007). Robert A. Dahl (1990) was the first theorist to conceptualise the principle, formulating it as:

*Dahl's All-Affected Interests Principle:* Everyone who is affected by the decisions of a government should have the right to participate in that government (p. 49).

The idea, then, is that if a certain decision taken by a political community affects someone, they should be able to participate in the decision-making processes of that community. What is not captured by the definition, however, is what kind of *affectedness* is needed for someone to be entitled to participation. As contained in the principle's name, what is crucial here is that decisions affect individuals' *interests*: that is, what makes their lives go better or worse.

So, if the decision to reduce the funding for public schools thwarts my interest in having a good education, which makes my life worse, I should be able to have a say in that decision.

Robert Goodin (2007), while agreeing with the principle in itself, later questioned the viability of this definition, distinguishing between *actually affected interests* (those affected after the decision was taken) and *possibly affected interests* (not only interests affected by the decision, but also the interests that might have been affected were the decision different). Ultimately, Goodin argues that the latter formulation is the one that better captures the idea behind the AAP, as the former excludes from the decision-making process all those who would be affected by the decision were it different. Goodin explains it as follows:

Imagine a U.K. referendum on the question, Should the United Kingdom transfer 5 percent of its gdp as restitution to its former African colonies? Ought citizens of those former African colonies get to vote in that referendum? On the “all actually affected interests” principle, they ought if their interests are affected by the outcome that actually occurs in that referendum. If the decision is to give them a vote, then interests are affected: there will (let us suppose) be enough African votes in favor of the proposal to swamp the British ones against it. If the decision is to deny the Africans a vote in that referendum, their interests are not affected: the referendum will fail (let us suppose) and they will be no better or worse off than they are at present. (2007, p. 55)

Goodin, then, observes that if members of former African colonies were denied a vote, they would not be affected under the actually affected interests version of the AAP, as they would not have been made better or worse off. However, under the possibly affected interests version, they would be affected, as they *could have been* made better off if they had been given the chance to participate. For this reason, he formulates the AAP as:

*Goodin’s All-Affected Interests Principle:* All interests possibly affected by any possible decision under any possible agenda should be included in the demos (2007, p. 55).

While other authors have defined the principle in slightly different terms, the crucial idea persists: if your interests are affected by a certain political decision, you should be able to have a say in the framing (what decision is being taken?), the options (what alternatives are available?), and the taking (is the decision accepted or rejected?) of the decision.

A crucial aspect of the principle concerns to what extent those interests need to be affected to be considered by the principle. This is partially captured by Gustav Arrhenius' (2019) definition:

*Arrhenius' All-Affected Interests Principle:* The people that are relevantly affected by a decision ought to have, in some sense and to varying degrees depending on how much they are affected by it, influence over the decision (2019, p. 171).

Arrhenius includes here two new components in the definition: the relevancy clause and the varying degrees of influence over decisions. The latter is, for the purposes of this thesis, irrelevant, as I will not be dealing with how much those affected by decisions (in this case, liminal animals) should be able to *influence decisions*. However, understanding the former, namely, *what kind of interest affectedness* is relevant to be considered by the principle, is crucial to the argument I will make below. The reason for this is that any political decision affects different interests, and in different ways. Take, for example, the decision to open or close a state border to migrants. A decision like this will affect, primarily, the interests of migrants in coming to the state, which may be based on other interests, such as in life, safety, or freedom. But it will also affect other interests that may be considered less relevant or irrelevant, such as the interest in having as many British pubs as possible instead of multicultural restaurants. Of course, distinguishing the criteria to determine which interests are relevant is really challenging. At the same time, doing so seems crucial: homophobes and racists, for example, certainly have particular interests that many of us think should not affect decision-making in the context of LGBTQ+ or multicultural policy.

During the rest of the chapter, I will not take any controversial position on the relevance of interests, and simply accept that *at least* the interest in avoiding suffering and in protecting one's life are the kinds of relevant interests that must be considered relevant by the AAP. That is, if your interests in avoiding suffering and life are affected by a political community, you should have a say in the decisions taken by such a community. The reason for this is that it is clear that basic interests like these are the ones considered most relevant by authors working on this topic. Take, for example, one of the main applications of the AAP: its use to defend the enfranchisement of non-citizen residents (Boudou, 2023; Song, 2009). According to the argument followed by these authors, non-citizen residents are deeply affected by decisions taken in the place in which they live, while they often cannot take part in such decision-making. The AAP favours their inclusion because their interests may be

thwarted by, for example, a migration policy that affects their life prospects, the availability of instruments to reduce the impacts of language differences, the ability or inability to bring their families to their place of residence, and the risk of marginalisation. When one looks at the way in which these factors affect interests, one can see that neglecting these issues may constitute a risk of suffering (as a consequence of fear of deportation, isolation, marginalisation, and so on), and in some cases, even pose a threat to their life (if their life prospects in their home country are bad enough or if they are refugees, for example). And precisely because of this, it is argued, they should be included in the decision-making process that could lead to such outcomes for them. Surely, a wider discussion of what *other* kinds of interests should also be taken into account by the AAP (such as some private desires or lifestyle choices) is necessary to provide a full account of the principle. However, for now, it is only necessary to agree that at least baseline interests such as the interest in life or in not suffering are *relevant* to be considered by the AAP.

### **3. The All-Affected Interests Principle and its Relevance for Full Membership Inclusion**

As was clearly seen in my explanation of the AAP, this principle has been designed to help us differentiate those individuals who are entitled to demos membership from those who are not. In what follows, I will expand its scope and show why the principle is also relevant to determine who is entitled to forms of membership that grant individuals with more extensive positive entitlements, such as full membership. That is, that the AAP is not only relevant to discern which individuals are entitled to participation in decision-making, but also to determine who is entitled to positive provision by virtue of being considered a full member. This will allow me, later, to defend that according to the AAP, liminal animals should be considered full members of the political communities that affect their relevant interests. The fact that the AAP's original purpose was not including individuals as full members may be seen by some as a starting objection against my argument. If the AAP works only to identify the demos, then using it for other purposes may be considered wrongheaded. The AAP, however, as a normative tool, can be used for diverse purposes if it can be shown that it has *normative relevance* for those other purposes. Examples of other normative tools used for purposes beyond those than originally intended include Charles Beitz's use of Rawls' veil of ignorance to defend global justice (1999, p. 151), or the use of the capabilities approach, initially developed by Amartya Sen as a welfare metric (1980), as a theory of justice by

Martha Nussbaum (2013). In what follows, I will argue the AAP is relevant for including individuals as members beyond demos membership, in ways that entitle them to positive benefits.

Crucially, the idea that the AAP is relevant in delineating full membership, and not only demos membership, has already been defended, although not explicitly. Cosmopolitan thinkers such as David Held (1995), along with Anthony McGrew (Held & McGrew, 1998), have claimed that transnational streams of affectedness, on which the current global political order is based, have normative significance. According to them, states and societies are immersed in a complex web of regional and global connections, in which the fates of individuals are dependent not only on the actions of their own country, but also on the decisions of others (see Held, 1995, Part II). In other words, then, individuals are deeply affected by the decisions of several political communities. Held understands by affectedness any change in the life prospects of people that may manifest in changes in health, welfare, economic power, or safety. According to cosmopolitan authors such as Held, an individual's vulnerability to actions taken by other countries justifies that negative and positive duties should not be confined to states, who are unable to protect their citizens, and that therefore, some form of international or global institution should be created to coordinate issues that stretch beyond the area of operation of states (see Held, 1995, part IV). More precisely, he argues that individuals affected by several states should become citizens (that is, full members entitled to benefits) of multiple political communities:

People would come, thus, to enjoy multiple citizenships – *political membership in the diverse political communities which significantly affected them* [emphasis added]. They would be citizens of their immediate political communities, and of the wider regional and global networks which impacted upon their lives. (Held, 1995, p. 171)

Held's argument, then, is based on the idea that those affected by the decisions of a political community should be included as *citizens* in it, which mimics the structure of the AAP. Importantly, for Held, this would allow for the protection of the seven clusters of rights that he argued must be guaranteed in a democratic order: Health, Welfare, Cultural, Civic, Economic, Pacific, and Political rights. Crucially for our purposes, most of these rights are positive entitlements, such as the “Pursuit of bodily needs and pleasures” and the “Ability to pursue economic activity without immediate financial vulnerability” (pp. 190–206). This,

then, means that affected interests does not just result in demos membership, but a fuller membership in which positive duties are owed, such as full membership.

Held's argument is closely related to the original justification of the AAP. In its traditional guise as a principle for demarcating the demos, the AAP acquires normative relevance under a very specific conception of democracy, based on the protection of interests. According to this *protective* model of democracy, government authority risks oppressing those ruled upon, potentially thwarting their interests. As such, proponents of this model believe that the franchise should be extended to keep power in check, so voters are able to vote the rulers out of office. In this sense, then, democracy is an instrument built to achieve a very specific outcome: to protect the interests of those subject to its power (Macpherson, 1978, Chapter 2). From this, the justification of the AAP as a principle to demarcate the demos follows from that those affected by a political authority should be able to protect themselves by voting. As a principle for delineating membership beyond demos membership, such as full membership, and following Held's ideas, the AAP can be similarly justified on the grounds that individuals excluded from entitlements in political communities whose decisions significantly affect them lack the political standing needed to secure protection (particularly the positive rights and benefits) from harms or threats arising from those communities' actions. For example, migrants whose livelihoods depend on EU trade regulations are deeply affected by those policies, yet without some form of membership they have no entitlement to the protections or benefits that EU citizens (i.e., full members) enjoy.

Cochrane (2018) also relies on the AAP to argue for the inclusion of animals as full members of political communities. In discussing the AAP, he claims that "in order for political institutions to show equal consideration and protect the rights of sentient creatures robustly, they must exist within political communities made up of all of the individuals whom they affect" (p. 70). This is justified by the idea that humans and animals (both domestic and wild, which would include liminal animals) are living in "entangled communities of fate", meaning that our well-being is interconnected, in a way in which our actions and policies have a profound impact on the lives of animals. According to him, belonging to these communities of fate, based on mutual affectedness, is what grounds full membership inclusion. This is based on the idea that this form of membership is necessary in order for political communities to show equal consideration to individuals (see Chapter 4). This, again,

mimics the structure of the AAP and uses it to justify individuals as members: those who are affected by the decisions taken by a political community should become full members of it.

The relevance of the AAP for delineating full membership, then, has been cogently defended by these authors. Building on their work, I will adopt the AAP for this purpose, defining it as:

*The All-Affected Interests Principle (for full membership inclusion):* everyone whose relevant interests are affected by the decisions of a certain polity should be included in it as a full member.

In the following section, I will argue that liminal animals, by virtue of the extent to which they are affected by human policies should be included in our political communities as full members, and owed positive entitlements as such.

#### **4. Liminal Animals and the All-Affected Interests Principle**

If the AAP is relevant for determining this fuller membership, to know whether it requires recognising liminal animals as such, one needs to show not only that different polities affect their interests, but also that they affect *relevant* interests.

Consider, then, the kind of liminal animals' interests affected by political decisions. Recall that I have explained above that the set of interests I consider relevant are only the interest in life and in avoiding suffering. If these kinds of interests are affected by political institutions, the AAP will imply that these animals should be regarded as benefit-owed members. To see if they are, take two paradigmatic examples of decisions that affect liminal animals, that will be dealt with in depth in Chapters 7 and 8: population control and urban planning. The former is often a policy implemented by political communities such as councils and regional authorities, and in many cases, the methods they use include anticoagulant poisons, that inflict severe suffering before causing the death of the animals. Similarly, many traps used do not kill animals instantly but cause a long and painful death. Take now the case of urban planning. This, again, is part of the set of policies routinely implemented by political institutions, ranging from small councils to states. And these policies also significantly affect the interests of liminal animals. Take, for example, the decision of a region to build a new road connecting two neighbourhoods. Roads like these often constitute a threat to animals' quality of life, by restricting their ability to migrate, find food, follow social groups, and

escape from predators; and will most likely also pose a risk to their life, as seen by data on collisions with animals. In Portugal, for example, there is an average of 1.1 collisions with wild boars per 100 km of road (Torres et al., 2023), and in Spain, there is a yearly average of more than 5000 collisions with this particular species (Sáenz-de-Santa-María & Tellería, 2015). These planning decisions affect animal interests of a similar kind to those discussed previously: they both deeply restrict individuals' quality of life, and can affect their chances of survival. Importantly, they clearly cause suffering and death, thwarting the interests that authors working on the AAP consider relevant.

Some may argue that these interests are not really affected by political institutions themselves. In the case of collisions with cars, it is drivers who kill animals. And in the case of harmful population control programmes, it is the “pest control” agencies who harm animals, rather than the institutions. This may be true if one understands as a political decision that affects some individual something that is *directly done* by political actors, such as when violence is exercised by police forces. However, decisions *taken* by political actors are often *delegated* to agencies and private businesses, and there is no reason not to consider them as relevant for our purposes. The reason for this is that while the agent that directly affects animals is not the political actor, the agent ultimately responsible for making the decision or allowing the behaviour that affects animals is *the political actor*. In many cases, it is the local council that *decides* to implement a population control programme, and then hires a company to do it. Similarly, in the cases of road collisions, it is the political institution that *decides* where the road passes through, at what speed cars can drive, and whether they are allowed to do it. In these cases, then, animals, despite not having their interests affected *directly* by public officers, are still affected by political decisions.

Another potential objection concerns the *extent* to which the interests of liminal animals are affected by political decisions. It might be objected that although liminal animal interests affected by political decisions are of the same *kind* as those affected in the case of humans, they may be of different *intensity* or *quality*. For example, the interest in having a certain life standard held by a migrant worker may be stronger than that held by a duck, in the sense that the satisfaction of the interest may contribute to a higher well-being in the case of the human. Or perhaps, the interest of the human may be of a higher quality, such as the desire to read complex books, have certain career aspirations, or develop a skill, while the interest of the duck may consist of having enough food, a social group, and a cosy place to sleep. This objection, then, would say that these factors are crucial to consider interests *sufficiently*

*relevant* to be considered by the AAP. Some may argue, then, that only these kinds of interests of a certain intensity or quality should be considered relevant by political institutions, and that therefore, those unable to reach such standards would not be entitled to full membership in the community.

Before responding to this objection it is necessary to say that it necessarily relies on two far from widely accepted assumptions: *(a)* that humans can experience larger well-being ranges than animals, that is, they can suffer more and be happier than animals; and *(b)* that there is something like the “quality” of someone’s interests, meaning that some interests are objectively better than others. The former has been proposed by different authors (see Aguilera, 2025; Fischer, 2024; Kagan, 2019; McMahan, 2002, pp. 145–161; Vallentyne, 2005) but there is far from a consensus on the view, with several authors contradicting it (see Akhtar, 2011; DeGrazia & Millum, 2021; Rollin, 2006). Position *(b)* was famously defended by John Stuart Mill and illustrated by his claim that “It is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied” (Mill, 2008 (1861), p. 188). But there is certainly no consensus on the view that there is something like the quality of interests. Indeed, in order to defend such an idea, one would need to come up with criteria to identify the quality of interests, independently of the impact they have on individuals. That is, it would be necessary to explain why reading Shakespeare is *better* for someone than socialising with their loved ones, even if they are as happy doing one as the other. Let us, however, for the sake of argument, accept these two assumptions and agree on that humans can experience *(a)* more and less well-being compared to animals, and that *(b)* humans can have interests of a better quality compared to animals, and proceed to show why even these being true, they do not justify excluding them from the kind of individuals included as full members by the AAP.

Even if these claims are accepted, this objection leads to consequences that most of us would consider undesirable, and that mimic what some have called the argument from species overlap<sup>26</sup>. This argument would say that if the criteria to consider individuals full members of certain political institutions have to do with the intensity or quality of their interests, many *humans* with interests of lower intensity or quality should be excluded from full membership. For example, the AAP would lead to the view that not only babies and some people with

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<sup>26</sup> Often also called the argument from “marginal cases”, although this name is disappearing out of respect for children and disabled humans (see Horta, 2014).

cognitive disabilities could be rightly excluded, but also many humans who have less intense interests, or who have more “basic” ones, such as those that simply want to lie on the beach instead of reading complex literature. But if this is the case, the AAP would be contradicting its original normative resonance in protecting people’s interests, to start only protecting *some* people’s interests. If one wants to avoid this conclusion, then it is necessary to avoid the idea that only those individuals with interests of a certain complexity should be included by the AAP. As such, this means that even if liminal animals have weaker interests and of a lower quality than humans, they should still be considered as full members by the AAP.

## 5. Conclusion

In this chapter, I have argued that, according to the All-Affected Interests Principle (AAP), liminal animals should be included as full members of our political communities, which would entitle them to positive provision. While most interpretations of the AAP have focused on its role as a principle to demarcate those entitled to demos membership, I have argued that the principle has also been proven to be relevant to delineate the kind of membership status that would grant individuals with access to positive entitlements. Liminal animals, whose lives are deeply shaped by human activity, then, would be entitled to full membership in the political communities that affect their interests.

To support this conclusion, I first clarified the structure and different interpretations of the AAP. I then showed how different authors had shown that it is also relevant to determine who is included in political communities as a full member. Then, I showed that the relevant interests of liminal animals are affected by political communities, which justifies their full membership in those communities. Finally, first I addressed the objection according to which many actions that affect liminal animals are not done by political actors, and second, I addressed the objection which claims that the interests of animals do not meet an intensity or quality threshold that makes their interests relevant. I rejected the first objection by showing how these actions are mostly *decided* by political actors, and the second by arguing that accepting this view implies excluding many humans from this kind of membership.

Any discussion of the inclusion of animals as full members triggers further questions, such as the form of inclusion (how can institutions adapt to animals becoming full members?), the scope of the inclusion (to what extent should animal interests be protected and advanced?), or its site (should they be included in cities, regions, states...?). Some answers to

these questions have already been discussed in the literature (see Cochrane, 2018; Garner, 2013; Magaña, 2022), and as my purpose here is only to show that the AAP requires us to recognise liminal animals as full members who are owed public provision, I will leave these questions unsolved.

This chapter, then, provides yet another way of justifying that liminal animals are entitled to positive duties, although using an explicit political focus. If my arguments are sound, followers of the AAP must accept that the principle includes liminal animals as members entitled to positive provision. This represents an original contribution to the field of animal politics, as I have developed a new way of arguing that liminal animals affected by the decisions of a political community are entitled to becoming full members of it, with the associated benefits this will imply for them. Those who want to resist this conclusion, then, must either reject the AAP altogether, present a successful objection, or turn to alternative principles of political inclusion. In the following chapter, I analyse whether the All-Subjected Principle presents a way to exclude liminal animals from full membership, or whether it leads to their inclusion too.

## Chapter 5: The All-Subjected Principle and Liminal Animals

### 1. Introduction

In this chapter, I turn to yet another principle of political inclusion, the All-Subjected Principle (ASP), to examine whether it leads to similar conclusions as the All-Affected Interests Principle (AAP) in granting liminal animals with the status of full membership, or if its normative commitments entail that they should not be included as full members of political communities. In contrast to the AAP, which, as I mentioned above, has been extensively applied to animals (although in the context of demos membership), the ASP has not received that much attention from those working in animal politics. To date, only Pablo Magaña in his PhD thesis (2022) and Peter Niesen (n.d.) in an unpublished piece of work have examined the implications of this principle for animals (although in the context of demos membership). In this chapter, then, I will delve into the principle, apply it to the case of liminal animals, and ultimately argue that it leads to the same conclusion as the AAP: that liminal animals should be entitled to full membership, and that this grants them with benefits coming directly from the political community.

This chapter is structured as follows. In Section 2, I define the ASP, explain its justification and its two main interpretations: one based on the understanding of subjection as *boundedness by laws*, and the other based on the understanding of subjection as *coercion*. In Section 3, I put forward an argument to claim that the ASP is not only relevant to demarcate the demos, but that it is also relevant to discern those entitled to become *full members* of the political community that subjects them. Section 4 makes the argument that liminal animals are *subjected* by political communities, and that therefore they should be entitled to full membership in those communities. It does so for the two interpretations of the ASP. First, it deals with the interpretation based on subjection as boundedness by laws, and second, with the idea of subjection as coercion.

### 2. Defining the All-Subjected Principle

Despite the great attention given to it, many authors consider the All-Affected Interests Principle (AAP) to be problematic for being overinclusive. As was shown in the previous chapter, the AAP may not only include liminal animals as full members, but makes everyone possibly affected by any possible decision part of the demos. While some consider this an advantage of the principle, and use it to defend the expansion of the franchise beyond

national borders (Goodin, 2007), for others it is a *reductio ad absurdum*, that gives good reasons to reject the principle altogether (Fraser, 2013, pp. 31–69; see also Miklosi, 2012). For this reason, the All-Subjected Principle (ASP) has been proposed as an alternative (Goodin & Arrhenius, 2024). There are a myriad of versions of the ASP, and as such, any attempt to define what the ASP is will be a simplification. As a starting point, however, the ASP can be formulated as:

*The All-Subjected Principle:* everyone subject to the laws or coercion of a certain polity should be able to participate in the decisions of such polity.

The ASP departs from the AAP in that it does not require affectedness by a decision to become a member of the polity, but to be bound to a certain set of laws or to be liable to be coerced. This definition captures something important about the ASP: there are two interpretations of it, based on what the idea of *subjection* means. According to some authors, subjection is to be understood as being bound by laws (Beckman, 2014; Goodin, 2016). This can be understood in three different ways. Firstly, one can be bound by laws if one can be *legally obligated* to follow them. A clear example of this involves the duty to obey laws that tax one's salary. Secondly, one can be bound by laws in the sense that they give one *legal powers*, such as the power to marry or to sue someone in court. And thirdly, one can be bound by laws in the sense that a system of laws or its application may *materially affect* one. This third understanding of subjection essentially amounts to the AAP, as it equates *subjection* with *affectedness*. For this reason, in the rest of the chapter I will focus only on the first two understandings to make my arguments. Following these two versions of what it means to be bound by laws, and therefore subjected, the ASP could be formulated as:

*All-Subjected (to Laws) Principle:* everyone liable to be ascribed legal duties or legal powers enacted by a certain polity should be able to participate in the decisions of such polity.

According to this interpretation of the ASP, non-citizen residents, for example, who are given the legal power to marry someone else or to take legal action against someone in a court should be given the opportunity to become members of the demos of the country that subjects them. Similarly, residents who are liable to the attribution of legal duties, such as tax-paying, should also be entitled to demos membership (Beckman, 2014).

Other authors, however, have understood the concept of subjection differently. According to the second interpretation of the ASP, subjected individuals are not those bound by laws, but those coerced by the power of political institutions (see Abizadeh, 2021; Goodin & Arrhenius, 2024). By coercion, in this context, these authors refer to situations in which a political authority prevents or forces an action by an individual in a way that undermines their autonomy. According to this interpretation, then, the ASP can be formulated as follows:

*All-Subjected (to Coercion) Principle:* everyone coerced by a certain polity should be able to participate in the decisions of such polity.

There is a debate in the literature concerning what *components* of autonomy are required to be undermined for an action to be considered coercive. Recall that in Chapter 2 I distinguished (following Raz, 1986) between two components of autonomy: (i) non-interference, meaning the capacity to make choices without external interferences, and (ii) adequacy of choice, which referred to the quantity and quality of the choices individuals have available. In the context of the ASP literature, according to Arash Abizadeh (2008; 2010), the undermining of (i) non-interference by a political authority is enough for an action to count as coercive. This means that, for example, when migrants are prevented from entering a certain territory, they are being coerced, even if they have other countries of destination they can choose from that are considered *adequate* (meaning that the migrant could thrive by living in those countries). Miller (2009), however, disagrees, and considers that for an action to be coercive, a political authority needs to undermine *both* components of autonomy: not only (i) interfering with an individual's decision, but also by (ii) reducing the quantity and quality of their options to a point that is not considered adequate. Following Miller, then, the case of the migrant impeded from entering a country would only be coercive if by not allowing them to enter, one would be leaving him without options to survive in other countries, for example. In the rest of the chapter, I will be accepting Miller's interpretation of coercion, for strategic reasons. Given that his interpretation includes both conditions of autonomy, if I show that animals are coerced in this way, by having both conditions of autonomy undermined, it will also mean that they are coerced in Abizadeh's version, which only includes one.

As it can be seen, then, the ASP relies heavily on the idea of autonomy. The reason behind this has to do with its justification. Recall that the AAP's justification rested on a democratic ideal based on *interest protection*. The ASP, for its part, is justified by an

understanding of democracy as an instrument for the *safeguarding of autonomy*. In other words, the ASP flows from a concern with autonomy as the primary normative value of democracies, based on the idea of self-government and the conception that the people in a democracy should govern themselves through making, authorising, and contesting the decisions taken by political authorities. For this reason, it is argued that any infringement upon people's autonomy, such as those created by the imposition of laws and coercion, needs to be justified. So the ASP derives from a commitment to the idea that those subjected to laws or coercion should be the ones making the decisions as a way of justifying such autonomy-infringement and preventing excessive autonomy-infringing policies.

Just like the AAP, the ASP has been mostly defended as a principle to delimit the demos, but hoping that it leads to a smaller and more concrete franchise than the AAP.<sup>27</sup> Some have also defended its normative relevance for other purposes. For example, according to Bauböck (2018), the ASP has a number of problems that make it unsuitable as the right tool to demarcate the demos, but he considers it the right principle to track those non-citizens entitled to contest the laws imposed on them. He argues that those subjected to the laws or coercion of a state should have a right to the equal protection of their liberties in a republican sense, including judicial reviews and institutionalised complaints and contestation procedures (p. 49). The reason behind this has to do with the justification of the ASP mentioned before. According to Bauböck, governments inherently subject individuals to coercion, infringing upon their autonomy. If such a government is to be considered legitimate, then it must ensure that the liberties of those subjected are protected, not only through showing equal concern for them, but allowing them to contest the decisions taken.

The ASP, however, has also been defended as a principle to track full membership. Dahl, in an ambiguous statement, has claimed that: “The *citizen body* [emphasis added] in a democratically governed state must include all persons subject to the laws of that state except transients and persons proved to be incapable of caring for them” (1998, p. 78). Miller (2009) also mentions the ASP as a way to include migrants as members, when he claims that:

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<sup>27</sup> According to some authors, this has proven not be successful, as the ASP has implications that statists may not be ready to accept, such as the idea that states that enforce borders coerce would-be immigrants (which would mean that they would be entitled to membership in the demos) (Abizadeh, 2008; 2010), or that the ASP has similar implications to the AAP, as explained by the fact that many domestic laws have international application (which would include as demos members all those subjected to laws from other countries) (Goodin, 2016).

(t)he belief that where someone is routinely forced to comply with the decisions of democratic authority, they are entitled to a say in those decisions, is strong and widely shared. It explains, for example, why states that *deny citizenship to long-term immigrants* [emphasis added] who make their life in the new country are justifiably accused of violating democratic principles. (p. 218)

These authors are explicitly dealing with inclusion of individuals as *citizens* (i.e., full membership), which stretches beyond mere demos membership. These thoughts, however, are only mentioned in passing and not elaborated. In what follows, I will argue in favour of the normative relevance of the ASP in delineating membership beyond demos membership.

### **3. The All-Subjected Principle and its Relevance for *Full Membership* Inclusion**

In order to argue that the ASP is normatively relevant to include individuals as *full members*, and therefore entitled to public provision, take the justification for the ASP again. According to defenders of the ASP, precisely because polities necessarily infringe upon people's autonomy through the imposition of laws and coercion, those subjected to such authority should be entitled to become members of the demos, meaning to participate in the decision making of the polity. This is both as a way of *justifying* their reduction of autonomy, and to *prevent* the authority from excessively infringing upon their autonomy. Similarly, Bauböck (2008) argues that the ASP should be used to demarcate those whose rights and liberties should be *protected* from threats by political authorities. According to its justification, then, the ASP is relevant in selecting those individuals whose autonomy needs to be *protected*, because by virtue of being subjected to an authority, they are always at risk of having their autonomy compromised.

However, when one takes autonomy as the primary value to be safeguarded by political communities, it is not obvious that what states should do is only *protect* it (in the negative sense). The reason behind this is that autonomy, as discussed above, consists of two parts: *(i)* non-interference; and *(ii)* adequacy of choice. The former affects autonomy by allowing or not individuals to make the choices they want to make, and the latter increases or hampers people's autonomy by giving them more or less choices of different quality.

When defenders of the ASP claim that those subjected to laws or coercion should be *protected*, it seems that they are only referring to *one* of the components of autonomy, focusing on that those subjected should not be *(i)* arbitrarily interfered with in their choices

(as *protection*, tends to refer to safeguarding negative entitlements). Interferences with people's choices are, of course, a significant component of political coercion: when a law applies to a certain person, it often means that such a person is not allowed to do something. This, however, is not the only way in which laws and coercion can thwart people's autonomy. They also (*ii*) *limit* the number and quality of the choices individuals can make. A clear case of this involves borders, in those cases where potential migrants have nowhere else to go (see Abizadeh, 2008; 2010). If their desired country of destination decides not to let them in, it is thwarting their autonomy not only by interfering with their choices, but also by limiting the range of choices they can choose from. They are made less autonomous because their (*ii*) quantity and quality of choices have been reduced.

But if the ASP is working within a conception of democracy according to which autonomy is the primary normative value to consider, and the ASP is relevant in determining whose autonomy should be safeguarded because subjection may thwart it, then it seems that the ASP should not only demarcate those whose autonomy should be (*i*) *protected* in the negative sense (by preventing interferences), but also those whose autonomy should be (*ii*) *recovered* or *enhanced*, in the positive sense (by giving them more choices). When a political authority limits the quantity and quality of choices of an individual, thereby reducing their autonomy, it therefore seems that a duty to *restore* such autonomy would follow from the autonomy-based conception of democracy on which the ASP relies. For example, when individual's options are reduced by infrastructure-building projects in which they lose opportunities of social interaction, such as in projects to build highways that divide areas into two, it seems that on autonomy-based grounds, the authority should provide alternative livelihoods, relocation assistance, or community-rebuilding programs to restore the lost choices (see Appleyard et al., 2014). These autonomy-recovering or enhancing measures follow from the idea that those subjected to coercive laws should be entitled to autonomy-safeguarding measures: if a policy reduces your autonomy by reducing your options, then it seems that you would be entitled to those options being restored *due to your subjection*.

Once this is accepted, the reason to consider the ASP a principle of full membership inclusion can be seen to follow. Recall that I am understanding full membership in a political community, as being primarily characterised by the entitlement to public provision. If this is the case, and subjection of individuals triggers autonomy-preserving measures for those

individuals through (i) protection from interferences and (ii) benefits by improving their choices, then subjection seems to track *full membership*.

This is, in fact, a conclusion already reached by Iseult Honohan (2018), through a similar route. According to her, from a neo-republican perspective, the ASP can serve as a basis for determining full membership in a political community. For Honohan, those who are persistently subjected to the laws and coercive institutions of a polity are enmeshed in dense interdependencies with that polity and face the risks of domination if they are excluded from this kind of membership. Accordingly, she argues that subjection to coercion, if it is not to be dominating, requires more than just protection of rights and liberties, and should also include the *facilitation* of both individual and collective autonomy. On this basis, she argues that individuals who share *continuing subjection to a political authority* are entitled to full membership.

If my argument is sound, then, those subjected to the authority of a certain political authority should be entitled to become full members of it, with access to public provision. Examples where the ASP may be applied in this way and that have been discussed in the literature include the case of migrant workers or refugees. The subjection to the authority under which they live significantly reduces their autonomy (both by interfering with their choices and by reducing their options), and therefore, on the autonomy-based grounds on which the ASP operates, they would be entitled to having their autonomy protected and enhanced by virtue of becoming full members of such community (see Honohan, 2018).

One may claim, however, that there may be situations in which individuals are *temporarily* subjected to the laws or coercion of a political community, such as tourists, and that it is very counterintuitive that these people should be entitled to full membership, and therefore, to public provision.<sup>28</sup> This objection, while having force and pointing to a detail of the ASP that should be clarified, is not fatal. Surely, tourists are subjected by the laws and coercion of the countries they visit. However, this does not mean that they should become full members, as the effects this has on their autonomy overall may not be enough to trigger an entitlement to full membership, as it is the case for migrant workers or refugees. This is because the temporary visitors' autonomy is only restricted in the context of the visit to the country that subjects them, and they may regain their autonomy by simply leaving the

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<sup>28</sup> This objection, when targeted to the ASP as a principle to delimit the demos, has already been dealt with by Goodin (2016).

country they are visiting. This contrasts with the kind of *sustained* (meaning not temporary) subjection experienced by migrant workers and refugees and the extent to which their autonomy is affected. In their case, protecting their choices and recovering their autonomy may not be as easy as simply leaving the country (as they may not be able to do so safely). In their cases, if their autonomy is to be safeguarded, they would require sustained access to autonomy-enhancing services, such as subsidies, medical care, and job opportunities, which are consistent with how full membership in a political community has been defined throughout the thesis.

This, then, nuances, but not defeats the claim that those subjected to a certain authority should be entitled to becoming full members of it. Following the response to the objection and the arguments presented above, then, the ASP for full membership inclusion can be formulated as:

*The All-Subjected Principle (for full membership inclusion):* everyone sustainedly subjected to the laws or coercion of a certain polity should be included as a *full member* of such polity.

#### **4. Liminal Animals and the All-Subjected Principle**

In this section, I will argue that liminal animals should be considered full members of the political communities that subject them. In order to do that, I will need to address the two understandings of subjection that have been given in the ASP literature: subjection as being bound by a set of duty-imposing and power-conferring laws; or as being coerced by a certain political authority. In what follows, I will claim that liminal animals fit into both interpretations, entitling them to becoming full members of the communities that subject them. This chapter, then, will contradict authors such as Magaña (2022), who claim that “[b]ecause of the vast number of “ifs” involved, I do not think we should place much faith on the potential of the All Subjected Principle as a vehicle for the political inclusion of nonhuman animals” (p. 104).

##### **4.1. *The Bound by Laws Interpretation of the All-Subjected Principle***

One of the interpretations of the ASP involves understanding subjection as being bound by laws. According to this interpretation of the ASP, as explained above, those individuals who are imposed legal obligations or are given legal powers count as being subjected.

Accordingly, following the argument put forward above, migrant workers who are obligated by the laws of the country in which they reside should be given the opportunity to become full members of it (Beckman, 2014).

Under this version of the ASP, it seems at first very difficult to include liminal animals. Even if one accepts that they are autonomous, no legal duties or legal powers seem to apply to them. Despite the many different interpretations of what *legal obligations* are, they all seem to include as a necessary condition that they should *require* someone to do something backed by punishments if they do not comply (Bertea, 2019). Animals do not seem legally obliged to do anything, and therefore, it may be said that they are mostly *affected* by laws, but not *subjected* to them. For this reason, those authors working on the intersection of the ASP and animals admit that this interpretation of the principle is incompatible with the legal status of animals and move on to the second interpretation (see Magaña, 2022; Niesen, n.d.).

There is, however, a route that can be taken to argue that animals (and in this case, liminal animals), are subjected to laws. This route entails rejecting the idea that animals cannot be obliged by laws. In what follows, I will argue that animals can be obliged by laws, in the sense that laws can impose duties on them requiring them to do something, backed by punishment in cases of non-compliance. I will defend this idea by comparing the legal obligations of animals with the legal obligations of children.

Children are not subject to legal duties or powers in the same way as adults. Children under the minimum age of criminal responsibility are often considered *doli incapax*, that is, incapable of making wrongs, and therefore are not liable to legal punishment (Yaffe, 2018). This is illustrated, for example, by the UK's Children and Young Persons Act 1933 (23–24 Geo 5 c 12, s 50), which states that “It shall be conclusively presumed that no child under the age of ten years can be guilty of any offence”. In most countries, then, legal obligations are *delegated* to their parents or guardians, who are liable for the criminal behaviour of their children. This liability is often grounded on the failure to prevent a child from committing a criminal act. A recent example involves the conviction of Deja Taylor in the U.S., the mother of a 6-year-old child who shot his school teacher. The child, despite having *committed* the crime, was not convicted but rather taken into custody by a close relative (Deliso, 2023). Despite country differences in the location of the age of criminal responsibility, this case illustrates the tendency for children not to be convicted (Meutia et al., 2021). If one assumes

that legal punishment is a necessary condition of having a legal obligation (see Hart, 2012), then it may at first sight seem that children (and animals) cannot be legally obliged to do anything.

This, however, is not entirely true, for two different reasons. First of all, it is not entirely true that children under the age of criminal responsibility cannot be legally punished. Legal punishment is not only about *retribution* (that is, causing harm to those responsible for causing harm), but is also a *prevention* or *rehabilitation* mechanism (meaning punishing as a deterrent in the case of the former, and as an educational vehicle for the latter) (Escamilla-Castillo, 2010). Children who commit crimes, while they may not be punished in the sense of being subjected to *retribution*, may be subjected to other forms of punishment, such as their placement in child detention centres or reformatories, which fit the other purposes of punishment. The case of animals is analogous to this situation, for example when dogs are punished by being sent for training after becoming aggressive, or even being put down after they bite someone.

There is, however, another reason that further supports the idea that children can be legally obliged. Take, again, the case of children who commit a crime, and in which their parents or guardians are punished. In these cases, it is not that children are not obliged by law. Rather, they are in a dual situation in which their behaviour is regulated by law (as they are certainly not legally *permitted* to kill), but the consequences of their behaviour fall on others. Visa Kurki (2019) refers to the legal status of these individuals as “passive legal persons”. These individuals, including children and animals, are bound by laws, as they possess a “legal platform” which encompasses legal rights and obligations (not to kill, for example). However, someone else *administers their legal platform*, meaning that they are responsible for the fulfillment of their rights, and bear the consequences of breaches in their obligations. In cases like these, then, it can be said that legal obligations apply to children *indirectly*, or through a *proxy*, as their behaviour is legally tracked, but consequences are delegated to their parents. This reasoning may also apply to animals, the clearest case being, again, that of domestic dogs who bite someone else and whose guardian is punished.

There are two main difficulties that stem from the view that children and animals are legally obliged. First of all, one may claim that neither are legally obliged because the legal obligation actually falls on the parents and guardians. For example, in case of children or animals who commit a crime, one may say, it is not that they are indirectly obliged to do

something, but rather, that their parents or guardians have failed in their obligation to prevent them from acting in illegal ways. Note, however, that this objection would not only question the viability of my argument, but also the cogency of this interpretation of the ASP, based on subjection as being bound by laws. For if children cannot be bound by laws (not even indirectly), this interpretation of the ASP would exclude them from full membership. Indeed, this is a conclusion that no defender of the ASP would want to accept, even if the ASP is not used for full membership but *only* as a means to distribute claims to equal protection of rights, as Bauböck (2018) intended. This means this interpretation of the ASP either includes as full members children *and* animals who are bound by laws indirectly, or it should be rejected.

Secondly, it may be argued that my view does not include liminal animals, but only those animals (mostly domestic) who have a keeper, guardian, or “owner” responsible for their behaviour. If liminal animals do not have someone legally responsible for them, it would not be possible to say that they are *indirectly* legally obliged because someone else would be punished for their behaviour. If this is the case, then, this interpretation of the ASP would not apply to them, as it could not be said that they are legally bound by laws.

In most cases, however, even if liminal animals do not have a specific guardian or owner, someone is *legally responsible* for their behaviour. Following Kurki (2019), someone administers their legal platform. Take the following two examples. First of all, very often, councils are responsible for the behaviour of liminal animals that dwell on private properties and cause damage. A recent example involves Birmingham City Council, which was ordered to compensate a tenant after ignoring their request to deal with rat damage. According to the local authority, the Council failed “to take *its responsibility* [emphasis added] seriously to actively address the concerns” (King, 2025). Similarly, landlords are often legally responsible for the presence and behaviour of liminal animals in their rented properties. In 2018 a landlord renting a property in North London was ordered to pay a £31,000 fine for failing to deal with a pigeon population nesting on the roof, which disturbed the tenants (Citylets, 2018). These cases have two things in common: they involve (a) the behaviour of a certain group of liminal animals; which (b) creates some damage, for which; (c) someone else is *legally responsible*. These cases are analogous to those of children who act in a way that harms others for which their parents or guardians are responsible. Animals’ behaviour is legally tracked, but a proxy bears the consequences of breaches. These liminal animals, just

like children, have an *indirect legal obligation* not to behave in damaging or harmful ways, for which states, councils or private individuals have delegated responsibility.

One may object that guardians or owners of domestic animals are legally responsible for the behaviour of specific individuals, while councils or landlords, for example, are not. Rather, they are responsible for the behaviour of a group of individuals. Accordingly, one may claim that in cases like these, individual animals do not have legal obligations, but rather, groups of individuals do. This disanalogy, however, should not be a problem for my argument. After all, groups of individuals for whom someone is responsible are still obliged to comply with laws, even if they are individually untrackable. To illustrate this, take the case of a guardian responsible for a group of children. Those children are still not allowed to commit crimes, and the guardian would be responsible for their collective behaviour, just as in the case of tenants responsible for the behaviour of rats. If those children, then, are legally obliged not to commit a crime because if they do so, their guardian will be punished, then groups of liminal animals such as pigeons or rats would be too.

If my arguments are correct, then, it is possible to say that liminal animals are bound by laws. To recapitulate, this is the case because, first, liminal animals, just as children, may be punished in non-retributive ways; and second, because animals are passive legal persons, whose behaviour is legally tracked, but legal consequences are transferred to another individual. If this is the case, then, many liminal animals would be *subjected*, in the sense that they would be bound by laws.

To see if this would grant them with the entitlement to become full members, it is only left to see if they fit in the nuanced version of the ASP defended above, according to which only *sustained subjection* triggers an entitlement to full membership. This is the case because in most cases, the situation of liminal animals is closer to that of migrant workers or refugees than that of tourists. First of all, their subjection to the legal decisions of these authorities *significantly reduces their autonomy*. Decisions to expel them from a certain place as discussed above, for example, not only (*i*) interfere with their choices by preventing them from using their preferred shelter, but also (*ii*) reduce the quantity and quality of their options by, for example, leaving them with the option of using other forms of shelter that may be less predator-safe or for which there may be more competition. But liminal animals are also often not able to find other ways of restoring their autonomy (contrary to the case of most tourists, by going back home), because, as it was explained in the Introduction, for many liminal

animals' the conditions provided by the place in which they live are often their only chance of survival due to the extent to which they provide resources. In the case mentioned above, due to liminal animals' often living in overpopulated environments (more on this in Chapter 8), expelling them from a certain shelter may mean that they will not find another suitable one.<sup>29</sup> In this sense, liminal animals are bound by laws and legal decisions in a *sustained* way, similar to other cases of sustained subjection in which individuals should be given the opportunity to become full members. This, then, means that this interpretation of the ASP includes liminal animals as full members, which would entitle them to extensive positive benefits, just as other full members.

#### **4.2. *The Coercion Interpretation of the All-Subjected Principle***

According to the second interpretation of the ASP, subjected individuals are not those bound by laws, but those coerced by the power of political institutions (see Abizadeh, 2021; Goodin & Arrhenius, 2024). Coercion, as it was mentioned above, is understood as a situation in which a political authority prevents or forces an action that undermines an individual's autonomy. To recall, there is a discussion concerning what components of autonomy need to be reduced in order for an action to be coercive: Abizadeh (2008; 2010) considered that *(i)* interfering with someone's choices is sufficient for an action to count as coercive. And according to Miller (2009), coercive actions are specifically those that *(i)* interfere with choices and *(ii)* significantly reduce options. Above, I committed to accepting Miller's view, purely for strategic reasons to make my argument: if I can show that liminal animals are coerced according to Miller's view, I will also be showing that they are according to Abizadeh's. In what follows, then, I will show that in many cases liminal animals are coerced according to Miller's view, and that in these situations, they would be entitled to full membership, following the ASP.

I will start by arguing that liminal animals are coerced because their *(ii)* adequacy of choice is curtailed by political decisions. In Chapter 2, to discuss the idea of *(ii)* adequacy of choice for liminal animals, I gave the example of *Squirrel 2* as a paradigmatic case of a liminal animal living in an urban context. This case tried to illustrate how political decisions affect their range of choices. Take, for example, their feeding choices. The options squirrels have are often determined by political decisions in designing and managing the place they

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<sup>29</sup> This may even be the case for migrant animals, as when they are based in a certain place (for example, in the UK for certain months of the year), such a place often constitutes their only chance of survival, which would match the situation described above for other liminal animals.

have available to live. Very often, squirrels will need to cross roads to find food, which puts them under the threat of being run over. Also, climbing down from trees can subject them to the danger of being attacked by domestic dogs. They are often fed by visitors, but in many cases their food choices are limited to human leftovers that can have a negative impact on their health, through, for example, the development of metabolic bone disease (Blackett, 2015). And even more regularly, planning decisions that affect food availability, such as decisions on the design of trash cans, lead to overpopulation, which severely limits their chances of surviving. In cases like these, it is obvious that liminal animals do not have an adequate range of options to choose from, as most of them include a danger to their life. Just as we do not consider humans to have adequate choices if, for example, all their commuting choices pose a risk to their lives, then the same must be the case for those liminal animals whose choices include the risk of not surviving to them. Importantly, all these situations described above are not the result of natural processes, but rather, the effects of decisions taken by political institutions such as local councils or private managers. These decisions severely limit the range of choices of liminal animals, infringing upon the *(ii)* adequacy of choice component of their autonomy.

To argue that liminal animals may be coerced, however, it would also be necessary to show that the first condition of autonomy is thwarted by political decisions. That is, that as a consequence of decisions taken by a political authority, they are unable to *(i)* make choices without interference. The case of *Squirrel 2* already proves this point in cases, for example, when they are unable to cross a busy road. However, many other examples can be given to prove that the choices of liminal animals are severely interfered with by political decisions. The clearest one involves instances of population control, when animals are killed, captured, or sterilised. Many other cases also support this view. Take, for example, situations when animals want to fly somewhere but tall buildings impede them from doing so, or when they are blinded by bright lights which do not allow them to orient themselves. Other cases include situations where animals may want to live undisturbed, but their habitats happen to be in a place targeted for urbanisation, forcing them to move elsewhere. In all these cases, liminal animals' choices are interfered with, reducing their autonomy by infringing upon the component of autonomy based on *(i)* non interference.

This means liminal animals *can be* coerced under Miller's more demanding interpretation of coercion, as in many cases, they *(ii)* do not have an adequate range of

choices as a consequence of political decisions, in cases such as inadequate feeding or movement choices; and (i) their decisions are often interfered with by political actors, such as when fences force them to stay in a certain area. For the same reasons presented above, this form of subjection is *sustained*, meaning that in many cases they will not have the chance of regaining their autonomy through other means, just as tourists. If this is the case, according to this version of the ASP, liminal animals are often subjected in the *coercion* interpretation, and therefore, following the ASP they should be included as full members in the polity that subjects them, being entitled to positive duties.

## 5. Conclusion

In this chapter, I have claimed that according to the two versions of the ASP, liminal animals should be considered full members of the political communities that subject them, and must be entitled to the benefits coming from membership of such political communities. To do so, I have first defined the ASP and its two interpretations, and argued that it is relevant in delineating full membership, and not only demos membership or protection of rights and liberties. I have done so by appealing to the central role of autonomy in the justification of the ASP, and arguing that in order to safeguard autonomy, political institutions are not only obliged to *protect* it in the negative sense, but also to help individuals to recover choices if subjection undermines autonomy in a *sustained* way. Then, I claimed that liminal animals are subjected according to both understandings of subjection: boundedness by laws, and coercion. Liminal animals, I have argued, are subjected following the first interpretation, either directly in the form of non-retributive forms of punishment, or indirectly, when their harmful actions lead someone else to be punished, and that these forms of boundedness greatly reduce their autonomy by being interfered with their choices and by reducing the quantity and quality of them. I also claimed that they are subjected according to the other interpretation of subjection, by being coerced by political authorities through autonomy undermining actions according to both Abizadeh's (2008; 2010) and Miller's (2009) interpretations.

I have now shown that both the AAP and the ASP lead to the view that liminal animals should be included as full members of their political communities. For this reason, those opposed to the inclusion of liminal animals in political communities as full members may want to invoke another principle of political inclusion to see if it yields different

conclusions. In the next chapter, I aim to show that this cannot be done by appealing to the Social Membership Principle.

## Chapter 6: The Social Membership Principle and Liminal Animals

### 1. Introduction

In this chapter, that closes Part 2, I examine the implications for liminal animals of another principle of political inclusion, the Social Membership Principle (SMP). This principle has two characteristics that make it overcome two difficulties faced by the principles discussed above. The first is about its relevance to distinguish those individuals who are entitled to full membership. In the chapters devoted to the AAP and the ASP, I had to make an argument to demonstrate how these principles were normatively relevant not only for its initial purposes (mostly demarcating the demos and who is entitled to protection), but also for the purposes of including individuals as full members, entitled to positive provision. The SMP, however, has been developed as a principle *precisely* for this purpose, based on the idea that those individuals who are members of a certain *society* (more on what this means below) should be entitled to full membership in the *political community* that manages such society. And secondly, this principle has already been applied to the discussion of whether *animals* are entitled to full membership, or other forms of membership beyond mere demos membership. These characteristics, then, smooth out the argumentation, by allowing me to spend less time making the case for preliminary issues needed to make the main argument of the chapter.

Despite these two characteristics, Donaldson & Kymlicka (2011), the initial proponents of the application of this principle to animals, consider that liminal animals are not entitled to full membership, but rather to a form of denizenship. Recall, this means a form of membership that entitles the individual to a *limited package of benefits*. This would be the status of, for example, some migrant workers or international students with a temporary visa. This chapter will, then, follow Donaldson and Kymlicka's theory to argue against their own conclusions. First, it will argue that *if* liminal animals are entitled to denizenship, then necessarily they would be entitled to a similar range of benefits as human denizens. And secondly, it will argue that despite this, liminal animals, following Donaldson and Kymlicka's SMP, do qualify for full membership. This chapter engages significantly with this application of the SMP theory to animals, which requires having several chapters explaining it. To do this, the first three sections of this chapter will be devoted to carefully explaining the theory and its different applications. Section 2 defines the SMP and its justification. Section 3 explains Donaldson and Kymlicka's SMP-based theory of citizenship (which for them equals full membership) for domestic animals, including the *characteristics* that animals need to

have to qualify for it, and the *benefits* to which they would be entitled as such. Section 4 explains the kind of membership that Donaldson and Kymlicka think should be given to liminal animals (denizenship) and the reasons for not granting them with citizenship (that is, full membership) status. After that, the following sections contradict their theory. Section 5 argues that liminal animals are members of society, which according to the SMP, in principle would entitle them with full membership. Section 6 argues that if following this, liminal animals can only be granted the status of denizenship, this would imply that they should be given similar kinds of benefits as human denizens. Finally, Section 7 argues that despite this, liminal animals, following Donaldson and Kymlicka's SMP and contrary to what they think, can also be entitled to citizenship.

## **2. The Social Membership Principle and its Justification**

The AAP and the ASP are far from the only principles of political inclusion discussed in the literature. In recent years, another principle has emerged, which can be called the Social Membership Principle (SMP):

*The Social Membership Principle*: anyone who is a member of the society governed by a particular political community should be recognised as a full member of that political community.

This means that if someone is a member of British society, then they should be entitled to become a full member of the UK, by, for example, becoming a citizen. A prominent defender of this principle is Joseph Carens, who defends this principle as follows:

What matters most morally with respect to a person's legal status and legal rights in a democratic political community is not ancestry or birthplace or culture or identity or values or actions or even the choices that individuals and political communities make but simply the social membership that comes from residence over time. (2013, p. 160)

Similarly, Kymlicka & Donaldson state that:

To be a citizen is to be a member of the society (or "the public" or "the people") in whose name the state governs, and one central function of citizenship is precisely to acknowledge this membership, to acknowledge who belongs here,

who has made a life here, and who therefore has a right to shape the terms of our shared social life. (2018, p. 165)

What this principle tries to capture, then, is that belonging to the pre-institutional group of *society* grants those individuals the status of full membership in the political community that governs such society. That is, *social membership* justifies *political membership*. The latter (to which I will also refer to as *membership in a political community*) is the kind of membership I have been dealing with in the previous chapters. In other words, political membership can be demos membership, denizenship, and full membership (in the context of the SMP, it is often referred to as citizenship).

But political membership is different from membership in society. What it means to be a member of a certain society varies amongst authors. According to Carens, social membership is determined by residency and time. That is, when someone spends enough time living in a certain place, they become members of such a society. So, if I moved to Brussels and spent enough time there, I would, at some point, become a member of Belgian society. Residency and time are, however, in Carens' theory, not ultimately what matters for membership in a society. They just serve as proxies for criteria that he considers of ultimate relevance: relationships, interests, and identities that connect people to the place where they live. According to him, however, the latter are too difficult to measure from an objective standpoint (see Carens, 2013, Chapter 8), and for this reason he leaves these aside and focuses only on the proxies of residency and time.

Donaldson & Kymlicka do not have precise criteria for differentiating those who are members of society from those who are not. Among others, they mention "interaction, mutual vulnerability, and dependency" (2013, p. 65) as key aspects of the relationship that leads to the creation of a society; as well as living "as part of a transgenerational "core" community, engaging in intersubjective communication, participating in cooperative activity, abiding by social norms" (Kymlicka & Donaldson, 2018, pp. 160–161). They also claim that members of society are those who "share a social world with us, and play a vital role in our schemes of economic production and social cooperation" (p. 167). However, contrary to Carens, they do not clearly specify criteria for social membership.

What is crucial for authors working on the SMP, then, is that being a member of society is what grants individuals with the right to become a full member of a certain political

community. For them, for example, being a member of British society is what entitles people to become UK citizens. In the example given below, if I ever became a member of Belgian society, according to these authors, I would be entitled to Belgian citizenship. In what follows, I will use Donaldson and Kymlicka's version of the SMP to show that under their interpretation, liminal animals, by virtue of being members of society, should also be considered members (either denizens or full members) of the political communities that stem from those societies, and therefore, be owed positive provisions. The reason to focus on their interpretation has to do with the fact that they have already developed a theory based on the SMP to allocate political membership to animals. My intention, then, is to follow their line of research and use some of their theoretical developments (such as the idea that some animals *can be* members of society or citizens) but contradicting, amending, and contributing to their theory. To do so, however, I will first need to explain what their theory consists of. Sections 3 and 4, then, explain the kind of status they think domestic and liminal animals, respectively, should have. Then, I will be in a position to make the argument that liminal animals should be granted a wide range of provisions, by virtue of them being entitled to denizenship or citizenship.

### **3. Donaldson & Kymlicka's Theory of Citizenship for Domesticated Animals**

To help understand Donaldson and Kymlicka's application of the SMP to animals, it will be useful to explain the main characteristics of their argument to grant *domesticated animals* with citizenship, including the characteristics animals need to have in order to qualify for it, and the provisions they would be entitled to. According to them (Donaldson & Kymlicka, 2011; 2013a; 2013b; 2016; Kymlicka & Donaldson 2014; 2018), domesticated animals should become full members of our political communities.<sup>30</sup> In their language, they should be citizens. This is justified by the SMP. Domesticated animals such as companion animals, according to them, are “members of society, at least according to most standard sociological definitions of sociality” (2018, p. 167). They take part in our social world and are integrated into our lives, sharing our homes and getting involved in most of our activities. Many dogs,

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<sup>30</sup> Note how Donaldson & Kymlicka (2011) employ a different name for roughly the same terminology of animals as I do. I classified animals as *domestic* and *wild* (and *liminals* would be part of the latter category). They, however, classify animals in *domesticated* (roughly similar to *domestic*, but in their case, these animals require to have been through a *domestication* process), *liminal*, and *wild* (they consider these to be two separate categories). This, however, should not change the structure of the argument, first, because I will not be making any arguments about domestic/domesticated animals, and because the kinds of animals we both classify as *liminals* are roughly the same, and the fact that for them they are not considered a subcategory of *wild animals* does not have any normative relevance, because for them what matters is whether they are considered *members of society*.

for example, accompany their guardians to work, go for runs with them, and join them on their holidays. Cats, in many cases, become part of people's families, who care for them profoundly. According to the SMP that Donaldson and Kymlicka defend, this entitles domesticated animals to become full members of the polities in which they live.

Donaldson and Kymlicka use a very specific conception of full political membership, namely, citizenship. This notion, key in the history of political thought (see Shachar et al., 2017), is based on the idea that citizens are co-possessors of society, and therefore are entitled not only to positive provision but also to the co-authorship of its social and political rules (Kymlicka, 2022). As they put it, "citizenship is thus an active role, in which individuals are contributing agents and not simply passive recipients of benefits" (Donaldson & Kymlicka, 2011, p. 103). This is precisely what gives the SMP normative relevance to include individuals as full members of political communities: members of a certain society should govern themselves, and the way of realising this goal politically is for them to become citizens, that is, to have a political status that allows them to co-shape the society in which they live. This is also often referred to as being co-authors of laws.

According to Donaldson & Kymlicka, citizenship serves three main functions: *(i)* nationality, which gives individuals rights of residency in the country of which they are citizens; *(ii)* popular sovereignty, which gives citizens the power to govern the polity and its affairs; and *(iii)* democratic political agency, that translates the idea of popular sovereignty into a decision-making model in which citizens are able to co-author the laws through different forms of political participation, including voting, representation, or the right to take office (2011, pp. 55–56).

According to the authors, domesticated animals should become full members in this citizenship sense, being allowed to reside in the society in which they take part, and entitled to share the public good of the community. Interestingly, Donaldson & Kymlicka reach this conclusion not only because they consider domesticated animals to be members of our societies, but also because they have what they consider the *capacities* needed for citizenship. Following Rawls, they think the role of citizenship requires individuals to be able to: *(a)* have and express a subjective good; *(b)* comply with social norms and engage in self-restraint, which are preconditions for cooperation; and *(c)* participate in the co-authoring of the laws (2011, pp. 103–122).

Crucially, they interpret these capacities as not requiring the kind of cognitive or linguistic capacities held by adult non-neurodiverse humans, which means that many animals are considered to have the capacities. It is uncontroversial that condition *(a)* applies to animals: many animals (at least all those domesticated) are sentient beings (Andrews et al., 2024) who can express their preferences through their behaviour. This is clear for those who live with animals and are used to interpreting their actions. Cats meow when they are hungry and purr when they are comfortable, dogs move their tails when they are happy and bow when they want to play. Most obvious, however, are the ways in which animals express suffering. Cows moo for long periods of time when their calves are taken away from them on farms. Pigs produce high-pitched squeals when in fear. And many animals whine when they are in pain.

Conditions *(b)* and *(c)* require a bit more justificatory work. Donaldson and Kymlicka claim that rational reflection is not needed to engage in *(b)* rule-following and self-restraint, and that many domesticated animals comply with these citizenship requirements. For example, they claim that this is the case for companion animals who learn to play without hurting their playmates, be they human or non-human; cats who learn to use the litter box; or to behave calmly when put in a social environment with people they do not know. According to them, domesticated animals can be taught the rule-following behaviours needed to live peacefully within a multispecies society (Donaldson & Kymlicka, 2011, pp. 116–122). With regards to *(c)* political participation, not only Donaldson and Kymlicka, but several authors in the field of animal politics have argued that animals, provided that certain facilitation is present, can be co-authors of laws (see Garner & O’Sullivan, 2016; Magaña, 2022). Animals cannot only “vote with their feet”, meaning that their sheer presence already points out certain political preferences (such as the will to use a public bus or play on a beach); but their interests, preferences, and wills can be brought up to the political table, enabling them to participate and shape the public good of the community. Donaldson & Kymlicka (2011, pp. 112–116) think this is possible through a model of “dependent agency”, which has its origins in the academic literature related to forms of citizenship for disabled humans. According to this model, animals’ political agency can be enabled through “collaborators”, who attend to their behaviour, interpret their interests, construct an understanding of the individual’s ongoing preferences and subjective good, and then act as their political representatives, effectively making them *(c)* co-authors of laws.

Donaldson & Kymlicka (2011) think the reason that domesticated animals possess these three capacities for citizenship, and especially condition *(b)*, is directly linked to the process of domestication. In their words:

Domestication presupposes and further develops the possibilities for cooperation, communication, and trust between humans and animals, which are preconditions for relations of citizenship. Citizenship presupposes a level of sociability that makes possible reciprocal engagement, rule-learning behaviour, and socialization. It requires the ability to have physically proximate and socially meaningful interactions. Humans and domesticated animals need to be socialized into their relations of co-citizenship, and this requires trust and cooperation. (p. 214)

Domesticated animal citizenship, which for Donaldson and Kymlicka requires physical proximity and collaboration, is made possible by the process of domestication. According to them, domestication has changed animal behaviour and allowed animals to coexist with humans, making it possible for them to cooperate with us in providing services (such as joy and labour), while at the same time accepting restrictions on their behaviour for the sake of the relationship (staying at home sometimes, learning not to bark in closed spaces, or limiting their aggressiveness). Donaldson and Kymlicka envision a citizenship relationship with animals similar to that held with children or disabled adults, in which animals and humans may have to accept concessions to their well-being to allow for joint coexistence. In the case of the former, for example, they may have to be spayed/neutered, and the latter may need to see some public services redirected to the care of animals.

According to Donaldson and Kymlicka, something important about citizenship is that it comes associated with an extensive range of positive rights, which include: 1) basic socialization, meaning to be allowed and encouraged to learn, explore, figure out rules, and find their place within their political community; 2) free movement and the sharing of public space, to allow animals to live free of unnecessary physical constraints; 3) duties of protection, which include legal punishment for violations of negative rights and harm prevention efforts; 4) a right not to be used as a product or as a mere producer, such as in the farming industry; 5) a right not to be used for labour when such activity would cause suffering, such as in cases where service dogs go through cruel training; 6) a right to medical care with funds coming directly from the political community; 7) a right to sex and reproduction in cases where they are able to control their populations; 8) a right to an

adequate diet; and 9) a right to political representation (Donaldson & Kymlicka, 2011, pp. 122–154).

#### **4. Donaldson & Kymlicka's Theory of Denizenship for Liminal Animals**

The picture changes significantly for Donaldson and Kymlicka when one shifts the view from domesticated to liminal animals. First of all, they acknowledge that liminal animals belong where they live and display a wide range of interactions within the societies they share spaces with, but they do not believe that they are members of the *societies* in which they live (Donaldson & Kymlicka, 2011, p. 227). According to them, liminal animals “belong here amongst us, but are not one of us” (p. 214). Secondly, they claim liminal animals do not have the capacities required for citizenship. The reason they do not have these, precisely, is because they were not domesticated, which has prevented them from developing the second capacity needed for citizenship: *(b)* rule-learning and self-restraint. For example, according to them, they cannot be taught not to attack other animals, to respect people’s properties, or not to urinate and defecate in particular areas. This means that they would not be able to participate in the cooperative scheme of citizenship, and that they would not qualify for citizenship (pp. 227–230).

Donaldson and Kymlicka acknowledge that liminal animals could be forced to have this capacity. In other words, they could be domesticated and taught to engage in the kind of behaviours they think are required to satisfy the conditions of citizenship. However, they think “this could only be achieved through significant confinement, separation of families, controlled breeding, and other violations of basic liberties like those that were imposed on domesticated animals as part of their historic domestication process” (Donaldson & Kymlicka, 2011, p. 229). According to them, then, making liminal animals comply with the conditions of citizenship would be detrimental to their liberty and autonomy.

Donaldson and Kymlicka offer another argument for not granting citizenship to liminal animals. Not only would making them engage in rule-learning and socialisation harm them, but so too would offering them some of the benefits of citizenship. The authors give the example of the right to an adequate diet and protection from harm, to which domesticated animals are entitled by virtue of their citizenship status. According to Donaldson & Kymlicka (2011), the fact that liminal animals tend to avoid humans means that “we could not protect squirrels from food shortages without undertaking systematic management of their food

supply and reproduction rates, and we could not protect them from cars or raccoons or weasels without confining them" (p. 214). This means that offering the positive benefits of citizenship would be worse for them, as it would necessarily imply unwanted interferences with their lives and liberties. Importantly, Donaldson & Kymlicka do this from an autonomy-based perspective, in which the crucial aspect of liminal animals' lives that should be protected is autonomy and liberty, which would be thwarted should we try to make them engage in rule following or provide them with the benefits of citizenship (see 2011, p. 214, 238).

For these two reasons, Donaldson and Kymlicka argue that liminal animals should not be considered citizens because they *would not want to be citizens*. Forcing them to comply with the responsibilities and to accept some of its benefits would be against their interests. Instead, they argue that liminal animals should be granted the status of denizenship. The authors use the cases of migrant workers and the Amish to illustrate the idea of denizenship, and characterise it as a looser status than citizenship, in which individuals are entitled to fewer benefits, while also being discharged from some of the responsibilities of citizenship. Following this, Donaldson & Kymlicka argue that liminal animal denizens would be granted: 1) secure residency, meaning the right to stay in the community in which they live and the protection against expulsion; 2) fair terms of reciprocity, with reduced responsibilities and benefits; and 3) anti-stigma protections, to protect denizenship from turning into a hierarchy in which liminal animals are seen as pests or vermin. Of these three benefits, the second one is the most unclear. Donaldson & Kymlicka do not explicitly state what the fair terms of reciprocity with liminal animals are. The authors argue that "For the foreseeable future, models of denizenship should operate on the assumption of wary and minimal interaction, rather than trusting and intimate cooperation. However, this weaker form of relationship still carries with it important positive obligations" (2011, p. 244).

Some of these positive obligations include taking into account their interests when designing our cities (see Chapter 8), regulating their reproduction to spare them from starvation (see Chapter 7), as well as modifying our transportation behaviours to avoid harming them. Some positive duties that are owed to domesticated animals, such as the right to healthcare, an adequate diet, or protection from predators are excluded due to the alleged levels of confinement that animals would be subjected to. To recall, then, liminal animals are not entitled to citizenship (full membership) in political communities due to them not being

members of society and to not complying with the three capacities needed for citizenship. This, then, justifies owing them a reduced package of political positive duties.

In what follows, I will criticise Donaldson and Kymlicka's interpretation of the SMP to allocate political membership status to animals. I will divide my argument into two sections. In the next section, I will show that liminal animals are members of the societies in which they live. Then, in Sections 6 and 7 I will claim that by virtue of their membership in society, following the SMP, they should be entitled to a more extensive range of benefits than Donaldson & Kymlicka allow, even including protection from starvation and access to healthcare. We can do this either by regarding them as denizens, but with a more extensive range of provisions (Section 6), or by giving them the status of citizenship (Section 7).

## 5. Liminal Animals and Membership in Society

Recall the structure of the SMP: those who are members of society should also be considered full members of the political communities that stem from such society. This means, for example, that if a migrant worker becomes part of the society of their country of residence, they will be entitled to citizenship in such country. As I mentioned earlier, Donaldson & Kymlicka do not delve into whether liminal animals are members of the societies in which they live. They only acknowledge that they *interact* with the societies within which they live (2011, p. 227). And even if they were members of society, for them, they still would not be considered citizens, as, according to them, they lack the capacities needed for citizenship. However, showing that they are members of society would give us, at least, a *pro tanto* reason to consider them citizens. Take first Carens' (2013) components of social membership: residence and time. According to him, when someone spends a certain amount of time living in a certain place, they become a member of society. Most liminal animals are born and die in the same place, which is also where they spend their life. They tend to settle and spend their (often short) lives in the same area, where they familiarise themselves with the surroundings, its opportunities for feeding and nesting, and create relationships with other animals and humans (see Sol et al., 2013).<sup>31</sup> In these cases, under Carens' model, they would be members of society.

While Donaldson and Kymlicka do not offer clear criteria to delineate membership in a society, their writings suggest several aspects that characterise social membership. These

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<sup>31</sup> This may even be the case with migrant liminal animals. When they divide their times between two locations, they can be considered members of two different societies, such as migrant humans.

include integration in human communities [“sharing a social world with us”] (Kymlicka & Donaldson, 2018, p. 167), participation in cooperative schemes [“playing a vital role in our schemes of economic production and social cooperation”] (p. 167), and relational aspects such as “mutual vulnerability,” “interaction,” and “dependency” (Donaldson & Kymlicka, 2011, p. 65). They also mention “intersubjective communication” and inclusion in “transgenerational core communities” (Kymlicka & Donaldson, 2018, pp. 160–161) as key parts of social life. Donaldson and Kymlicka, however, do not mention whether these are necessary or sufficient conditions to be considered a member of society. In any case, liminal animals qualify for most of these conditions. They clearly *share a social world with us*, living in environments where there is human presence and that have been shaped by us, adapting their behaviour to our activities and having their lives greatly influenced by us. Whether they also play roles in *schemes of economic production and social cooperation* is less clear, although it can be argued that they contribute to aspects we consider important in urban ecosystems, such as removing corpses and enriching the lives of those who enjoy their presence. The conditions of *mutual vulnerability, interaction, and dependency* are strongly met, as I argued in Chapter 3. Animals’ lives and well-being are often dependent on and vulnerable to our actions, which may discretionally harm or benefit them. When it comes to *intersubjective communication*, while it may be argued that we do not engage with them in rich forms of communication, many liminal animals respond behaviourally to human actions, such as when they get closer to humans who feed them, suggesting some form of understanding of intentions. Finally, many liminal animals may belong to *transgenerational core communities*, such as when populations of liminal animals persist in certain places for several decades, as happens with populations of foxes who establish in urban or suburban areas for generations. However, it is unclear whether this aspect is really a necessary condition to be a member of society, as, if it were, it would exclude many migrants from society. In any case, as I have just shown, liminal animals satisfy *most* of the aspects Donaldson and Kymlicka consider relevant to be a member of society.

Surely, some of the social relations liminal animals hold with us are of mere avoidance, but this does not entail that we live in different societies. Many migrants in certain countries only socialise with other migrants of the same origin, and may even avoid certain social groups for safety reasons (such as far-right groups). However, this does not mean they are members of different societies. As Carens argues

Being a Pakistani in London or a Moroccan in Paris or a Somali in Toronto is not the same as being a Pakistani in Pakistan or a Moroccan in Morocco or a Somali in Somalia. The air people breathe, the streets they walk, the buildings in which they live and work, the money they use, the taxes they pay, the laws they must obey, the language in which most social institutions function—all these are concrete realities linking the lives of immigrants to the new society where they live. (...) Treating relationships with fellow immigrants as irrelevant to social membership denigrates the immigrants and denies that they belong. Relationships with fellow immigrants should be seen as just as important as relationships with nonimmigrants in establishing claims to social membership.

(Carens, 2013, p. 167)

The same would be true for those liminal animals who largely avoid humans. They are one of us, even if they try to avoid us as much as possible. Pigeons that fly away when they see us may go rest on an electricity line. Rats escape from us and hide in our sewage systems. And when ducks escape from humans they may go rest in shelters built by us in public parks. They are inevitably tied to our forms of social organisation, even if they avoid us.

One may claim, however, that liminal animals may be part of *human* society, but not of the different kinds of societies we have created. For example, a pigeon living in the UK may certainly be affected by humans and live amongst them, but not be part of British society specifically. This may be the case as one may argue that they are affected by things that are characteristic of human settlements, but not specific to different human settlements. If this were true, it might mean that liminal animals would not be considered part of specific human societies as understood in this chapter, which are related to cultures, identities, and relationships that crystallise in political communities such as states. It could mean, then, that it would be impossible to say that pigeons are members of British society. This, however, is not true, and it is clearly demonstrated by the fact that any research project in natural sciences studying animals does not just study their, i.e., behaviour, but their behaviour *in* a certain place. The reason behind this is that the results in other places may have been different. In the case of pigeons, for example, feeding practices, urban design, management practices, and public perception change between countries. It is not the same to be a pigeon in India, where feeding bans are rare, than in Spain, where they are common. Similarly, it is not the same being a pigeon in Belgium, where many cities use contraceptive-based methods of population

control, than in the UK, where shooting and trapping are more common. Liminal animal lives, then, are not only influenced by human practices in general, but they are differently conditioned by the specific societies in which they live.

The close interaction between humans and liminal animals, the positive and negative relations created between us, along with the sharing of space and resources, as well as the specific social interactions created by the different societies in which they live suggest liminal animals are members of the societies in which they live. If this is the case, they would satisfy the main condition of the Social Membership Principle, and, at least in principle, should be considered candidates for citizenship, and beneficiaries of the perks that comes with. In what follows, I will explore what this means, first accepting that liminal animals are ineligible for citizenship and exploring what denizenship might entail, and then challenging this view and arguing that liminal animals should be granted with citizenship status.

## **6. Denizenship for Liminal Animals Includes Extensive Positive Provisions**

Let us first, in this section, accept Donaldson & Kymlicka's view according to which liminal animals are ineligible for citizenship. Accordingly, I will be assuming that they will be better served by being considered denizens. In this section, then, I challenge the idea that the only positive duties to which they are entitled include: 1) residency rights; 2) those emanating from what they call "fair terms of reciprocity", that encompass minimal public benefits; and 3) anti-stigma protections. In particular, I will deal with the very limited scope of 2), and argue that liminal animals should be entitled to similar protection as other denizens, such as migrant workers, including the entitlement to healthcare and protection from predation and starvation. To do so, I will show that these are crucial aspects of denizenship status for humans, and respond to the objection according to which liminal animals would not want these protections.

It is worth acknowledging that the duties Donaldson and Kymlicka envision for liminal animals already greatly depart from the status quo. Giving them residency status will imply they should not be expelled or exterminated from the places where they live, contradicting most population control policies. Also, some duties emanating from what Donaldson and Kymlicka call "fair terms of reciprocity" will dramatically change the situation of many liminal animals by building safer cities and roads (see Chapter 8), using compassionate methods of population control (see Chapter 7) and creating and publicly

funding rescue centres and sanctuaries. Moreover, anti-stigma protections would lead to civic education on their sentience and moral consideration, and safeguard them from the demonisation of which they are currently victims.

Despite its progressiveness, however, this is far from what the status of denizenship entails in the case of humans. Donaldson & Kymlicka are vague in their explanation of what the 2) fair terms of reciprocity include, which has led others to complement their theory. Daphne Brouwer (2018), for example, has argued that these fair terms of reciprocity should include labour rights for liminal animals. I will contribute to this task of exploring the implications of 2) by arguing that liminal animals should get a more extensive set of positive denizenship entitlements.

To do so, let us look at the way Donaldson and Kymlicka identify the key duties emanating from denizenship for liminal animals. They start by identifying the kind of duties owed to human denizens. In the case of predation and starvation, they acknowledge that:

In the case of human denizenship, we do not accept predation of some denizens by others, or the death of denizens by starvation or exposure. States have an obligation to protect all human residents, including denizens, from these basic threats to existence-the status of denizenship does not involve waiving such protections. (Donaldson & Kymlicka, 2011, p. 242)

The case of access to healthcare is not strictly defended by Donaldson and Kymlicka as a key component of human denizenship, but *it is* in practice. Most liberal states with a sufficiently strong welfare state (which are the kind of states about which liberals such as Donaldson and Kymlicka are theorising) operate on a residence or employment-based model of healthcare, in which either the status of resident or worker (both of which fit under their characterisation of a denizen) provide the legal basis for healthcare access. This is the case for all EU countries, the UK, Canada, Australia, and New Zealand. It seems, then, that access to healthcare would also be one of the central provisions stemming from denizenship.

Donaldson and Kymlicka, however, do not consider that these kinds of provisions for human denizens automatically apply to animal denizens. In the case of protection from predators, they argue that “liminal animal denizens will still be subject to predator-prey relations: some animal denizens are predators (hawks), others are prey (house sparrows), and others are both (feral cats eat birds, and are sometimes eaten by coyotes)” (Donaldson &

Kymlicka, 2011, p. 242). Similarly, while they consider access to healthcare one of the components of denizenship for *some* liminal animals, such as those living in sanctuaries, they reject the idea that denizenship, in general, would entitle all liminal animals to it (p. 226).

According to Donaldson and Kymlicka, what justifies giving access to healthcare and other benefits to human denizens but not animals has to do with the need to constrain their liberty and autonomy in ways that would harm them significantly in order to give them these benefits. To do so, one may need to, for instance, trap hawks to avoid them from eating house sparrows, or to constantly feed squirrels, making them dependent on our provision. For this reason, for the authors, the conditions of animal denizenship must include a greater acceptance of risk to their lives, as “reducing these risks would involve levels of coercion and confinement which we would also find unacceptable” (p. 242).

There are, however, a couple of problems with this justification. The first has to do with the fact that this argument is structurally problematic. According to the argument, some benefits cannot be given to some liminal animals, and therefore, none of them should be entitled to them. In other words, the argument says that a benefit that cannot be given to some individuals within a group should not be given to *all* individuals within such a group. To explain, they are claiming that the fact that some liminal animals would not want to be fed by humans because that may impact their autonomy means that there is no duty, in general, to prevent liminal animals from starving. This argument, however, is very difficult to accept in other contexts. We all have the right to public provisions even if some of us may not want them for different reasons. For example, most people residing within the EU have the right to take annual medical tests, including mammographies, colonoscopies, or rectal examinations. Yet, many people decide not to take them for privacy or autonomy reasons (some people may not want to disclose their health status to the state, or may think that taking them would greatly violate their bodily integrity, for example). Similarly, many people have the right to join the military, which comes with benefits such as a permanent salary, generous pensions, and late-career opportunities. Again, this is incompatible with some people’s ideals of mobility, safety, or autonomy. This, however, does not mean everyone else is not entitled to medical checkups or to serve in the military. This means, then, that the fact that *some* animals may not want *some* benefits cannot be used as a justification to exclude *all of them* from being entitled to the duty to receive them.

This argument, however, needs to be complemented by yet another: one that demonstrates that *many* animals do want the public provisions associated with denizenship, including healthcare and protection from predation and starvation. First of all, it is worth reiterating that successful provision of these benefits is possible. Among other things, we can give many liminal animals oral vaccines to treat several diseases (Zhong et al., 2024), we can rescue and treat injured liminal animals such as baby birds who have fallen out of their nest or hedgehogs harmed by lawnmowers, we can build shelters for feral cats to escape from predators, we can give deers food with contraceptives so that their reproduction does not lead to overpopulation and starvation (see Chapter 7), and we can plant trees so that squirrels can escape from cats. Crucially, many of these actions do not interfere with their liberty or autonomy, as either they may hardly entail any interference, such as in cases where shelters are placed in parks or vaccines are put into feed; or because the liberty and autonomy of these animals may already be compromised in the first place. An injured squirrel who will die of starvation will probably try to escape from humans, but taking them to a vet, treating their injuries and releasing them back to their park enables their autonomy, rather than constraining it, as it was argued in Chapter 2.

Donaldson and Kymlicka acknowledge there are cases in which animals want to be helped, such as when raccoons are orphaned or squirrels are injured and approach humans. This willingness to be helped, according to them, seems to stem from the fact of them being in need. In cases like these, for them, giving them extensive benefits such as veterinary care would be justified (Donaldson & Kymlicka, 2011, p. 243). Donaldson and Kymlicka, however, seem to be underestimating the amount of liminal animals that are in need, and that would welcome human provision. One must recall that liminal animals, even if they live amongst us, are subject to the same natural processes as wild animals living in nature, and that therefore, they have to endure similar hardships, including the threat of starvation, diseases, injuries, attacks, or accidents. For example, studies have shown that juvenile mortality in squirrels often reaches 74% (Fisher et al., 2017). Others have found that juvenile urban pigeons often starve to death (Sol et al., 1998). Contrary to what Donaldson and Kymlicka seem to think, then, cases of squirrels being orphaned and injured are not exceptional, but the rule in the lives of liminal animals. This makes the argument according to which these provisions should not be given to animals because there are some of them who would not want them even more implausible. Many animals can be helped without interfering

with their autonomy, either because we can help them in autonomy-preserving ways, or because their autonomy is already deeply constrained and needs to be restored.

It must be acknowledged, however, that many animals would not want these benefits, in the sense that in order to give these benefits to them one may need to interfere with their autonomy.<sup>32</sup> For example, in order to protect sparrows from predation, it may not be enough to locate birdhouses in strategic places, but one may need to confine them or their predators. This, however, does not pose a problem for the argument according to which liminal animal denizens should be entitled to extensive forms of provision. Take, again, the case of humans. The fact that some do not want medical checkups does not mean that everyone else who does want them should not be entitled to them. So, the fact that some injured animals escape humans does not mean they should not be entitled to help, because many others *may want to be helped*. Similarly, the fact that Donaldson and Kymlicka's autonomy-based approach leads to the view that some forms of assistance such as medical care through confinement would be unacceptable does not mean that all forms of medical care are unacceptable. In the case of humans, for example, the fact that we consider forced surgeries wrong does not mean that people would not be entitled to affordable painkillers. In fact, Donaldson & Kymlicka acknowledge this when they claim that "Human societies are constantly balancing liberty and autonomy against safety" (2011, p. 242). When one accepts an autonomy-based approach such as this, one needs to accept that some forms of assistance (for both humans and animals) would clash against autonomy. But the fact that some of them do does not mean all of them do; nor does the fact that some individuals may reject benefits imply that no one should be entitled to them.

If this is true, then, liminal animals who are entitled to denizenship should also be entitled to a range of benefits similar to that of humans, including protection from predation and healthcare. While some liminal animals would not want these benefits, as it may interfere with their autonomy, it does not mean that *all of them* should not be entitled to these benefits.

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<sup>32</sup> I am here using this sense of "want" used by Donaldson & Kymlicka (2011), which is autonomy-focused. That is, someone wants something if it stems from a choice that respects autonomy. So, in this sense, liminal animals may not want to be helped if by doing so, one would interfere with their autonomous choices. Other understandings of "want", however, could be used. Equating "wanting" with "having an interest", for example, would radically change things, as even animals who refuse being helped may have an intrinsic interest in being helped. For example, injured dogs often escape humans, but their life improves if they are captured and treated. Something similar happens with children who do not want to be taken to the dentist. For the sake of engaging with Donaldson and Kymlicka's argumentation, I am leaving these considerations aside.

## 7. Citizenship for Liminal Animals

It is also possible to criticise Donaldson & Kymlicka's model not only by arguing that the provisions offered to animal denizens are not enough, but also by questioning whether liminal animals should only be given the status of denizens. In this section, I will argue that liminal animals qualify, under Donaldson and Kymlicka's own SMP, for citizenship: that is to say, they should be recognised as full members of the political communities in which they live. If this is the case, liminal animals will be entitled to the same protections as domesticated animals, including the right to an adequate diet, public healthcare, public infrastructure, and others. In practice, the kind of provisions to which liminal animals are entitled under a model of citizenship would not differ much from the extended duties of denizenship I outlined above. However, one key aspect of becoming a citizen involves the individual being able to shape the public good of the polity, unlike denizens, through a model of *dependent agency*. According to this model, animals' political agency would be enabled through mechanisms of interpretation and representation to allow animals to become co-authors of laws. This is likely to affect provisions for liminal animals, especially, in those contexts where different individuals have incompatible distributive claims. If liminal denizens and citizens have a claim against the state to, for example, resources for healthcare, the state will tend to prioritise citizens, as citizens are those for whom the state primarily governs. If liminal animals were considered citizens, however, they would have comparable claims to these resources.

Recall, then, where liminal animals sit, theoretically. First of all, many of them are members of society, which means that, under the SMP, they would be entitled to some form of political membership. Donaldson and Kymlicka claim that the proper form of political membership for liminal animals is denizenship. This is based on the idea that liminal animals do not comply with the capacities needed for citizenship (especially the capacity to *(b)* comply with social norms). In what follows, I will argue that liminal animals *do* have the capacities needed for citizenship. As I mentioned earlier, this would not only grant them access to the benefits (positive duties) stemming from the state, but also to shaping the public good through co-authoring of the laws.

Before showing that animals have the capacities for citizenship, one may question whether one really needs those capacities in order to become a citizen, or if the capacities need to be adapted in order to meet the demands of members of society to become citizens.

According to Donaldson and Kymlicka, the latter is the right approach when it comes to deciding who should be granted citizenship:

We don't start with some received view about essential citizenship practices and then ask who qualifies for citizenship in virtue of being able to perform these practices. Rather, we start from some account of who is a member of society – in Bauböck's terms, who has a “stake in membership” – and then ask how to organize politics to enable all members to enact their citizenship. If not every member of society is able to vote or to engage in public reason, then we need to find alternative ways of enabling those members to have a say in the governing of society. (Kymlicka & Donaldson, 2018, p. 168)

The authors argue this in response to the view that only those with certain cognitive capacities or linguistic agency should be recognised as citizens. To counteract this argument, Donaldson & Kymlicka (2011, p. 103–122) argue that the capacities needed for citizenship should be modified. In so doing, they defend an interpretation of the three capacities of citizenship outlined above that includes domesticated animals but excludes liminal ones. However, following the logic of their own reasoning, this approach is just as exclusionary. If liminal animals are members of society, then we need to adapt the criteria for citizenship to accommodate the abilities of liminal animals. According to Donaldson and Kymlicka, the conditions of citizenship must adapt to members of society, rather than members of society having to conform to some established conditions of citizenship. If this is the case, just as we do not require domesticated animals to comply with social norms to the same level as humans (we do not ask them not to lick people or to clean their paws before entering a public space), we have no reason to do so in the case of liminal animals. Some liminal animals may be unable to *(b)* comply with social norms, and stay quiet early in the morning or late at night, or to learn that people's sandwiches should not be stolen, but this is not a reason to exclude them from citizenship. Rather, this condition, if it is to be kept, should be adapted to their own needs for them to comply.

But let us accept that Donaldson and Kymlicka are right, and that the capacities they inherit from Rawls are strictly required to be considered a citizen. In what follows, I will show that liminal animals do have these capacities. A few lines will suffice to show how liminal animals comply with the capacities to *(a)* have and express a subjective good and *(c)* participate in the co-authoring of the laws. Liminal animals, as sentient beings, certainly have

(a) their own conception of the good and are able to express it, when, for example, injured squirrels beg for help, birds' sing to express discomfort, or when pigeons sit in someone's window waiting to be given food. They also have the capacity to (c) participate in the co-authoring of the laws if sufficient facilitation mechanisms are put in place, just as with domesticated animals. In defending that this condition applies to domestic animals, Donaldson & Kymlicka mostly rely on two key ideas. First of all, there is the idea that "sheer presence (...) constitutes a form of participation" (2011, p. 113). The authors discuss cases such as when dogs are allowed on public transport and send a political message to those living in places where this is not allowed that such practice is plausible. Secondly, there is the idea that animals *express* dissent and assent. For example, when animals in farms escape, destroy equipment, or show resistance to their living conditions, they are expressing their preferences, and therefore sending a political message to those interested in interpreting it. Liminal animals clearly fit these two forms of participation. First of all, liminal animals are present in our lives, and their presence demonstrates explicit messages. For example, the fact that they nest somewhere expresses a preference to live in such an area, and escaping those that try to hunt them expresses their preference not to be killed. Certain policies can also be seen through this lens, such as their presence in publicly funded shelters and rescues, or their use of contraceptive feeders. They also resist certain policies, such as when they break spikes, fences, or other deterrents, or when they raid markets looking for food to eat.

But animals, both domesticated and liminal, can engage in more formal aspects of politics, including deliberations, policy-making, and voting. It is in this sense that it can be said that they become co-authors of laws: when they participate in decision-making processes, their preferences are put on the table, and they are able to shape the public good of the community. Authors in animal politics have been discussing mechanisms to do this for years, and most of them appeal to some form of *participation through representation* (see Garner, 2017). Donaldson and Kymlicka have something like this in mind when they discuss their model of dependent agency, in which animals (and humans without linguistic abilities) are enabled to participate in politics through a facilitator or a set of facilitators tasked with interpreting their interests and preferences and bringing those to political decision-making for them. Just as children or people with cognitive disabilities are able to participate in these formal processes through the mediation of a facilitator, animals can too. In cases where an area to be urbanised is the home of certain liminal animals, one may appoint a representative of the animals in the local council to look after their interests and represent them in the

deliberations that would lead to a decision on the urbanisation project. A real example of this involves the organisation Animals in the Room, which is designing a pilot project to create mini-publics in the Italian Trentino area to deal with the bear population and their attacks on people. In these mini-publics, both the bears and the local human population would be represented in the debates and would try to achieve an agreement that is satisfactory for all parties involved (Animals in the Room, n.d.). In this sense, animals will be participating in politics, shaping the public good of the community, and ultimately becoming co-authors of laws, which would fulfill Donaldson and Kymlicka's interpretation of capacity (*c*) of citizenship.

Perhaps Donaldson and Kymlicka's deeper disagreement with regards to the capacities of liminal animals, would lie in the capacity to (*b*) engage in self-restraint and comply with social norms. Take, then, their view that domesticated animals have this capacity. According to them, domesticated animals such as dogs can engage in self-restraint, adhere to social norms when mating, playing, and grooming, and negotiate the terms of social rules with humans. Cats, for example, may try to eat people's leftovers if left outside the fridge once, but if they are constantly prevented from doing it, eventually they will learn it is something they cannot do, and will stop trying. In this sense, they will go through a learning process that would make them comply with the social norm "do not eat our leftovers". Similarly, dogs learn that they are not allowed to urinate at home, so they may engage in the self-restraining behaviour of holding it until someone takes them out for a walk.

Importantly, Donaldson and Kymlicka argue that rational reflection is not needed in order to engage in these kinds of rule learning-and-following activities. After all, in most human cases, we do not comply with social rules after a process of reflection. Rather, we tend not to be violent, to respect others, or to be kind because we were educated and socialised to act in such ways, and therefore we do it automatically (see Donaldson & Kymlicka, 2011, 116–122).

But if understood in this way, many liminal animals also comply with social rules and engage in self-restraining behaviour. Pigeons tend to defecate in pigeon lofts when these are provided (Dobeic et al., 2011; Haag-Wackernagel, 1995), showing how with the adequate measures in place, pigeons engage in social rule-following. Similarly, foxes do not tend to attack humans in their encounters. For example, in the period 2010-2019 only 23 cases of unprovoked fox bites or scratches were reported. Importantly, none of them were predatory,

but exploratory (Bridge & Harris, 2020). This low number, considering the probable high number of encounters with foxes in the UK, suggests that foxes learn to adapt their behaviour to coexist with humans, refraining from attacking them and, in many cases, even engaging in play and socialised behaviour with many humans who feed them or care for them. Moreover, animals living near houses such as crows and squirrels often learn to wait patiently if they know they will eventually be fed (see Pepper & Healey, 2024). In all these cases, liminal animals follow rules and act with self-restraint in the same way that many domestic animals do.

One may claim that while some liminal animals can engage in these forms of rule-following and socialised behaviour, they cannot do so in many other realms. So, while foxes may be able to learn that they should not attack people, it would be more difficult to teach them that they should not attack people's cats. In this sense, liminal animals may not be complete rule-followers, which may weaken their claim to citizenship. However, Donaldson and Kymlicka's understanding of what it means to comply with social norms cannot entail compliance at *all* times or in *all* realms. If this were the case, most domesticated animals would not satisfy the condition. Dogs often urinate and defecate indoors, and sometimes attack their guardians or other people. Cats constantly kill birds, scratch furniture, steal food, and urinate on people's clothes. Horses can bite and kick their carers. And rabbits chew on furniture, cords, and other appliances despite regular correction. But still, Donaldson and Kymlicka think that these animals have the ability to follow rules, even if they do not do so at all times. And yet again, this is also the case with liminal animals who comply with some rules and not others. If Donaldson and Kymlicka see specific failures in rule-following as a reason to exclude animals from citizenship, many dogs would have to be excluded due to their aggressive acts, just as many liminal animals for their predatory behaviour. The fact that some liminal animals cannot follow rules in some ways (by not attacking cats, for example), cannot be used to deny them their citizenship status, as they may be able to follow rules in other ways (by learning not to attack humans, for example).

There is, however, another instance of rule-following that liminal animals comply with and that Donaldson and Kymlicka do not acknowledge. This has to do with the *passive acceptance* (that is, complying with certain actions that are imposed on an individual that they could resist) of certain rules that may minimally harm that individual for the sake of the community. In the case of humans, paying taxes, attending jury duty, or any other

citizenship-related obligations are instances of this. We accept minor inconveniences in order for the state to function or to provide for others. Domesticated animals also engage in these instances of rule-following, for example, by accepting to stay inside for a certain amount of time every day when their guardians are working. These are rule-following activities that domesticated animals fulfil for the sake of others (which are very similar to those instances of rule-following Donaldson & Kymlicka have in mind). These are, of course, not voluntary ways of acting, but are imposed on animals. And yet, the cases of compliance with citizenship responsibilities in the case of humans are imposed as well. We comply with them because we have to, independently of whether we want to or not.

These kinds of mandatory ways of rule-following, however, apply to liminal animals as well. Humane programmes of population control that prevent animals from reproducing, for example, may minimally harm those animals who want to have offspring. Urbanising areas may harm those who have an interest in living in the area to be urbanised. And human mobility may harm animals who want to cross roads, for example. In all these cases, peaceful coexistence may oblige liminal animals to deal with these activities if they want to keep living in a mixed human-animal society. In doing so, liminal animals would be following social rules that harm them but benefit others, just as we do when we pay taxes. If this is the case, then liminal animals do not only follow rules in the sense that they show self-restraint, but also in the sense that they accept certain harms that are necessary for the benefit of others.

It may be objected, however, that these animals are not *accepting* certain harms for the sake of coexistence because they do not have the chance to reject them. After all, rats and pigeons may simply be getting on with their lives in the niches they live in when they are imposed something necessary for coexistence, with no reflection on the costs and benefits of their choices. However, these animals may indeed be *accepting* the risks associated with human activities in a more practical sense: they may not have the option to fully resist urbanisation, population control, or human mobility, but they may *choose* to stay in human-dominated spaces because they are better off with the resources available there, despite the potential harms. In this sense, their situation mirrors, again, that of humans who cannot resist paying taxes in their own country (because they would be subject to penalties), but they prefer it to paying less taxes but being more unhappy in another country, for example. As such, their decision can be seen as an implicit acceptance of the risks associated with living in a mixed human-animal society, such as in the case of liminal animals.

It seems, then, that liminal animals, contrary to what Donaldson & Kymlicka think, fulfill the three conditions of citizenship. They can engage in self-restraining behaviours (by not attacking people, or by waiting patiently for food), and they can also be obliged to engage in such coexistence behaviours without massively compromising their liberty or well-being. This means liminal animals are not only members of society, but they also fulfill the three capacities needed for citizenship: they *(a)* have and express a subjective good; can *(b)* comply with social norms<sup>33</sup>; and can *(c)* participate in the co-authoring of the laws. This means liminal animals can be considered citizens, and they are entitled to the wide range of rights that this status comes with. Among others in Donaldson & Kymlicka's list (2011, p. 123), they are owed 2) free movement and the sharing of public space, 6) a right to medical care, and 8) a right to an adequate diet. Donaldson and Kymlicka would here probably object that many liminal animals would not want these provisions. This is something I dealt with in the previous section, arguing that while it is true that many of them will not want them, this does not mean they would not be entitled to them, as many others will want them. Importantly, they stand in the same position towards the state as any other citizen, be they human or animal. This means if the state has to do trade-offs when it comes to deciding how to distribute resources, liminal animals would have a claim just as weighty as any other citizen for these resources.

## 8. Conclusion

This chapter has argued that according to the Social Membership Principle (SMP), liminal animals should be considered members of our political communities and owed positive duties either as *denizens* or *citizens*. To do so, I first claimed that liminal animals should be considered members of society according to the standards set by Carens (2013) and Donaldson & Kymlicka (2011). Then, I argued that if this is the case then following the SMP, they are entitled to membership in the political communities that emanate from such societies. I then examined what this means for liminal animals if they are to be considered denizens. As I argued, if this is the case, then they would be entitled to a wider range of provisions that Donaldson & Kymlicka initially envisioned. Then, I showed how liminal animals can also be considered citizens, by virtue of them fulfilling what Donaldson and

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<sup>33</sup> Another approach to argue that liminal animals comply with the capacities could have been taken. This would entail following the idea defended by Donaldson & Kymlicka (2011) that the capacity of *(b)* rule following is only relevant because it enables *cooperation*. As such, I could have shown that liminal animals are able to cooperate, even if they do not fulfill *(b)*. For the sake of keeping the argument as close as possible to their own argumentation, however, I have decided not to follow this route.

Kymlicka consider the capacities necessary to become a citizen. I have also dealt with the main difficulty these authors pose to this idea, according to which animals may not want to become citizens because of how that would undermine their autonomy.

Taken together with the previous chapters in this part, which have examined the All-Affected Interests Principle (AAP) and the All-Subjected Principle (ASP) and its implications for liminal animals, we can confidently conclude that the three main principles of political inclusion support their full membership of the communities in which they live. This part, then, has provided a contribution to the literature on animal politics by showing how these widely accepted principles lead to unexplored conclusions for animals.

If the arguments put forward throughout these two parts are correct, then, they must have some practical implications for liminal animals. That is, if there are positive duties towards liminal animals, either as a result of the conclusions of ethical theories, or by virtue of them being considered full members of political communities entitled to public provision, this necessarily needs to have an impact in our individual practices, policy-making, and public-resource distribution. The next chapters will explore two areas in which these ethical and political conclusions may be applied: population control and urban planning.

## PART 3: Practices

The previous two parts of this thesis have shown that our ethical and political duties toward liminal animals are much stronger than generally assumed in the literature. By appealing to the theoretical approaches of three ethical frameworks (consequentialism, autonomy-based, and relational theories) and three principles of political inclusion (the All-Affected Interests Principle, the All-Subjected Principle, and the Social Membership Principle), I have argued that the idea that there are positive duties towards liminal animals follows from widely accepted assumptions and theories. This approach, however, is fairly limited in scope: it only tells us that these duties exist, but does not indicate how these duties may be realised *in practice*. And while I have mentioned several ways in which this can be done (building rescue centers, protecting them from starvation, implementing non-painful programmes of population control...), more specificity is needed to prove that animals can, in fact, be effectively helped. This is especially the case for two reasons. First of all, almost any approach we take to help them will have implicit normative issues that may lead to disagreements. The use of population control, for example, implicitly assumes that it is permissible to control the reproduction of animals. Building rescue centers assumes that it is acceptable to use public funding, that could have been used for other purposes, for the benefit for animals. And creating dedicated spaces for liminal animals such as public parks assumes that political institutions are right in creating spaces with liminal animals in mind. In order to develop a consistent position in favour of positive duties towards liminal animals, then, it would be very useful to examine some of these normative disagreements and show how they can be overcome, at least in a few cases. And secondly, proposing that liminal animals are entitled to positive duties *in theory* ignores the fact that *in practice*, those positive duties will have to be weighed against other duties, as well as limited resources. The fact that there is a duty to, for example, build a park for animals, can lead to a conflict with the positive duty to build a hospital for humans, if both of those are to be built in the same place, or if there is only enough funding to build one of those. This recognition, then, requires more normative work examining the kind of practices that can lead to fulfilling our positive duties towards liminal animals to see if they are feasible, both from a normative point of view, and from a coexistence perspective.

In doing this, I will be expanding the contribution of the thesis, by stepping out from the purely theoretical realm, and diving in the practical aspects of the discussion of positive

duties towards liminal animals. In doing so, I will be following the steps of other authors who have done this in the context of wild animals living in nature, but with an explicit focus on liminal animals.<sup>34</sup> So far, normative reflection on our practices towards liminal animals has been very limited, and with this contribution I aim to put a few stones for others to step on and improve the literature dealing with this topic.

Due to a time and space limitation, however, it would be impossible to examine all the ways in which we could help liminal animals. For that reason, I will focus on two actions that humans perform routinely, but without much normative reflection, and that could be transformed to actively help liminal animals. In Chapter 7, I explore population control as a potential form of assistance towards liminal animals. While this practice has often been used to pursue human interests, such as to reduce the populations of animals that we tend to have negative attitudes towards, to protect human properties, or to allegedly protect human health, I will argue that it can be used to help liminal animals cope with the challenges of overpopulation. This chapter reframes population control as a tool that, under the right conditions, can fulfil our positive duties toward liminal animals by reducing suffering caused by, for example, resource scarcity, diseases, and competition. In Chapter 8, I turn to urban planning, because of its important role in shaping the coexistence of humans and animals in urban spaces. Urban planning often reflects ethical and political priorities and systematically includes or excludes certain beings from safety, health, and well-being. Roads, fences, zoning laws, and architectural choices all impact whether animals can live, move, and thrive in urban areas. Despite this vital importance for animals, their interests are generally ignored in planning decisions. This chapter argues that if there are positive duties towards liminal animals and they are full members of our political communities then they must be considered in planning decisions of areas in which they live. Drawing on principles of conflict, coexistence, planning, and livability I show how urban planning can lead us to fulfill both our negative and positive duties towards liminal animals. In this chapter, I also deal with a topic implicit in the thesis but of crucial importance: the normative relevance of the burdens placed on humans by the allocation of positive duties towards liminal animals.

The reasons for choosing these two topics over potential others (such as climate change-related issues, food or energy production matters, or conservation conflicts) are

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<sup>34</sup> A few examples of practical approaches to our duties towards wild animals in nature include Fischer (2022), Horta & Terán (2023), Keulartz (2016), Murado Carballo (2025), and Palmer (2021). Examples of contributions dealing with liminal animals (although not explicitly) include Gamborg et al. (2020), Milburn (2022), Pejic (2024), and van Gerwen et al. (2021).

twofold. First of all, population control and urban planning are practices that we do constantly without reflection or consideration for the interests of liminal animals, and that yet, they harm them significantly. Reframing them, then, has at least the potential to fulfill a *negative* duty not to harm liminal animals by stopping our harmful practices. But secondly, as I will argue, these practices, if they are applied correctly, have the potential to help animals significantly, also allowing us to fulfill our *positive* duties towards them.

This shift in focus, from abstract theory to practice, however, does not mean that I will be abandoning the normative perspective taken so far. That is, these are not technical chapters about methods of population control or about planning or architecture. Rather, in them, I use insights coming from those technical fields and combine them with normative arguments to explore if and how they align with our duties towards liminal animals. To do so, I necessarily deal with technical aspects of each practice, but also engage with theoretical questions, including, for example: whether population control is ever permissible; if the kind of identity-affecting results that population control generates are consistent with saying that it *helps* specific animals; or whether considering animals' interests in planning decisions is too demanding for humans.

Besides the contribution to scholarship these chapters will be making, my intention with them is not only to help grow the literature on these topics. Rather, they also aim to inform action and policy. If liminal animals are entitled to positive duties, either because this follows from ethical theories or because they are full members of political communities, then we need to find suitable ways of fulfilling these duties. These chapters, then, aim to guide decision-makers in changing our practices towards liminal animals. Currently, the way in which particular practices are currently undertaken show a complete neglect for the interests of liminal animals. For example, ineffective population control methods that cause immense pain to animals are routinely used, including shooting, kill-traps, or poison. Similarly, urban design often ignores the behaviour and preferences of animals, creating infrastructures that expel animals from areas where they reside, clash with their mobility, or pose a risk to their safety. If liminal animals matter, the following chapters do not only intend to show how animals should be helped, but also to translate these insights into clear policy guidance that changes how we relate with liminal animals.

## Chapter 7: Population Control as a Form of Assistance for Liminal Animals

### 1. Introduction

I have argued that three ethical theories justify a positive obligation to assist liminal animals and that three principles of political inclusion support the view that liminal animals should be considered full members of our political communities, entitling them to public provision. Hence, our duties towards liminal animals are not limited to not harming them, but also extend to helping them when they need it. Ways of assisting liminal animals can take many forms, with proposals including vaccination programmes, veterinary care, setting up rescue centres, providing them with resources, or eliminating harmful parasites (see Horta & Terán, 2023; Murado Carballo, 2025). In this chapter, I am going to argue that the active management of the populations of liminal animals can be a way of helping them. This approach to helping animals is already being carried out in the case of domesticated animals, including companion animals, to prevent them from reproducing and leaving behind newborns that cannot be adopted (Slater & Weiss, 2020), as well as in zoos, to avoid overcrowding in their limited space (Silber et al., 2013). Population control is also used for liminal and wild animals, but mainly for reasons other than an intention to help them. Rather, population control is used for the sake of conservation, to reduce or eradicate non-native species and favour the growth of native and endangered species (Cope et al., 2017; Wilson & Edwards, 2019); to reduce the alleged risks of disease transmission posed by some urban animals (Killian et al., 2007; Rhyan et al., 2013); or to control animals who create conflicts with humans, such as when local councils put poison in different parts of cities to kill rodents (Massey et al., 2024). However, to date, population control has only in exceptional circumstances been used to assist liminal animals themselves (as mentioned, this happens mostly in the case of companion animals and in zoos). In this chapter, I will argue that this way of assisting liminal animals deserves far greater consideration, and that if there is a duty to assist liminal animals, then this method may be a promising way of realising this duty.

To do so, in Section 2, I make the case that population control is a form of assistance towards liminal animals by helping them cope with the negative effects of overpopulation. In the sections that follow, I consider objections. In Section 3, I deal with the objection that population control methods harm animals, and that therefore, if there is a negative duty not to cause harm to them, then population control would be impermissible. In order to respond to this objection, I review different methods of population control, defend the use of

contraceptive methods, and argue that even if some methods of population control minimally harm animals, this does not necessarily entail it would be impermissible to use them. In Section 4, I deal with the objection that claims that population control is impermissible for another reason: because just as forced population control is impermissible in humans because it violates individuals' reproductive autonomy, the same must be the case for animals. I respond to this objection by arguing that there is a relevant difference between human and animal population control. In Sections 5 and 6, I address objections that claim that population control is not good for animals. Section 5 deals with the idea that controlling the population of a certain species will grow the population of other species, ultimately making it worse for the latter. Section 6, considers the objection that population control does not help animals in "person-affecting terms", as the positive effect of population control will mostly lie in future individuals who have not yet been born. This fact would make such practices incompatible with saying that population control makes the situation better *for someone*. I respond to this by discussing different ways of understanding the "person affecting view" that may overcome this problem.

## **2. Population Control as a Tool to Help Liminal Animals**

In this section, I will show how controlling the populations of different species is a viable form of assisting them. But before doing that, I need to clarify what I mean by "population control". Population control, often also referred to as population management, is, in short, the active regulation of the size and density of the population(s) of certain animals. That is, the manipulation of the number of individuals of the same species that live in a specific geographic area at the same time. Population control tends to be carried out in delimited places (neighbourhoods, cities, parks...) and normally applies to certain species and not others (poisoning in neighbourhoods intends to kill rats but not squirrels, for example). Population control can have the aim of increasing the populations of animals (by breeding in captivity certain animals and releasing them, for example) or reducing their populations. In this chapter, I will be concerned with population control as a way of reducing the populations of certain animal species. The reason for this is that, for most liminal animals, their welfare and autonomy is significantly thwarted not by the fact that populations are too small, but by them being too big.

If one asks an animal shelter manager what they would do to improve the situation of the animals they care and will care for, the response will likely have to do with sterilising

companion animals so that the number of animals they will have to take in in the future is reduced. This is very clear with feral cats and dogs who, due to their numbers, are unable to be helped and rehomed by animal shelters, who are limited in space and resources. The concern of these managers with sterilisation is related, at least partially, to a problem of *overpopulation*: a situation in which the number of animals in a population exceeds the capacity of the environment to support their health, well-being, and long-term survival.<sup>35</sup> While terms like “overpopulation” or “overabundance” are often value-laden, and typically used to describe animals whom humans prefer not to see or who are labelled as “pests”, I use them here to refer to circumstances in which the number of animals within a certain population compromises animals’ health, survival, and overall welfare, regardless of whether or not their interests conflict with human preferences. In such cases of overpopulation, animals may be forced to compete for limited resources, face increased disease transmission, and become entangled in human-animal conflicts.

Overpopulation, however, does not just occur in the cases of feral cats and dogs. Rather, this is the case for many populations of liminal animals. The reason for this is that most populations of animals operate at their “carrying capacity”: that is, the maximum population size that can be maintained in a certain environment with the resources it provides. The carrying capacity of liminal animal populations is limited by contextual factors such as food availability, shelter, space, and access to other resources. The problem with populations being at carrying capacity is that in order to survive, animals will have to fight for those limited resources. Failing to gain access to them will imply, in most cases, not surviving. It has been shown that many populations of liminal animals operate at carrying capacity and their growth is limited by food availability (Sibly et al., 2005; Prevedello et al., 2013; Ruffino et al., 2014). This implies that animals’ mortality rate will be high due to competition over food, which will cause deaths by starvation, dehydration, lack of suitable resources, and disease transmission (Eckerström-Liedholm et al., 2024). The examples given in previous chapters about squirrels’ populations having a juvenile mortality rate of 74% (Fisher et al., 2017) and about juvenile pigeons commonly starving to death (Sol et al., 1998) are exemplifications of the consequences of liminal animal populations being at their carrying capacity.

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<sup>35</sup> I say that this is the case *at least partially*, because in the case of companion animals there are other factors affecting the problem, including the fact that shelters are typically underfunded and that many people do not want to adopt animals. In any case, numbers would still be a problem in an ideal world, as letting them reproduce freely would still create a situation in which there are too many of them to be homed if they exceeded the capacity of shelters and homes.

Interestingly, despite the vast number of studies analysing the correlation between overpopulation and mortality, publications examining the relation between overpopulation and well-being are scarce. However, there are several reasons why it is plausible to think that overpopulation is detrimental to the well-being of liminal animals. First of all, the fact that many animal populations operate at their carrying capacity is caused by the fact that animals have evolved so that each individual utilises as much of their environment as they can to ensure their own biological fitness: the ability of individuals to reproduce. However, it has been shown that fitness does not necessarily correlate with well-being, but often the contrary is the case (Beausoleil et al., 2018; Clarke & Ng, 2006; Dawkins, 1990; 1998; Ng, 1995). Secondly, high mortality rates are associated with low well-being due to the often painful ways in which animals die (Ellis et al., 2012). Thirdly, it has been shown that proxies that correlate with welfare are also negatively affected by overpopulation, including body condition and body mass (Grandin, 2012). There is evidence of this in different animal species typically considered liminal, such as badgers (Bright Ross et al., 2021), deer (Kjellander et al., 2006; Mysterud et al., 2001); rabbits (Rödel et al., 2004), different bird species (Paradis et al., 2002), rats and mice (Leirs et al., 1997; Saitoh et al., 1999) and various different large herbivores (Bonenfant et al., 2009). Finally, many liminal animals also carry diseases that are likely to affect their well-being and that are more likely to be transmitted in overpopulated environments (Haro et al., 2021; McFarlane et al., 2012).

Taking into account that most populations of liminal animals operate at their carrying capacity, and are therefore experiencing the difficulties associated with overpopulation mentioned above, reducing the size of the populations of liminal animals seems to be a way of improving their life, and therefore, fulfilling the positive duty to help them. Reducing their populations can help animals in at least three ways. The first is by *(i)* reducing mortality rates. As I have explained above, many overpopulated animal species operate at their carrying capacity, likely meaning that their number is limited by the resources available. This will automatically create competition over resources. Those who are not able to access those resources will either be unable to reproduce or die in painful ways. This will maintain the population at their carrying capacity at the expense of the deaths of many animals. Reducing population sizes will free up resources that could be consumed without the need for competition, which will reduce the mortality rate of those animals whose death was caused by competition over resources. This has been proven true in the case of animals of different species (see Bromley & Gese, 2001; Ransom, 2012; Turner & Kirkpatrick, 2002; Twigg et

al., 2000; Williams et al., 2007). By reducing mortality rates, besides from minimising the harm of death that these animals have to face, one would also be addressing the painful and agonising ways in which these animals may die, which include starvation, vulnerability to infectious diseases due to higher population density, or lethal injuries from aggressive competition over limited resources

The second way in which reducing populations would improve the situation of liminal animals is by *(ii)* extending their lifespans. This is, of course, a consequence of reduced mortality rates. As was previously mentioned, many animals that die as a result of overpopulation are newborn or juvenile animals. Freeing up resources will reduce their mortality and expand their lifespans, other things being equal, which will improve their situation. While it must be acknowledged that animals with extended lifespans may still suffer due to other causes such as accidents, disease, or predation, population control would eliminate one of the main drivers of early suffering and mortality: overpopulation.

The third way in which population control would make animals better off is by *(iii)* affecting certain physiological and mental aspects of animals' daily lives. High population densities often lead to chronic stress due to constant competition for limited resources, aggression between individuals, and a heightened risk of disease transmission (Eckerström Liedholm et al., 2024). Reducing population sizes can alleviate these pressures and improve both the physical and psychological condition of animals. For example, studies have shown that in reduced-density environments, animals tend to have higher body weights, stronger immune responses, and lower levels of stress indicators, all of which correlate with higher well-being (Gray & Cameron, 2010; Turner & Kirkpatrick, 2002; Wilson & Edwards, 2019). These findings suggest that population control, by mitigating the negative effects of overpopulation, can create conditions under which animals are not only more likely to survive, but also to enjoy improved welfare during their lives.

Population control, then, can constitute a form of assistance towards liminal animals who live in overpopulated environments. If there is a duty to assist liminal animals, then, there are reasons to manage their populations to make them better off. This is something that is already done for feral cats and dogs. Cats that live in managed urban colonies, for example, are given food and sterilised. This is done, at least in part, for the sake of the cats themselves, as they would be worse off if their colony was overpopulated (ICAM, 2011). The same can

be done for other liminal animals whose lives are constrained by competition for resources among the animals that live in the same population.

As with any practice that targets animals' life, autonomy, and well-being, however, simply defending that population control is a promising way of fulfilling our positive duties towards liminal animals raises important questions and objections that must be addressed if this is to be considered an acceptable intervention. In what follows, I deal with four crucial issues that need to be smoothed out before we can confidently say that population control is a suitable way of helping animals. In the next section, I deal with the question of whether by controlling the populations of liminal animals we harm them, and with whether this would make any attempt of doing so impermissible. Section 4, then, discusses the objection according to which population control would be impermissible even if it did not harm liminal animals, as it would thwart their reproductive autonomy. Section 5 considers the empirical objection according to which reducing the population of one species will necessarily increase the population of others, making it worse for the latter. Finally, Section 6 addresses the philosophical objection according to which population control does not help animals in "person-affecting ways".

### **3. Methods of Population Control, Harm, and Negative Duties**

Take, then, the first objection that can be posed to the view that reducing the populations of animals is a way of helping them. One may claim that in order to do so, we would necessarily have to harm and kill many of them. If there is a negative duty towards animals, as claimed throughout this thesis, this would make population control very problematic, if not impermissible. This objection relies on two different claims. Firstly, there is an empirical matter at play: that all population control methods harm animals. And secondly, there is the normative claim that harming animals is impermissible, independently of whether in doing so we also help them, or help others. I will tackle the two claims in order.

In order to address the first claim, consider all the methods of population control that are available, from the most painful to the least painful ones. First of all, poisoning seems to be the most harmful method. The most used poisons are composed of anticoagulants that kill the animals by causing internal bleeding. Poisoned animals often die days after consuming the product, and before dying, they can experience anorexia, anaemia, convulsions, ataxia, paralysis, breathlessness, lethargy, weakness, thirst, dizziness, anxiety, fear, and extreme

levels of pain caused by internal bleeding (Baker et al., 2022; Fisher et al., 2019). Further problems with using poisons have to do with the fact that they can also affect non-targeted species, including companion animals (Nakayama, 2019). Besides the suffering caused by it, poisoning and all other lethal methods harm animals by killing them (see Introduction for the justification of why death harms animals). Shooting and kill-trapping also harm the animals by killing them, but tend to avoid the suffering experienced by the animals before dying. An added problem with these methods is that they do not always kill the animals instantly. Kill-traps very often only injure the animals, as it is not possible to ensure that animals enter the trap in the intended position, so, in many cases, animals are immobilised and injured for days inside the traps, causing enormous suffering until they die as a result of the injuries, starvation, or are killed by a predator (Proulx & Rodtka, 2019). Shooting the animals seems to have the same problems, and some added ones. For instance, one of the methods to control the population is allowing and incentivising recreational hunting (Quirós-Fernández et al., 2017). Hunters are normally not professional shooters, and hence, the risk of only injuring and not killing the targeted animal increases (Descovich et al., 2015). Hunting is also dangerous for people living in the areas where the animals are shot (Loder & Farren, 2014), as well as for non-targeted animals. It has also been shown that hunted animal species have lower welfare levels, as a result of having increased stress (Bryan et al., 2014). A proposed alternative to recreational hunting is sharpshooting, where professional shooters are the ones killing the animals (DeNicola & Williams, 2008; Descovich et al., 2015). This form of population control reduces the risks of injuring but not killing the targeted animal, but the risk is not eliminated. It also runs the risk of leaving orphaned animals that will not be able to survive without parental care.

Luckily, these are not the only methods that can be used to control the populations of animals. Non-lethal methods (those that do not kill the animals to reduce their populations) can also be used. Consider first separation of males and females and surgical methods. Both of these methods imply having to capture the animals, handling, in the case of surgical methods performing surgery, and releasing them. This already harms the animals by imposing stress, and in the cases where a relocation is performed, there is evidence of high mortality rates (Villaseñor et al., 2013; Whisson et al., 2012) and low welfare (Teixeira et al., 2007; Thompson et al., 2023). Recovery after surgery also involves pain and low welfare rates in the short term and, in some cases, elevated mortality rates (Tribe et al., 2014). However, there are some even less invasive and harmful methods, such as hormonal methods (that suppress

the reproductive endocrine system), immunocontraception (that generate antibodies which then attack some reproductive cells), or chemical methods (in which chemical substances affect certain aspects of reproduction) (Asa & Moresco, 2019). Many hormonal and chemical methods, including immunocontraception, do not require surgery to be used. Many of them only require an injection that can be administered using a dart. This has only minimal welfare implications derived from the possible infections produced by the dart (Gionfriddo et al., 2009). These kinds of contraceptives can also be administered via oral baits that animals eat. Oral contraceptive methods can also have side effects. There is evidence of these contraceptives causing some physiological changes, such as reduced size (Killian et al., 2005), and extended breeding seasons (Nuñez, 2009), but these do not necessarily correlate with a reduction in welfare (Gray & Cameron, 2010, p. 49).

A compelling example of the use of this method is the ongoing contraceptive programme targeting pigeon populations in Barcelona. Using Nicarbazin, a chemical compound administered via oral baits along corn kernels, the city has implemented a safe and painless strategy for reducing overpopulation. The product, marketed under names such as Ovocontrol, Ovistop, and R-12, renders pigeon eggs infertile without causing harm or secondary effects, and provides food in the process. Its impact has been significant: a three-year programme achieved an average population reduction of 55.26%. Although the cost of the programme (387,000€) was initially higher than traditional capture-and-kill methods (270,000€), the latter have been shown to be ineffective in producing long-term population declines (González-Crespo & Lavín, 2022; Senar et al., 2009). Moreover, as pigeon numbers decrease, so does the cost of maintaining the programme, making it more economically viable over time. Similar results have been recorded in Modena, Mantova, Como, Florence, Carpi, Udine, and Genoa (Albonetti et al., 2015; Ferri et al., 2009; 2011), demonstrating that painless, effective, and safe population control is not only possible but scalable and cost-effective.

It seems, then, that the first claim of the objection, based on the idea that in order to reduce the populations of animals one would have to harm and kill many animals, is not entirely true. Lethal methods certainly harm and kill animals (Gamborg et al., 2020), but non-lethal and non-harmful alternatives exist. Many contraceptive methods, especially those administered via oral baits, do not harm animals in the process of being implemented, do not

have (or only have minimal) side effects, benefit the animals by providing them with stable sources of food, and reducing or eliminating death by starvation and competition.

However, one may claim that while these methods do not harm animals by inflicting pain, they may harm animals by depriving them of the behaviours associated with reproduction, such as courtship, mating, and parental behaviour (Curtis et al., 2001; EAZA Council, 2023). This may be the case because, if animals have an evolutionary drive towards reproduction, it could be the case that not fulfilling this evolutionary behaviour causes negative mental states. Just as not performing other evolutionary-related practices, such as sexual relationships, has an impact on well-being (Vasconcelos et al., 2023), not allowing animals to reproduce may also have an impact on how they fare. This view is supported by the fact that some sterilised dogs keep showing offspring caring behaviours even after they have been sterilised (Lezama-García et al., 2019), and by the observation that an inability to reproduce in the case of humans when they have a will to do so has important welfare implications (Sheeran et al., 2024).

Unfortunately, there is no consensus on whether these non-lethal methods impact animals' well-being in this way. Some authors have suggested that depriving animals from reproductive behaviours does not have welfare effects, or that if they do, they are minimal (Gray & Cameron, 2010), but since the evidence in favour of this view is scarce, I will accept that even these methods of population control can have *some* impact on animals' well-being. This means, then, that the first claim of the objection (based on the idea that population control harms animals) cannot be tackled empirically. Rather, I must then assume that even the least harmful population control methods *can* harm animals. For this reason, I need to jump to the second part of the objection, that says that considering that population control methods harm animals, their use is impermissible. In the remainder of this section, I will show that population control can be permissible, even if it causes *some* harm.

To recap: in cases where contraceptives are available, we can reduce the populations of animals while *potentially* causing some harm to them by depriving them of reproductive behaviours, but *very likely* also improving their life conditions. We can also decide not to reduce their populations, which means letting animals endure the hardships of overpopulation. Faced with this situation, the objection would say that provided that we have negative duties not to harm animals, it is impermissible to implement population control programmes. This objection is based on a typical discussion in ethics and political theory, that

has to do with the permissibility of trading harms for benefits (see Rodin, 2011) and on whether allowing harms to occur is as wrong as causing harm (see Woollard, 2012).

The first response to the objection, then, has to do with accepting that at least *some harms* can be traded for *greater benefits*. Providing a thorough justification for this is out of the scope of the thesis (as it would mean solving one of the most important problems in normative theory). Nonetheless, following the ecumenical approach of the thesis, it must be acknowledged that the idea that some harms can be accepted if they lead to greater benefits follows from many of the theories discussed. This is most clearly the case with consequentialist theories. And it does seem that the benefits outweigh the harms in the case of overpopulation, given the extent to which animals are harmed by overpopulation, and the only potential negative welfare effects that population control methods have (see Eckerström Liedholm et al., 2024). Importantly, however, this conclusion would also follow from most non-consequentialist theories; after all, most such theories also accept that some harms can be justified if they are necessary to produce a greater good. That is, they are *moderate non-consequentialists* (see Kagan, 2019, pp. 170–183), meaning that they accept that harms can be traded by benefits *if the benefits are big enough*. Of course, there are no shared strict criteria for what counts as big enough, but in the case of population control, averting a great amount of deaths by starvation and dehydration, aggression over limited resources, psychological stress, and the spread of diseases seems to be a significant benefit that could certainly be regarded as sufficient.

Secondly, it is very unclear that all evolutionary-driven behaviours that contribute to people's well-being should be accepted, especially if they cause harm to others. In the case of humans, we know that deprivation from sexual relationships leads to a decrease in well-being (Vasconcelos et al., 2023), but this does not justify all and any kinds of sexual encounters in the human case, but only those we consider acceptable (for example, those that are consented). Similarly, in most cases we do not accept harmful violence, even if it can be explained from an evolutionary point of view. As such, *even if* reproduction causes benefits to some, if it leads to a situation where others necessarily suffer, it must be subject to the same scrutiny as other evolutionary-driven behaviours.

And thirdly, consider the alternative to not controlling the populations of animals, specifically with regards to offspring caring behaviour. When animals are left to reproduce freely, it is not only newborns and juveniles who often die in painful ways, but also often

*their progenitors* who suffer from having to see their offspring die due to lack of resources (Sol et al., 1998). If the assumption that animals who invest in reproduction and care for their young are harmed by not being able to reproduce is valid, then it also seems valid to assume that these caring animals suffer when they see their offspring die prematurely and painfully. In fact, evidence says that even those animals who do not invest much energy into caring for their young suffer when they die. Rats, whose infant mortality tends to be very high, were observed to experience high levels of stress after the death of their young, followed by depressive-like behaviours (see Demarchi et al., 2024). If this is the case in these animals, who do not invest much into caring, then it is very likely that other animals who do care for their offspring and create emotional connections with them will experience even more distressing emotions after their young die (see Bercovitch, 2020; King, 2013; Millar, 2024; Monsó, 2024). This makes the alternative to not controlling the populations of animals even worse, as animals not only suffer due to the conditions of overpopulation, but also have to suffer due to seeing others endure those conditions. If this is all true, then, the case for trading some potential and unlikely harms for known benefits increases. Not only because the stakes are higher, and therefore non-consequentialist theories would be more likely to accept some harms to create greater benefits, but also for epistemic reasons. While there is no hard evidence that animals suffer as a consequence of being deprived of reproduction and caring behaviour (it is only a reasoned assumption) there is plenty of evidence that animals suffer as a consequence of overpopulation, both for direct causes and indirect reasons.

Given that this is the case, it seems that the objection according to which it is impermissible to control the population of animals due to the harm it causes to them fails. It must be acknowledged that it most likely prohibits the use of the most painful methods of population control, such as traps and poison, especially in those many cases in which they are proven to be ineffective in reducing the populations of animals (see Senar et al., 2009). However, it is not successful in making it impermissible to use those methods of population control that do not cause harm, or that are likely to cause a small amount of harm, such as contraceptives.

#### **4. The Permissibility of Population Control Beyond Welfare**

The idea that population control may be impermissible because it harms animals, however, is not the only route that can be taken to argue that population control is problematic. Perhaps, what matters in making population control permissible or not is not the harm it causes, but

other factors, such as respect for rights or autonomy. To explain, consider an analogy with humans: most of us find forced population control in the case of humans, such as imposed sterilisation, to be impermissible, even if some overall assessment could show that its benefits outweigh the harms. This seems to be the case, precisely, because it violates people's reproductive autonomy (Overall, 1993). For this reason, researchers have been looking at ways of tackling the problems that may be associated with the rising population of humans in ways that respect their autonomy, such as providing education to women so that they can make their own decisions with regards to their reproduction (Sen, 1999), or making contraceptives more available and affordable (UNFPA, 2024). So, if forced contraception is impermissible in the case of humans because it violates their reproductive autonomy, it may also be the case for liminal animals, considering that there are duties towards them based on their autonomy, as I argued for in Chapter 2.

This is a powerful objection. In order to respond to it, consider how autonomy makes it impermissible to impose contraception on humans. To do that, recall the distinction I made in Chapter 2 between autonomy as a (1) capacity and autonomy as a (2) condition. The former refers to the cognitive capacities needed for an individual to make their own decisions, while the latter refers to whether contextual factors allow individuals to make such decisions. For example, many human adults have the (1) capacity to make their own decisions, but some of them, for instance, those who are in prison, are unable to (2) exercise it. In Chapter 2, I also used Beauchamp and Childress' (2013) autonomy model to argue that autonomy as a (1) capacity must be assessed in relation to different domains or choice situations. In the domain of reproductive behaviour, it is clear that most humans have the capacity to make autonomous decisions: people decide to use or not different methods of birth control, choose to have the number of children they want according to economic, environmental, or personal facts, decide on the moment of their life in which they want to have children, and in countries where it is allowed, they also decide whether or not to take the pregnancy to term. The fact that humans have the (1) capacity to make these decisions makes them *normatively authoritative* (Groll, 2012), meaning that there is a duty to respect those decisions. But reproductive autonomy does not only pose a duty to not impose forced population control on humans because they have the *capacity* to make such decisions, but because they value *intrinsically* the benefits that such reproductive autonomy gives them.<sup>36</sup>

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<sup>36</sup> If the discussion was about how reproductive autonomy makes forced population control impermissible because it is only *instrumentally valuable* (meaning it is valuable because it contributes to other things, such as well-being), then the discussion of whether it is permissible in the case of liminal animals would be the same as

That is, humans value in itself the ability to make their own choices about their reproduction, and therefore this grounds a duty to respect such choices by not imposing population control programmes on them.

As a starting point, then, it must be acknowledged that while liminal animals may have the *(I) capacity* to make autonomous decisions about certain aspects of their lives, such as where to live, or how to behave in different situations because their behaviour is not strictly determined by evolutionary mechanisms (as argued in Chapter 2), this is much less clear in the case of reproduction. This is the case for, at least, two reasons. Firstly, animal reproductive behaviour is deeply determined by environmental conditions. For example, when resources are abundant, animals tend to invest more in reproduction, while resource scarcity usually leads to lower reproductive rates (see Baron et al., 2012). This contrasts with human behaviour, who tend to reproduce *less* in contexts of abundance, and *more* in situations of resource scarcity (see Our World in Data, 2023), which suggests that decisions are not taken on the basis of evolutionary drives, but rather as a consequence of reflection and mediated by cultural factors. In contrast, animals' reproductive behaviour seems to be more inflexible, determined primarily by evolutionary pressures rather than autonomous decisions weighing different factors.

That said, one might object that animals can still express their *reproductive preferences*, which, even if deeply conditioned, should still be respected. Still, having preferences does not necessarily mean that they are *autonomous preferences*. In Chapter 2, I discussed being able to form preferences which departed from pure evolutionary mechanisms such as pleasure-seeking as one piece of evidence that many animals have the capacity to be autonomous. So, if the preferences that animals have in a certain domain are determined, or at least *greatly influenced* by evolutionary drives, this would mean that they do not have the capacity to be autonomous in that context. Just as I do not have the capacity to decide when I am hungry, since that preference is largely driven by evolutionary mechanisms aimed at energy preservation, animals may also not have the capacities needed to make autonomous decisions about their reproduction. If this is the case, their decisions would not be

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the one examined in the previous section. In it, I argued that liminal animal population control is permissible because its harms do not exceed its benefits.

*normatively authoritative*, meaning that they would not ground reasons to respect them. This, then, explains why population control is impermissible in humans, but not in most animals.<sup>37</sup>

One may, however, disagree with this view, and still believe that if liminal animals have the ability to make autonomous decisions regarding, for example, where to nest, they may also have the ability to decide with whom, when, and where to reproduce (see Siemieniec, 2025). But even if we accept that as true, it may be the case that animals do not value their reproductive autonomy *intrinsically*. If this is the case, then autonomy-based reasons, as shown in Chapter 2, would not trigger duties to respect such preferences. To explain, take the idea that humans value their reproductive autonomy intrinsically. This means that even if preventing them from reproducing would be overall better for their well-being (by, for example, improving their personal finances, sparing time for themselves, or reducing worries), they would still be made worse-off by having reproductive autonomy curtailed. That is, they value their reproductive choices intrinsically, independently of the contribution that such choices make to their well-being.<sup>38</sup> It is much less clear, however, that liminal animals value reproductive autonomy in this way. This, of course, is difficult to know, as we cannot access liminal animals' mental states to see if they intrinsically value making their own reproductive decisions, but there are a couple of reasons that suggest they might not. First of all, humans would clearly reject restrictions on their reproductive autonomy even if those would have a positive effect on their well-being. For example, a great part of the Chinese population was against the one-child policy, even if its justification had to do with improving the financial situation for the whole population (see White, 2010). But in the animals' case, there is no evidence showing that they are intrinsically affected by the loss of *choice* in itself. This is supported by the fact that humans are willing to sacrifice well-being in exchange for more reproductive autonomy, which is something animals have not been observed to do. Consider, for example, human couples who end fulfilling relationships because they do not share the same choice as their partner on whether or when to have children. In these cases, individuals appear to accept the loss in well-being that the relationship provides in order to preserve their reproductive choices. This, again, seems to be a clear indication that humans value their reproductive autonomy intrinsically, as they decide

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<sup>37</sup> In those cases in which animals are able to make autonomous decisions with regards to their reproduction, this argument would not be successful. Some animals, especially great apes, may have this capacity (see Kasperbauer, 2016).

<sup>38</sup> The intuition that this is the case can be tested by reading Dan Brown's *Inferno* (2013), in which a philanthropist intends to spread a painless infertility pathogen to benefit humans affected by the alleged risks of overpopulation.

to conserve it despite losses on well-being. Nothing comparable, however, seems to occur in animals. During population control programmes, for example, animals were not observed to behave in ways that lowered their well-being to restore their reproductive choices. In the case of pigeons subject to a population control programme, no evidence of mate switching, persistent wandering, or aggressive behaviour aimed at restoring fertility was observed (Heiderich et al., 2016). Similarly, in the case of fallow deer given contraceptive vaccines, they did not show increased behavioural efforts to mate more aggressively or disruptively (Darhower & Maher, 2008). These examples suggest that animals subject to population control do not typically behave in ways that imply an extra cost to their well-being, such as leaving pair bonds or increasing mate-searching behaviour in order to regain their reproductive choices. If this is the case, then, it provides yet another reason to consider that liminal animals do not value their reproductive autonomy intrinsically. If these arguments are sound, we would not have autonomy-based duties not to interfere with liminal animals' reproduction, which would defeat the objection presented above.

## **5. Would Population Control be Overall Bad for Animals?**

I have dealt with objections regarding whether it is permissible to control the populations of animals. In the next two sections, I will deal with objections that doubt that reducing the populations of animals would be good for them. This first objection says that reducing the populations of certain liminal animals may make some animals better off, but others worse off. This may be the case in, at least, two situations.

First, reducing the population of a certain species (say, rats) may provide others (mice) with more available resources if they live in the same environment. This is likely to make the population of the latter grow to carrying capacity, as a consequence of them being able to invest more energy into reproduction, making more mice suffer the effects of overpopulation. In other words, then, a situation like this may be a form of fulfilling our positive duties towards rats, but also a way of violating our negative duties towards mice. Second, it can also occur that by reducing the population size of a certain species, their offspring find more available resources due to less competition for food, so they again invest more in reproduction and grow up to carrying capacity again. In a case like this, one would only be fulfilling one's positive duties towards one generation, as the next generation will again have to endure the hardships of overpopulation.

There are a couple of things that can be said to respond to these objections. The first is that it is not clear that a reduction in the size of one population will necessarily imply an increase in the population of another population, even if they share the same environment. This is especially the case if populations do not share the same ecological niches (for example, if they eat different food). In cases like these, networks of interaction may be separate, and therefore, a reduction in one population may not affect the other. Second, it is also not clear that reducing the numbers of a population will cause an increase in the population of the same species in the next generation. The ecosystem dynamics tend to change after the reduction of the population and the new generation may not be able to reproduce to carrying capacity again for other reasons. For instance, the reduction might change predation structures, mating patterns, or the distribution of some food sources, which may prevent the population rebounding to its previous size (see Walter et al., 2017).

However, the objection still stands: even if this does not occur in all cases, it *could surely occur* that another population grows to carrying capacity after reducing the population of one species, or that the offspring of a reduced population reproduces to carrying capacity again as a result of having plenty of food and shelter. For these reasons, forms of population control that strive for long-term and successful assistance will need to be *general* and *continuous*. General programmes of population control refer to the control of all relevant species in a certain ecosystem that share ecological niches to avoid other species filling in the niche left by the controlled population. For example, rodent population control programmes that aim to fulfill our positive duties towards liminal animals in cities should not target either rats or mice, but both. This is already done in most cities, although through the use of very painful methods: traps and poisons are not only meant to kill rats, but also other small rodents. This, however, using painless methods, would be a way to realise our positive duty towards liminal animals without harming others in the process. However, if such *general* programmes are not technically feasible for some reason, localised population control programmes could still realise this duty towards certain animals by targeting populations that do not share the same ecological niche or where it is known that reducing the population size will not negatively affect other species.

By continuous programmes, I mean programmes that extend through time. It would not be consistent with the duty to help liminal animals to have a programme for a short period of time and then abandon it if by doing so the populations of animals will reach a state of

overpopulation again. Rather, if these programmes are meant to be effective in actively reducing populations and fulfilling our duties, they have to be continuous. This is, again, what happens with rodent control in urban areas. But there are other examples of continuous population control. An example is the case of the feral horses of Assateague Island, whose population is continuously controlled to protect their welfare and the land they inhabit (Donaldson & Kymlicka, 2016, pp. 232–235). Perhaps, however, the clearest example of a continued form of population control is that of cats and dogs. If we want fewer feral cats and dogs suffering from a lack of food and shelter on the street, then it is not possible to do a temporary programme or population control. Rather, what is needed is a continuous effort to manage their reproduction. The same seems to be the case for liminal animals.

It seems, then, that population control does not necessarily make it worse for other animals. If programmes are general and continuous, or if they target populations that do not share similar ecological niches, they will not necessarily increase the hardships for other non-targeted populations. Still, one may pose another objection: that population control does not help the animals targeted by it, but different ones.

## 6. Helping Non-Existing Individuals

There is an important objection that can be raised to my defence of population control as a form of assistance. Recall my definition of assistance in the Introduction of this thesis. In it, I argued that assistance implies improving the situation of individual animals, either by improving their well-being or their autonomy. In this sense, it is “person-affecting”:

*The person-affecting view:* an action or outcome can only be good (or bad) if they are good (or bad) for someone.<sup>39</sup>

If assistance is person-affecting, this means that forms of assistance need to improve the situation of individuals, and not merely increase total well-being. This is crucial. Imagine an intervention that, if applied to a certain population of animals, would increase the total well-being by increasing the population size but keeping the well-being of each animal intact. An intervention like this would not be a form of assistance in person-affecting terms, as it

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<sup>39</sup> Even if these views are called “person-affecting” they are not restricted to “persons” in the philosophical sense of the term, but rather to individuals in general capable of being made worse or better off.

would not improve the situation of individual animals, and therefore would not be a way of fulfilling our positive duties towards liminal animals.

Having clarified this, some may challenge the view that population control is a form of assistance. Population control will surely benefit those animals who live in populations whose numbers are reduced by sparing resources, but the main benefit of population control seems to be for animals who will be born in the future and who will not have to face extreme competition for resources and conflicts with humans. In this light, it is possible to challenge how this is a form of assistance in person-affecting terms: after all, by using population control, we are changing the identities of those who are being born. To explain, any form of population control has effects on the lives of animals, which changes their behaviour, including with whom they mate, when they get pregnant, and most notably, how often and how many offspring an animal has. So, animals that are born after the population control programme is implemented will be different individuals to the ones who would have been born if the programme had not been implemented. If this is the case, then, it is difficult to see how this situation was “good for someone”, as it would not have made anyone better off. It simply changed those who were going to exist. Undoubtedly, the new individuals will be better off than the ones who were going to be created if the programme was not carried out. However, it cannot be said that the implementation of the programme was “better for those who were born”, as their alternative was not being worse off, but simply not existing. This is what Derek Parfit (1986, pp. 351–379) called the “Non-Identity Problem”, and poses a problem to my view of population control as a form of assistance in person-affecting terms.

This objection can be partially met by saying that population control is a form of assistance towards those individuals who *do exist* at the time of the implementation of the programme and who benefit from reduced populations. However, this does not solve the Non-Identity Problem, as it does not apply to future individuals who would be benefitted from population control programmes. Philosophers have proposed various means to resolve this problem since it was first stated by Parfit (see Boonin, 2014; Roberts & Wasserman, 2009). Some avoid the problem by abandoning person-affecting views and accepting impersonal views (Campbell, 2021; Tännsjö, 1999). According to these views, actions can be good or bad, even if they are not good or bad for anyone in particular. So, an action that maximises overall well-being but does not increase the well-being of any particular individual could be considered good. However, it is not possible to use this proposal in order

to defend population control as a form of assistance. First, there is the important issue that I am accepting assistance as person-affecting. And second, population control as a form of assistance and an impersonal account of ethics may be incompatible. Population control reduces the number of individuals. By doing this, it may reduce total aggregate well-being, and hence, make the situation worse in impersonal terms. For those who accept an impersonal view of ethics, it may be better to have as many individuals as possible so that the aggregated sum of well-being is as high as possible, even if this leads to a situation where there are many individuals living barely good lives: what Parfit has called the “Repugnant Conclusion” (Parfit, 1986, pp. 381–390; Zuber et al., 2021). For this reason, a better solution is needed, that keeps the person affecting view, but that overcomes the Non-Identity Problem.

To find this solution, let us define more specifically the person-affecting view. This view, as I have defined it until now, has been more technically defined as the *Narrow Person-Affecting View*:

*The Narrow Person-Affecting View*: an action or an outcome ( $O_1$ ) cannot be better or worse than another action or outcome ( $O_2$ ) if there is no one for whom ( $O_1$ ) is better or worse than ( $O_2$ ) (Holtug 2004; 2009).

This is, precisely, the kind of person-affecting view that leads to the Non-Identity Problem and therefore does not allow for defending population control as a form of assistance. But besides leading to the Non-Identity Problem, which produces conclusions that most people find counterintuitive (such as that, for example, building a hospital may not be “good for someone” because the identities of people would change in the process of building it), the *Narrow Person-Affecting View* also leads to other counterintuitive conclusions that most people are not ready to accept. An example of this includes situations in which individuals (humans or animals) have lives not worth living, such as in cases in which someone is born with an untreatable painful disease that would cause their death shortly after being born. In cases like these, many of us will be tempted to say that it would have been preferable for these individuals not to have come into existence. But, again, such a claim is not compatible with accepting the *Narrow Person-Affecting View*. It cannot be said that not existing would have been *good for* these individuals, because by not having come into existence, there is no one for whom it would have been better. Again, this is extremely counterintuitive, and most of us tend to think that if a life is not worth living, it would have been preferable for the

individual never to have existed. It seems, then, that the *Narrow Person-Affecting View* is extremely counterintuitive.

For these reasons, authors have found an alternative to the *Narrow Person-Affecting View*:

*The Wide Person-Affecting View*: an action or outcome ( $O_1$ ) cannot be better than another action or outcome ( $O_2$ ) if there is no one for whom, were ( $O_1$ ) to obtain, ( $O_1$ ) would be better than ( $O_2$ ) and no one for whom, were ( $O_2$ ) to obtain, ( $O_2$ ) would be worse than ( $O_1$ ) (Holtug 2004, 2009).

According to this revised form of the person-affecting view, it is possible to make comparisons between individuals in different hypothetical situations. So, it is possible to compare how individuals would live in a world with a new hospital ( $O_1$ ) with other individuals in a world without a hospital ( $O_2$ ). If those individuals (even if they are different) are better in  $O_1$  than in  $O_2$ , then it could be said that  $O_1$  is better than  $O_2$ , because it is better for the individuals that would have existed in both situations. This reformulation of the person-affecting view neatly ties up intuitions held by most people, and allows us to say that, for example, building a hospital can be good for future individuals. Importantly, it also allows us to say that population control can be a form of assistance for liminal animals.

To see how this is the case, consider the following hypotheticals. In  $O_1$  a population control programme is introduced, while in  $O_2$  it is not. In  $O_1$ , then, the number of animals is reduced and as a consequence they have resources available, while in  $O_2$  animals live at carrying capacity, leading to deaths and low welfare levels as a consequence of overpopulation. The *Wide Person-Affecting View* allows us to compare the plight of these hypothetical and different animals, and say that considering that individuals in  $O_1$  are better off than in  $O_2$ ,  $O_1$  is better. As such, following this revised form of person-affecting views, it can be said that population control is a form of assistance towards those liminal animals for whom the situation is better than it otherwise would have been. These programmes assist liminal animals in the sense that the ones who are going to exist will be better off than those who would exist if the programmes were not implemented.

## 7. Conclusion

In this chapter, I have argued that population control can, under certain circumstances, be a form of assistance towards liminal animals. I began by examining the negative consequences of overpopulation for animals, including increased mortality, shortened lifespans, painful deaths, and increased disease transmission. Then, I argued that population control can address these issues by freeing up resources and improving animal health. Then, I dealt with several objections to this view. I began by analysing the objection according to which population control methods harm animals, which make their use impermissible. I addressed this objection by first showing that not all methods of population control are equally harmful, and that many of them are only potentially and minimally harmful. Secondly, I argued that even if some of these methods have the potential of harming animals, their use can still be justified by accepting that some harms can be traded by greater benefits and by acknowledging that not all evolutionary-driven behaviours, such as the interest in reproduction, need to be respected if they lead to harm to others. Then I addressed the objection according to which population control may be impermissible because it thwarts animals' reproductive autonomy, by arguing that many animals' reproductive decisions are not normatively authoritative, because many of them lack the capacity for reproductive autonomy and because they do not value their reproductive choices intrinsically. Then, I argued that population control programmes should be general and continuous if they want to fulfill our positive duty to assist liminal animals, in response to the view that said that these programmes would help some animals, but harm many others. Finally, I addressed concerns arising from the Non-Identity Problem, according to which it would be impossible to say that population control is *good for* animals. In response, I showed that the adoption of the *Wide Person-Affecting View* allows us to intuitively consider the welfare of individuals in different potential scenarios, making it consistent to say that population control is good for liminal animals,

Importantly, I am not defending the indiscriminate use of population control, nor am I arguing that all population control practices are justified. In fact, our current use of population control is often excessive and driven by anthropocentric goals. Animals are routinely poisoned and trapped not to help them, but to remove them as nuisances or to benefit conservation priorities defined solely in human terms. If the arguments made in this chapter are sound, they imply a shift in our priorities: population control should be assessed in terms of its capacity to assist animals themselves, rather than simply to serve human interests.

This reframing carries significant practical implications. Population control programmes, if they are to count as consistent forms of assistance, should be done after feasibility studies that assess their effectiveness in reducing populations, and using methods that do not harm animals, or that only do so minimally. They should also not be episodic or isolated interventions. Rather, they should become part of a long-term strategy of active and continuous management, what I have called general and continuous programmes: those that address the welfare of all animal populations that endure the challenges of overpopulation and that may be made worse by changes in populations of other species. This does not mean that there is no room for species-specific programmes, but these should assess that they do not make other animals worse-off. This approach, of course, will need sustained investment in scientific research, development of non-harmful technologies, and allocation of public resources. This, however, follows from the ethical and political positive duties that have been defended along this thesis.

## Chapter 8: Urban Planning and Liminal Animals

### 1. Introduction

We share cities and towns with many liminal animals. Pigeons, rodents, geese, seagulls, foxes, sparrows, and many others are seen and interacted with daily by people living in urban areas. Many of these animals are victims of urban planning decisions: that is, decisions concerning the shape and spaces of the city. Planning decisions can involve expansive works, such as clearing some land to build a new block, but can also involve minor changes in the structure of cities, such as painting a new zebra crossing. Liminal animals are harmed by these decisions in two ways: first, they are harmed by planning decisions that change the current state of an urban area. Urbanisation processes, for example, expel animals from their habitats. Similarly, refurbishments of existing buildings may destroy animals' nesting or resting sites (see Mosman et al., 2024). And secondly, liminal animals are harmed by the form that planning decisions take, which often ignore animals' presence and interests. For example, decisions to install overhead and exposed power lines instead of underground ones lead to animals crashing against or getting electrocuted by them (Bernardino et al., 2018), and decisions to build roads that cross animals' habitats lead to them getting run over by cars (Sáenz-de-Santa-María & Tellería, 2015). These harms, rather than being fortuitous, are the result of decisions that political actors take, that very often ignore the fact that liminal animals also live in the city they manage, that is, their interests are *excluded* from planning decisions.

While liminal animals are often also benefitted *by living* in urban areas, they are hardly benefitted *by planning decisions*. That is, liminal animals are benefited by conditions of cities that are accidental, in the sense that they are not taken with their interests in mind. For example food leftovers are thrown away outside and liminal animals eat them, buildings often have cavities they can use to nest, and parks are places in which they can find suitable places to rest, protected from cars. However, these are not planning decisions taken *for their benefit*, taking into account their interests and acting upon them, as it happens in the case of humans when institutions decide to, for example, install bike sharing services and safe bike lanes. Rather, they are spaces built for humans that accidentally have features that liminal animals can use.

It must be acknowledged, however, that many human interests are also absent in planning decisions, especially those racialised or belonging to low-income families, which leads to situations of injustice. This is the case when, for example, working-class neighbourhoods are absent of adequate public transportation (see Martens & Lucas, 2018). For this reason, several innovative political proposals to improve social justice within cities have been developed. Unfortunately, such proposals either completely ignore animals or only include them in the protection of nature or endangered species. This is evident in the United Nations's *New Urban Agenda* (2017), which outlines a vision of "cities for all." It describes this as the equal use and enjoyment of cities and human settlements, aiming to promote inclusivity and ensure that

all inhabitants, of present and future generations, without discrimination of any kind, are able to inhabit and produce just, safe, healthy, accessible, affordable, resilient and sustainable cities and human settlements to foster prosperity and quality of life for all. (p. 5)

Despite this broad language, the document makes no mention of animals living in cities. Similarly, the European Commission's *Green Paper on the Urban Environment* (1990) includes animals only when they have conservation value. The same is true of current UK planning regulations, which require risk assessments or permission to develop an area only if endangered species are affected, but there are no rules tackling harm caused by liminal animals with no conservation value in urbanisation processes (see Natural England, 2023; Natural England & Department for Environment, Food, and Rural Affairs, 2025).

While this may be expected in terms of policy, reflecting the general disregard for the interests of liminal animals, what is not is the scant attention given to animals in academic discussions on the ethics and politics of urban planning. Only Beatley & Bekoff (2013), Byrne (2010), Mancini et al. (2024), Palmer (2003), Pejcic (2024), and Yan (2025) have explored the status of animals in cities in the fields of ethics and political philosophy.<sup>40</sup> This chapter intends to contribute to this field, asking what it means for liminal animals' interests to be considered in urban planning decisions. This is especially relevant in light of the arguments put forward in Part 1 and 2. According to the theories discussed in those chapters, liminal animals are not only entitled to negative, but also to positive duties. If this is the case

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<sup>40</sup> It must be acknowledged, however, that this topic has not been neglected in other academic fields, such as geography and urbanism. See, for example, Acampora (2004), Barrett (2019), Emel et al. (2002), Sheikh et al. (2023), Shingne (2022), Shingne & Reese (2022), Wolch (2002) and Zask (2020).

in theory, then we necessarily need to find a way to realise these duties in practice. Urban planning decisions have great potential to both violate and fulfill these duties. They can violate liminal animals' negative duties, as discussed above, but it can also fulfill positive duties that may exist towards liminal animals by helping them live better in cities. Some of these positive entitlements often discussed with regards to humans and that would also be valuable for animals in urban contexts include having a suitable place to shelter oneself and protect from others, having access to services that treat one's injuries, or having adequate food to eat. Considering that urban planning has this double edge, being able to both harm and benefit animals, just as in the case of population control, it merits normative reflection.

To do so, this chapter explores the duties of those making planning decisions towards liminal animals, and proposes theoretical and practical ways to include their interests, both to avoid harming them and to benefit them. In this sense, this chapter departs slightly from the strict focus on positive duties that was characteristic of the rest of the thesis, and also deals with the negative entitlements that liminal animals have. The reason behind this is that urban planning is a practice in which benefits and burdens are shared by humans and animals alike. For example, building a hospital can be beneficial to humans but harmful to animals, just as building overpasses for animals may be beneficial for them while being harmful for humans (as the road may need to be closed during its construction). In this sense, the normative analysis of urban planning allows me to delve into one aspect that has been ignored along the thesis: that of conflicts between humans and liminal animals in the process of fulfilling their duties. For example, fulfilling the positive duty of liminal animals to have an adequate shelter may harm humans who do not want animals to be living in the cavities of the buildings in which they live. Similarly, as said before, fulfilling a human positive duty to health by building a hospital may harm, and therefore violate the negative duties of liminal animals. For this reason, this last chapter focuses both on the negative and positive duties of liminal animals, to examine how these can be balanced against the duties of humans and other non-liminal animals.

This chapter will be structured as follows. I start in Section 2 showing how the negative duty not to harm liminal animals can be realised in urban contexts. Specifically, I deal with contexts in which decisions not to harm animals necessarily imply harming humans. To overcome this situation, I propose a protocol to assess planning decisions that may violate the negative entitlements of liminal animals. In Section 3, I analyse how positive

duties towards liminal animals can be realised in the context of urban planning through the use of the normative framework of *livability*, which is often used in similar discussions about humans. Section 4, finally, discusses an objection directed at the idea that liminal animals' interests should be considered in planning decisions, based on that in order to include all liminal animals' interests in planning decisions, one would have to significantly make humans worse off.

## **2. Realising Negative Duties Towards Liminal Animals in Planning Decisions**

As I explained above, planning decisions harm liminal animals in multiple ways. Including their interests in planning decisions, if there is a negative duty towards them, then, will imply refraining from doing many of the things that cause them harm. For example, councils may decide not to urbanise an area during a certain season in which animals are present (see NatureScot, 2016), deterrents can be installed in tall buildings, power lines, and windows to make animals see these objects and avoid crashing against them (see Szondy, 2020, Urban Wildlife Trust, n.d.), and fences and other safety devices may be installed alongside roads to prevent animals from being run over by cars (see Huijser & McGowen, 2012).

In many cases, this will only come at a negligible cost to humans, and may even provide benefits to us. In order to illustrate this, take again the case of driving. Implementing measures to reduce collisions with liminal animals such as installing visual deterrents, adjusting lighting, or modifying speed limits not only protects animals from injury and death, but also benefits humans by minimising risks of collisions and reducing vehicle damage. However, in many cases, such win-win solutions will not be available. Many human practices harm animals, but the alternative to doing so is not to be better or neutral ourselves, but rather to abandon some of the practices we consider valuable. In these cases, we find ourselves in a conflict: our practices harm animals, but ceasing those practices would harm us. Consider, for example, the decision not to urbanise a certain area where liminal animals live. Refraining from building housing or a hospital in such areas can protect liminal animals from being harmed, but the cost of this decision for humans can be significant: it may mean increasing problems of housing availability, or put at risk humans who need to use the hospital. In this sense, the negative duty not to harm liminal animals will clash with the human positive duty to have suitable places to live or to health. Conflicts with liminal animals of this kind are not scarce, and in fact, the IUCN SSC (Species Survival Commission) Human Wildlife-Conflict and Coexistence Specialist Group argues that these kinds of conflicts are becoming more

frequent and widespread as a consequence of “human population growth, agricultural expansion, infrastructure development, climate change and other drivers of habitat loss” (IUCN, 2022). For these reasons, more and more liminal animals are present in urban areas, which can make these conflicts grow and escalate. If this is the case, then, not harming animals may be very difficult, at least in those cases in which doing so comes at a significant cost to humans. And it may mean, crucially, that it would not be possible to coexist with liminal animals in cities in ways that respect both their and us entitlement to duties.

This is a critical issue, that is, in fact, not specific to the issue of planning decisions, but that would apply to any practical application of the duties towards liminal animals defended in this thesis. Until now, the idea that humans may bear burdens due to the positive duties owed to animals has been absent from the discussion. In what follows, I aim to tackle this question by using the specific case of urban planning. To do so, recall the situation where we are at. Liminal animals are owed negative and positive duties. While I have not explicitly defended it, however, it is widely accepted that humans are also entitled to these kinds of duties. However, by definition, liminal animals and humans will coexist, and in many cases, it will not be possible to fulfill the duties towards one party without violating the duties owed to the other. In deeply entrenched conflicts like this, in which there is no win-win solution, then, some entitlements (of both parties) may have to be violated for the sake of respecting the entitlements of the other party. In a familiar, and less serious, case, for example, the positive entitlement to enjoying a night of party with friends may need to violate the negative entitlement of someone else not to be disturbed at night by loud music. The relevant normative question, in these cases, then, lies at *when those violations are justified*.

In contexts like these, in which policies are likely to harm multiple parties, *protocols* are often used. Protocols are practical guides, but normatively backed, that outline when policies that necessarily harm individuals are justified. Examples of protocols of this kind outside the realm of conflicts with liminal animals include *triage* and *environmental protocols*. The former includes cases in which medical teams are unable to help everyone (such as in pandemics), and therefore a decision-making protocol needs to be used to decide who is prioritised. These protocols, then, will outline when it is justified to deny treatment to some people in order to save others (see Soster et al., 2022). The case of the latter involves situations in which it must be decided whether policies that harm the environment are justified. An example of this is the European Union’s Habitats Directive, that mandates

avoiding harm to endangered species, but that has clear guidance allowing for exceptions if the policy serves an overriding public interest (Council Directive (EU) 92/43/EEC). In the rest of this section, then, I will develop a protocol to guide and justify decision-making in urban planning contexts in situations in which the negative duties towards liminal animals may not be possibly realised without infringing upon other duties owed to humans. After explaining the steps of the protocol, I will test it by applying it to a series of scenarios to see if it yields acceptable implications.

Take, then, a possible decision in the context of urban planning that may harm liminal animals for the benefit of humans. In such cases, if we are to respect the negative entitlements of liminal animals, decision-makers should begin by reflecting on the importance of the goal to achieve. From this, I am deriving *Step 1*:

*Step 1. An evaluation of the necessity of the goal:* any goal that an authority wants to pursue through a planning decision that may harm liminal animals must be evaluated in terms of whether it is necessary for humans. Here, I am understanding a policy goal to be necessary when it aims at fulfilling important duties. In this sense, not all goals in urban planning carry the same importance: some projects aiming to provide healthcare, education, or affordable housing may be considered necessary to fulfill important duties towards humans, while others, that may involve mere aesthetic changes or commercial expansion, would lack the necessity to justify harm to liminal animals.

After the goal of the policy is assessed, and an evaluation grants it as necessary, decision-makers should analyse whether the policy in question is necessary to achieve the proposed goal:

*Step 2. An assessment of the necessity of the policy to achieve the goal:* planners must examine whether there exist viable alternatives that achieve the same goal but that are less harmful for animals. For instance, a goal that aims at fulfilling housing rights may not necessarily involve a policy to build new houses, as, for example, abandoned houses could be used instead. If there are policies that achieve the same goal, but that do not harm liminal animals in the process, those harmless policies should be preferred.

There may be cases, however, in which the proposed policy, even if it harms animals, is the only means to achieve the necessary goal. In such case, the *form* of the policy must be then evaluated:

*Step 3. An assessment of the policy form:* even if the goal and the means are necessary, the form of the policy should be assessed. There are many aspects of policy design that may be discussed and potentially modified, including its location, the timing, its scale, or design. At this stage, planners must demonstrate that they have made an effort to mitigate all potential and foreseeable harm to animals. This includes undertaking risk assessments and feasibility studies that consider all alternatives to the policy form that may reduce harm to liminal animals. If appropriate measures exist but planners decide not to implement them, the project would not be justified. Following the previous housing example, then, planners must make sure that in refurbishing the abandoned houses they are not killing animals living in nearby trees, for example. It may also be the case, however, that in order to fulfill duties towards humans in providing them with appropriate housing, they need to clear some portion of land, because abandoned houses are not available. In this case, planners must make sure that they minimise harm to liminal animals living in such land they are going to clear and that, for example, trees are not cut in the middle of the nesting season.

In some cases, policies would reach this state, and planners would find themselves in a situation in which, according to *Steps 1-3*, the policy is justified, even if it harms animals, as the goal is necessary, as well as the policy in question and its form. In such cases, they must then consider the proportionality of the policy:

*Step 4. Assessment of the proportionality of the policy:* this fourth step involves an assessment of whether the policy, even once all harms have been minimised, remains proportionate. This involves comparing the interests at stake from the parties involved. For example, the liminal animals' interest in not being killed or made to suffer should be weighed against the harm that it would constitute to humans through not pursuing the policy. If the cost to humans is minor, but the harm to animals remains high, the policy would not be justified. Conversely, if the policy harms animals but not implementing it would significantly harm humans, and planners have taken liminal animals' interests into consideration, the policy may well be justified.

This is likely to be the trickiest step in the protocol, especially in those cases in which implementing a policy will likely significantly harm animals, and not implementing it will significantly harm humans. This can be the case in situations in which a hospital is really needed, such as in contexts of pandemics, but the only place in which the hospital can be built is in an environment on which several populations of liminal animals depend. In such

cases, a thorough assessment of the interests at stake, and how they relate to the duties owed to both parties should be carried out. Planning decisions like these, in any case, will harm someone. Either the humans by the project not being justified and implemented, or liminal animals by the project being justified and implemented. This, despite being unfortunate, is the consequence of living in shared communities in which individuals have intertwined and opposed interests. In situations like these, then, individuals harmed would be entitled to compensation.

*Step 5. Providing compensation:* finally, those harmed by the policy should be given compensation. In the case of animals, this may include relocating individuals, restoring or creating equivalent habitats, facilitating their translocation by offering food and shelter in another space, and providing veterinary care to affected animals.

This protocol, then, offers a framework for planners and decision-makers to evaluate the permissibility of urban planning policies that may harm animals while still *seriously considering their interests* in planning decisions. It aligns with principles taken from normative reflection regarding risk-assessments and conflict situations, such as proportionality, non-maleficence, and compensation (see Beauchamp & Childress, 2013; Hermerén, 2012; Simkulet, 2015), with current efforts to develop protocols to protect the environment and endangered species in planning contexts, (see Department of Housing, Local Government and Heritage, 2022; Hess et al., 2014), and with efforts to minimise conflicts with liminal animals in general (see IUCN, 2023), and applies them to the specific case of liminal animals. Its normative justification relies on the theoretical work carried out in the rest of the thesis, acknowledging the duties owed to liminal animals, but still weighing those duties against those owed to humans, as well as on several other normative theories, such as those dealing with safeguarding and fulfilling interests in contexts of conflicts (see Bovens & Fleurbaey, 2012; Calabresi & Bobbitt, 1978; Nussbaum, 2024, Chapter 8; Stocker, 1992), and those justifying compensation after the infliction of harm (see Menkel-Meadow, 2007; Pali et al., 2022).

While the protocol allows for the infliction of some harm to animals, it must be acknowledged that it also allows harm to humans to protect liminal animals. Fundamentally, the protocol implies that only those planning policies that are necessary, proportional, and that have taken all necessary steps to ensure that harm to liminal animals is minimised would be permissible. This will render many planning decisions that humans may want to make

impermissible, including, for example, urbanising new areas to build shopping malls, or building new roads to save only minimal commuter time. In addition, the protocol will make planning policies more costly: they will need to include certain assessments before its ratification; deterrents and other harm-minimisation devices during its implementation; and after they are implemented, the affected liminal animals will need to be compensated for any harms.

To increase the validity of the protocol, in what follows, I will show how it can be applied to three different cases. If the protocol brings conclusions we find acceptable in light of the entitlements of both liminal animals and humans, its normative force will be improved.

Consider first a case in which the goal of a potential planning decision, when one takes into account the harms it causes to animals, is unjustified. In recent years, the Catalan and Spanish governments have been discussing the expansion of the Barcelona airport, as a way of improving international connections, competing better with other airports, and favouring the tourism industry. The necessity of the goal, as per *Step 1*, then, must be evaluated in light of the harms that it would cause to animals: the expansion would destroy part of Llobregat Delta's protected Natura 2000 sites, including La Ricarda wetlands, critical habitats for flamingos, turtles, and over 1,000 plant and bird species. Precisely for these reasons, environmental activists are engaging in ongoing protests against the expansion (Garfella, 2025). In a case like this, this planning decision would not pass *Step 1* of the protocol, as the goal is not necessary, meaning that it does not intend to fulfill important duties towards humans. Hence, it would not be justified to carry on with the expansion of the airport in light of its necessary violation of the negative entitlements of liminal animals.

Secondly, consider the case of a planning goal that may be regarded as justified, but in which the specific policy that aims to fulfill that goal is impermissible. A good example of this is the proposed building of the California Northstate University hospital in Elk Grove, California. The goal of the project can be justified, as it serves an important duty to provide human health and emergency care (State of California, 2020), which would satisfy *Step 1*. However, the specific policy proposed to fulfill this duty, namely building an 11–12 storey glass-covered hospital directly adjacent to Stone Lakes National Wildlife Refuge would foreseeably harm many liminal animals, including sandhill cranes, Swainson's hawks, burrowing owls, and geese, who regularly roost, forage, and commute between the refuge and

the urban environment (Environmental Council of Sacramento, 2021; Sacramento Audubon Society, 2021). The reflective glasses would pose high risks of bird collisions, the helipad and associated noise would cause severe disturbance, and 24-hour lighting risk would disrupt circadian rhythms and navigation. Considering that there are alternative sites for building the hospital within Elk Grove that would not risk harming liminal animals, the policy to achieve the goal would not be considered necessary, which would not satisfy *Step 2*, making the project unjustified.

Finally, consider a policy that harms liminal animals, but that it is nonetheless justified by the protocol. This can be illustrated by the case of tree pruning or tree removal in urban areas, as done in many cities to improve pedestrian safety and accessibility for people with reduced mobility. In a case like these, *Step 1* would be satisfied, as the *goal* is to fulfill the duty to protect human safety and accessibility. Yet the *policy* of trimming or removing trees may harm liminal animals who use those trees for nesting, hiding from predators, or as sources of food. Despite these harms, policies like this may still be justified. To be justified, planners would need to, first, ensure that there are no alternatives to the policy to improve human safety and accessibility. If this is the case, the policy would satisfy *Step 2*. Planners would also need to minimise harm to animals by, for example, ensuring that the works are carried out outside the nesting season, and making sure workers check that no birds are present in the trees before removing them. If this is done, the policy will then satisfy *Step 3*. Planners would also need to ensure that the policy is proportional (*Step 4*), meaning that the benefits to pruning and removing trees exceed the harms caused to animals after they were minimised. And finally, should all these conditions be satisfied and the action justified, they would need to follow *Step 5* and compensate those animals who were harmed in the process by, for example, planting more trees somewhere else, or providing veterinary care to birds affected by the policy. In a case like this, while animals may be harmed, their interests are still seriously considered in the policy process and weighed against the interests of other individuals with whom they share the city.

The application of the protocol to these cases, and its implications, all seem to resemble situations of planning conflicts among humans we find acceptable (such as when some areas that people use for transportation are transformed into leisure parks). As we can see, in many cases, the interests of liminal animals will prevail and their negative entitlements will be fully protected. In others, they may have to accept some harms to prevent other

justified harms to humans. However, even in these latter cases, these animals' interests would have still been considered in planning decisions, aligning with what we owe them in light of their moral and political status. This protocol, however, only reflects how liminal animals' *negative* entitlements should be protected in planning decisions. But it does not tell us how planning decisions can be a form of fulfilling our *positive* duties towards them. The next section will discuss this topic.

### **3. Fulfilling Positive Duties Towards Liminal Animals in Planning Decisions**

Urban planning decisions, beyond harming (or not harming) liminal animals, can also benefit them, serving as a way of fulfilling the positive duties this thesis has claimed they are owed. The fact that planning decisions can do this is very obvious in the case of humans. Decisions that include building hospitals, schools, leisure centers, and other public services are usually taken to improve the lives of human members of the community. They are examples of the kind of public provision through planning that satisfies the positive duties humans are owed. In urban planning theory, these kinds of practices have often been framed as improving the *livability* of a city. The idea of livability gained attention in urban theory in the 1970s (Brown, 1975) and has since been widely discussed in the field (Ahmed et al., 2019; Harvey & Aultman-Hall, 2016). Very simply defined, the concept of livability refers to the extent to which a place is *good to live*. Different authors have defined it differently. Some of them link it to a place maintaining and enhancing people's quality of life while others define it in reference to a set of *factors of livability*, such as access to housing, jobs, health, transportation, medical services, or education (see Appleyard et al., 2014, Table 1). In this sense, those for whom the city is made more livable are being benefitted by planning decisions that directly further their interests. Despite the relevance of the concept of livability in urban theory, it has not yet been applied to animals. In what follows, I will explore whether liminal animals fit within the theoretical insights developed by the authors in the field, and if so, what it would mean to make cities more livable for them. This would be a way of satisfying our positive duties towards them.

The framework of livability is not a single set of principles. Rather, it has been used and defined in many ways by different institutions, organisations, and scholars, which makes it difficult to identify what it consists of exactly. Some of the examples of uses of livability in policy are, for example, the 1998 Clinton-Gore Livability Agenda, the 2012 US's Department of Transportation TIGER Program for Livability and Sustainability, or the 2013 Singaporean

Principles for Livable High-Density Cities (see Appleyard et al., 2014, Table 1). In this context of a variety of definitions and interpretations, Bruce Appleyard and colleagues (2014) have developed a set of principles of livability, drawing from an extensive literature review, that maps most of the principles of livability published by different scholars and institutions. The main advantage of this set of principles is that they condense the ideas proposed by different authors in defining what *livability principles* consists of into just four:

1. Promote thriving, not just surviving
2. Choose accessibility and exchanges over mobility and speed
3. Restore choices lost to forced adaptation
4. Value the needs of society's most vulnerable

These four principles not only *define* what a livable city consists of (more on this below), but they are also framed *normatively*, in the sense that they propose guiding criteria to make cities more livable. These principles have, however, been developed for their application to humans. In the rest of this section, I will argue that liminal animals fit into these principles, meaning that they *could* be applied to them, and that doing so, through different actions, would be a suitable way of fulfilling our positive duties towards them.

Consider, then, the first principle: “1. Promote thriving, not just surviving”. The authors of the principles claim that livability should not simply be about planning policies protecting people’s survival, but also about promoting “joy, happiness, community pride, spiritual uplift, self-actualization, comfort, rest, rejuvenation, and so forth” (p. 68). This would imply that planning decisions that intend to make cities more livable should not only, for example, provide safe walking routes for pedestrians, but also ensure that pedestrians have places to walk in that directly improve their life, such as parks. In the case of liminal animals, they can also thrive, and can experience most of the components of livability mentioned above. That is, they can have a well-being of their own and therefore have it increased and decreased depending on external conditions imposed by the city (see White et al., 2024, pp. 5–8). Applying this principle to animals would entail that cities should not only allow for the existence and survival of animals, but that they should also make sure that they live as well as possible, other things being equal. So, for example, a livable city is not only one that allows animals to find shelter in gaps in buildings but also one that builds dedicated

spaces for them to live, such as dovecotes, birdhouses, or shelters for urban cat colonies. The latter is something that is already being done in many cities by local councils. In managing these colonies, these councils can choose to benefit the stray cats by promoting their thriving by providing them with the resources and care they need. An example of this is the way in which cat colonies are managed in Rome. These feral cats are protected by Italian law, recognising the obligation to care for their well-being and life, and giving them the right to settle in a territory. Volunteers who care for these cats are encouraged to register cat colonies, for which they receive institutional support such as reimbursements for Trap-Neuter-Return programmes, funding to buy food, and dedicated storage space (Caponi, n.d.). In doing this, Rome's council is ensuring that cats can not only survive, but also live well. They are making the city more livable for them.

Take now the second principle; “2. Choose accessibility and exchanges over mobility and speed”. This principle incorporates two claims. First, the idea that for a place to be livable, it must allow individuals to live well in a certain place, rather than being forced to move constantly searching for opportunities. The core of the principle, then, is about having the kind of services individuals need nearby, allowing them to make use of them efficiently. This is relevant for terrestrial animals, who usually have to leave their habitats due to human development plans or resource scarcity, and have to navigate the city searching for the resources they need. An example of this is the case of urban red foxes in many UK cities. Foxes have adapted to urban life, but their survival often depends on risky behaviours such as crossing roads, scavenging in bins, and moving between fragmented green spaces (see Kimmig, 2021). A city designed for livability for urban foxes, then, would reduce the need for them to travel long distances or through dangerous zones by ensuring that their basic needs, such as suitable habitat, shelter, and food sources, are met within safer urban habitats. This could involve, for example, maintaining green corridors and reducing practices that promote risky scavenging behaviours, such as the need to cross roads or to eat inappropriate food. Applying this part of this principle of livability to liminal animals would be a way to fulfil our positive duties towards them through planning decisions by improving their chances of finding food and travelling choices. The second idea conveyed by the principle, however, seems even more relevant for liminal animals. This is the idea that, according to the authors, accessibility should take priority over road traffic. More than 570 million animals are killed every year on the roads of Europe and the U.S. (Grilo et al., 2020; Seiler & Helldin, 2006). As such, many cities and surrounding areas are not livable spaces for animals, whose

movement is constrained by roads and who are put in danger every time they need to cross. Ways of benefiting them to make cities more livable in this context can take many forms, but road crossings are one of the best examples. These pieces of infrastructure allow animals to cross roads without the risk of being run over. Many of these are installed in urban zones (Zellmer & Goto, 2022). An example of these are the squirrel bridges in the city of Longview, WA, in the U.S. These bridges, which were originally installed when neighbours were concerned about the number of squirrels killed by cars, allow them to safely move from one place abundant in nuts to another (Longview, n.d.). While there are no studies on the effect of the bridges in Longview, a test of a similar bridge in Otsuki, Japan, showed that squirrels used the bridge to cross the road, and no collisions with cars were observed during the 32 days that the study lasted (Komatsu et al., 2019). These bridges do not necessarily imply *choosing accessibility over mobility and space*, but they make both compatible, benefiting animals while maintaining human practices. In this sense, they are a way to use planning decisions to directly benefit liminal animals, and therefore to fulfill our positive duties towards them.

Take now the third principle: “3. Restore choices lost to forced adaptation”, which implies that “stewards must be able to observe, uncover, and present to constituents ways in which they may be affected by, and may be retreating from, poor environmental conditions that hinder thriving livability” (p. 68). The authors illustrate this principle by showing how increases in traffic disrupt human social networks, and how a livable city is one that allows individuals to recover the social choices they had before traffic was increased. The idea, then, is that livable cities are those in which people recover choices they would have had if they were not reduced by the conditions imposed by the city. This relates to Chapter 2, in which I dealt with the autonomy-based duty of enriching the choices of liminal animals. This third principle of livability follows a similar structure: it claims that individuals should recover the choices they lost as a result of living in cities. Many animals lose some of their preferred choices when they live in urban areas, such as the ability to move freely, to have suitable spaces to nest, or to live in an adequate environment. Following the authors’ recommendations on how to implement this principle, restoring animal choices means that we should “observe and uncover” (Appleyard et al., 2014, p. 68) the ways in which they are affected by cities, and try to restore their lost choices. An example of how this could be done is by evaluating the welfare of animals in and around cities, analysing the factors that lead to a welfare reduction, and then acting on the results of the analyses to help animals recover the

kind of behaviour that is good for them.<sup>41</sup> This is illustrated by the negative effects of artificial lighting on the choices and well-being of animals and solutions to address them. Artificial lights affect the sleeping patterns of suburban great tits (Raap et al., 2015) and lead to increased parasite presence and inflammation in dark-eyed juncos (Becker et al., 2020). This is not only likely to have an impact on the well-being of these animals (Animal Ethics, 2021) but also implies that they have lost some of their choices, such as the choice to sleep at night. However, for reasons that have to do with human safety, councils cannot afford to simply get rid of artificial lighting. Luckily, there are solutions short of eliminating light at night, such as reducing the duration of the lighting, by, for example, using sensors that detect human presence; minimising light trespass, that is, focusing the light only where it is really needed; and altering light spectrum, using, for example, LEDs with lower blue light content (Gaston et al., 2012; Perez Vega, 2024). Measures like these are already being implemented in different areas, such as the red lighting installed in Nieuwkoop in the Netherlands to protect bats (Peters, 2018) or the amber lights used in Ocean Isle Beach to protect newborn turtles from being disoriented (WECT, 2024). In this way, animals can be benefited by having their choices restored as a consequence of urbanisation.

Finally, the fourth principle: “4. Value the needs of society’s most vulnerable” claims that “extra effort should be made to address the needs of society’s most vulnerable: the poor, the young, the elderly, and those with disabilities” (Appleyard et al., 2014, p. 68). I will not deal with whether animals are the *most* vulnerable members of society. But certainly, many of them are vulnerable if we define vulnerability as being susceptible to being harmed (Deckha, 2015; Faria, 2023; Mackenzie et al., 2014; Martin, 2023). As I have shown throughout the thesis, urban animals are susceptible to things like being poisoned, trapped, run over by vehicles, having their habitats destroyed, crashing against windows and tall buildings, and dying of starvation and disease. If a city is to be made more livable by paying attention to those individuals who are more susceptible to harm, then it seems that it should also pay attention to liminal animals, whose vulnerability is not only exacerbated by the conditions of the city, but in most cases, it is completely legal and socially accepted. Take, then, what can be done for the most vulnerable urban animals: those sick, injured, or orphaned. A good example of work to help them is carried out by the New York City charity Urban Utopia Wildlife Rehabilitation, which supports organisations that care for those vulnerable animals

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<sup>41</sup> Work like this is usually carried out by Wild Animal Initiative (n.d.).

that need specialist treatment (UUWR, n.d.). Most of the organisations they support will pick up these animals from the streets, try to rehabilitate them, and ideally release them back to their environment. If they cannot do that, they will redirect them to a sanctuary where they will be cared for for life. Councils that devote resources to these kinds of rehabilitation centres show that they can make cities more livable for vulnerable animals, fulfilling our positive duties towards them.

Liminal animals, then, can fit into the four principles of livability proposed by Appleyard et al. (2014). This not only means that their neglectedness in planning agendas is theoretically unjustified, but also that the positive duties they are owed can be realised through planning decisions, by examining how to make cities more livable for them. Following this, it would be possible for councils or animal welfare organisations to develop a livability agenda for liminal animals, such as certain institutions have developed similar instruments for humans. A tool like this would make it easier for institutions to follow a set of guidelines to improve the lives of liminal animals through planning decisions, and therefore, to meet our positive duties towards them. Proposals like this, however, due to the burdens they will place on humans, are likely to meet the opposition of objectors. In the next section, I address a way of framing this objection, according to which including animals' interests in planning decisions would place a burden *too high* on humans.

#### **4. The Demandingness of Including Liminal Animals' Interests in Planning Decisions**

Some people may object to the idea that liminal animals' interests should be seriously considered in planning decisions because in doing so, our political institutions would place a burden on humans that would be considered too high. This would be the case if, for example, in order to not harm liminal animals or to benefit them through planning decisions, humans would be made disadvantaged, or more than they already are. This objection claims, then, that making planning institutions care about liminal animals would take resources away from human groups to give them to animals, which would seriously harm the former.

This objection, however, is not exclusive to liminal animals in urban contexts. Rather, it is generalisable to any proposal to extend our moral and political consideration to other animals beyond humans. If animals matter, and human resources are finite, then, it may seem that *most* of our resources should have to be directed at animals, either because they are more

numerous, or because they are often worse off than humans. This is what Peter Vallentyne (2005) referred to as the *Problematic Conclusion*. In the context of urban planning, this objection would say something similar: that most resources put into planning for humans should be directed at liminal animals, and that most of our planning decisions should be made to avoid harming and benefiting animals. That is, that most of our planning decisions should be directed towards fulfilling our duties towards liminal animals. Most people would consider that this would place a burden too high on humans, and that therefore, this would give us reasons to reject the idea that urban planning should take liminal animals' interests into account.

The clearest response that can be given to the *Problematic conclusion* is to bite the bullet, and accept that if liminal animals are to be included in planning decisions, many resources would have to be directed at them, which would impose big burdens on humans. However, this bullet may be much less hard to bite than it might appear at first. While it is true that including animals in planning decisions may require devoting resources to them, this is not unique to this case. Any expansion of moral and political consideration to new groups leads to new claims by new individuals that must be addressed. This has been the case throughout history: recognising the moral status of women, racialised communities, people with disabilities, and domestic animals requires an effort from those who do not directly suffer the consequences of the exclusion. And in these cases, most people have not found it objectionable. The issue, then, would be to see whether these inclusions lead to situations that are burdensome to the point they block inclusion of these communities, or if it is simply a consequence of recognising the ethical and political duties we have towards those individuals. If one accepts the arguments made throughout the thesis, then, and accept that negative and positive duties also apply to liminal animals, it follows that their interests must factor into decisions that concern them. Once this is accepted, then, their interests must be accommodated along with the interests of others in ways that compromise individuals' interests as little as possible. In the case of liminal animals, this does not mean prioritising them over all human needs, but acknowledging and accepting that inclusion of their interests may entail thwarting some human interests, as it was demonstrated by the protocol above. The *Problematic Conclusion*, then, is only problematic if we assume that only humans are entitled to all decision-making and benefit in cities, which is something I have argued against throughout the thesis.

One could claim, however, that the problem also lies on the fact that liminal animals are too numerous, which will make the amount of duties to fulfill too demanding, by trumping any decision that could be taken for humans. It must be acknowledged, however, how the available planning decisions that help animals are currently able to help *many* liminal animals at the same time. Green corridors, that allow animals to move from one place of the city to another safely fulfill the duties of many animals with an interest in mobility. Overpasses over busy roads satisfy the interests of all those animals who want to cross the road. Safe windows with deterrents to avoid animals crashing into them help all those animals who want to avoid crashing against windows and getting fatally injured. And rescue centers, if properly staffed, would be able to care for and rehabilitate many animals. This effectiveness of our way of fulfilling our duties can be complemented by the implementation of population control programmes, as I have argued in Chapter 7. By doing this, one would not only be benefiting liminal animals directly by sparing them from deaths by starvation, competition, and disease, but it would also make it easier for us to fulfill our duties towards liminal animals by virtue of them being less numerous. This means, then, that the fact that liminal animals are more numerous do not necessarily entail that their interests would trump the interests of humans, as by doing little, we can help *many* liminal animals (see Casal, n.d.).

It must also be acknowledged that the view that including animals' interests in planning decisions would significantly harm humans goes against the results observed in many planning interventions. One of the reasons for this is that the well-being and health of animals and humans are interlinked, and affecting one (positively or negatively) is likely to affect the other (Atlas & Maloy, 2014; Sebo, 2022). Two of the most prominent examples of this are the following. Consider, first, interventions to include animals' interests in planning decisions by creating or managing spaces in which they can live, such as parks, protected habitats, or the use of green infrastructure. Parks can be peacefully shared by animals and humans, as is already done in most cities. The protection of urban green habitats, besides providing animals with places to live, is also likely to help humans fight against climate change by sequestering carbon and reducing inland and coastal flooding, water pollution, and mitigating urban heat island effect, as well as reducing noise and improving air quality (White et al., 2024, pp. 21–23). *Green infrastructure* has also been shown to help animals and humans alike. Green infrastructure refers to the incorporation of natural elements into urban construction, with the aim of making cities more sustainable. It includes actions like installing buildings with rainwater collectors, green gardens, and bioswales. Green

infrastructure has been defended as a way of including animal interests' in planning decisions, benefiting them by providing food, shelter, suitable habitats, protection from predators, and refuges for nesting (see Filazzola et al., 2019; Hunold, 2019; White et al., 2024). The positive effects of green infrastructure on humans have been widely studied and demonstrated. There is evidence of the impact of green infrastructure on physical health and reduced mortality, caused by factors like the ease of accessing parks in order to exercise, the ability to relax faster, or breathing less polluted air (Kumar, 2019; Mitchell & Popham, 2008; Nieuwenhuijsen, 2021; Tzoulas et al., 2007). There is also extensive evidence demonstrating the positive effect of green infrastructure on mental health and well-being in general, by, among other things, reducing stress and emotional states associated with depression, and increasing attention and cognitive capacities (Carrus et al., 2017; Couts & Hahn, 2015; McKinney & VerBerkmoes, 2020; Suppakittpaisarn et al., 2017).

The clearest case of a type of urban planning decision that benefits animals and humans alike, however, are road traffic interventions and restrictions. It has been shown that speed reduction, temporary road closures, and crossings reduce animals' mortality and improve their ability to access resources and social groups (Glista et al., 2009; Mccollister & Van Manen, 2010; Visintin et al., 2018). This is also straightforwardly beneficial for those drivers who do not collide with the animals. Researchers estimate the number of collisions with vertebrates per year, solely in the US, to 350 million, resulting in 26,000 human injuries and 200 human fatalities, incurring a cost of \$8 billion for humans (Ament et al., 2021; Seiler & Helldin, 2006). Similarly, traffic restriction and calming policies are also beneficial for non-drivers, reducing collisions with pedestrians, cyclists, and children (Batomen et al., 2024; Jones et al., 2005).

It seems, then, that the objection claiming that including liminal animals in urban planning would place an unacceptably high burden on humans does not hold. As I have shown, this objection fails for two reasons. First, the *Problematic Conclusion* can be mitigated by recognising that fulfilling our duties to liminal animals does place burden on humans, such as any inclusion of traditionally excluded communities in our moral and political schemes, but that our ways of realising these duties may not be as demanding as the objection claims, as many planning measures that help animals, such as green corridors, safe crossings, or rescue centers, benefit large numbers of liminal animals at the same time. Second, many of the ways in which we can help animals *also* help humans. Green

infrastructure, protected habitats, and parks enhance air quality, reduce noise, mitigate flooding and heat islands, and promote physical and mental health. Road traffic measures that prevent animal collisions also reduce human injuries, fatalities, and economic costs. In short, including liminal animals in planning does not necessarily demand excessive sacrifices from humans and can even generate mutual benefits. Rather than being a too-demanding-burden, considering their interests is a feasible and normatively necessary extension planning to liminal animals, and a way of fulfilling our duties towards them.

## 5. Conclusion

In this chapter, I have argued that planning can be a suitable way of realising our duties towards liminal animals. To do so, I explored the practical implications of including liminal animals' interests in planning decisions. First, I developed and tested a protocol for planning decisions for cases in which human and liminal animals' interests clash. Second, I argued that planning can also serve as a way to benefit animals, fulfilling our positive duties towards them. I did this by drawing on the framework of livability developed by Appleyard et al. (2014), and showing that it allows us to discover ways in which cities can be made more livable for liminal animals.

Finally, I responded to a key objection: that including animals would significantly harm humans by placing a demanding burden on us to satisfy their interests. In response, I claimed that if we are to take seriously the ethical and political duties owed to liminal animals, they cannot be excluded from planning decisions. If this is the case, the implications of this are expansive and demanding, but they are required by the arguments provided in the rest of the thesis. I also showed that these policies may not be as demanding as implied by the objection, both because we have very effective ways to help many liminal animals at the same time and because many ways of helping animals also help humans.

With this chapter, I hope to have set the first steps for other authors to combine research into our duties towards liminal animals, and what they are owed, explicitly, in urban contexts. As I have shown, cities, both in its construction and due to the way they are designed, harm animals who live in them significantly. Despite this being visible for many of us, when we encounter dead animals on the side of the road, when we see (or hear) them crashing against a window, or when we notice that certain environments in which animals live are being developed, this topic is still heavily underexplored. This chapter aims to

contribute to the study of this topic, not only by claiming that liminal animals' interests should be considered in planning decisions, but also by showing *how* this can be done from a normative perspective, both in the context of respecting their negative entitlements, and in the context of fulfilling our positive duties towards them.

## Conclusion

In the previous eight chapters, I have argued that liminal animals not only have negative entitlements that impose on humans a duty not to harm them, but that we also have positive duties to help them lead better lives.

In Part 1, which I devoted to ethical theories, I started by, in Chapter 1, arguing that consequentialist theories lead to the view that there are strong positive duties towards liminal animals, based on the idea that we can act to improve their lives. In Chapter 2, I reached the same conclusion by appealing to autonomy-based theories, that derive duties from the idea that autonomy has intrinsic value. In it, I argued that considering autonomy as intrinsically valuable not only grounds a duty to respect liminal animals' decisions, but also to improve the number and quality of their choices. In Chapter 3, I argued that these positive duties could also be derived from relational theories, according to which positive duties are only owed to individuals with whom one has morally relevant relationships. In it, I showed that we are related to liminal animals in four different ways that authors consider morally relevant.

Then, in Part 2, devoted to principles of political inclusion, I dealt with three of these principles to argue that liminal animals should be considered full members of our political communities, which would grant them an entitlement to access public benefits. I started in Chapter 4 by showing that the All-Affected Interests Principle is morally relevant to delineate full membership claims, and showed that liminal animals have their morally relevant interests affected by political decisions, which grounds a duty to include them as the kind of members who are owed public provision. In Chapter 5, I argued that the All-Subjected Principle is also relevant to determine which individuals should be considered full members, and then showed that liminal animals are subjected, both in the sense of being bound by laws and of being coerced by a political authority, which would lead to the same conclusion: they would be entitled to full membership, and public benefits should be given to them. Finally, in Chapter 6, I dealt with the Social Membership Principle, and used Donaldson & Kymlicka's interpretation to argue that liminal animals are members of society, and therefore they should be entitled to extensive forms of public provision, either following an extended denizenship model, or as citizens.

Finally, in Part 3, I discussed practices. In it, I examined the practical implications of the duties arising from the previous two parts. I started by arguing, in Chapter 7, that

population control, provided that it uses painless, effective, general, and continued methods, can be a form of realising our duties towards liminal animals by sparing them from the hardships of overpopulation. Then, I devoted Chapter 8 to an examination of our duties towards liminal animals in urban planning contexts. In it, I argued that liminal animals' interests should be considered in planning decisions, and claimed that the practical implications of this idea entail that we should ensure that harm to animals in planning processes is eliminated or minimised (through the development of a protocol), and that urban planners have a positive obligation to benefit animals by making cities more livable for them.

This thesis has contributed to the field of animal ethics and animal politics in several ways. First, it has expanded the work on our obligations towards liminal animals, a subset of animals commonly overlooked in normative discussions, by examining the specific duties that would be owed to them and how these duties can be realised in practice. As such, it can serve as a basis for future investigation, both contributing to my research questions, and drawing on the arguments I developed. Authors reading this work are encouraged to critique my arguments or build theirs upon mine, enriching the amount of work examining what we owe liminal animals.

Secondly, through using an ecumenical method, it has contributed to the set of arguments that defend the existence of positive duties towards non-domesticated animals, and has done so using innovative approaches, such as relational and autonomy-based approaches, that were traditionally used to argue for the contrary view. This is valuable due to the fact that the academic field examining positive duties towards non-domestic animals is overpopulated by arguments relying on consequentialist theory. This can lead many people to disagree with the conclusions of the arguments not because of the conclusions themselves, but because of their normative foundations. My contribution, in this sense, lies in having reached similar conclusions from a variety of theories, showing that the idea that there are positive duties towards non-domestic animals (in this case, liminal animals) does not require accepting a certain normative view, but rather follows from a variety of them.

Thirdly, this thesis has enriched the field of animal politics in several ways. First, it has shown that a variety of principles of political inclusion can lead to conclusions about liminal animals' full membership, and not only about demos membership. Other authors are now encouraged to explore further the implications of these principles for liminal animals, as well as the application of other principles of political inclusion to liminal animals. Secondly,

it has also made the connection between the membership status of liminal animals and the entitlements they would be owed by showing how full membership status can be used as a proxy for positive duties. Thirdly, and specifically within the Social Membership Principle, it has expanded Donaldson & Kymlicka's (2011) theory, by exploring the implications of the denizenship model for animals, and by contradicting it by arguing that liminal animals can also be considered citizens.

Fourthly, this thesis has developed practical discussions on topics that were largely unexplored, such as the idea that population control can be used for purposes that directly benefit animals, and that urban planning can and should avoid harming animals, and instead benefit them through specific planning interventions. Specifically, Chapter 7 contributes to the field of animal ethics and politics by examining the suitability and permissibility of using contraceptives to improve the lives of animals, both by providing interdisciplinary arguments showing that this is possible, and by meeting normative objections. In doing so, it matches recent approaches defending practical ideas to improve the lives of non-domestic animals (see Fischer, 2022; Horta & Terán, 2023; Keulartz, 2016; Murado Carballo, 2025; Palmer, 2021), but examines and proposes a novel and promising one.

Similarly, the interdisciplinarity of Chapter 8 contributes both to normative reflection on our duties towards animals and to adjacent fields, such as urban planning, geography, or architecture. It does so by showing that there are specific ways of realising liminal animals' duties in urban contexts. The protocol it develops is the first of its kind, as so far no one had developed a practical but normatively informed guide facilitating the discussion of the permissibility of planning decisions that harm liminal animals. In a similar fashion, it also applies the widely used framework of livability to liminal animals, showing its normative implications for them. It also highlights some of the problems that scholars will encounter in the future when dealing with these topics, such as those that have to do with accommodating the potential conflictive interests of different parties, and the demandingness of the duties owed to liminal animals.

Besides the contributions to the academic fields of which the thesis is a part, it also aims to have an impact on how we perceive and treat liminal animals. Currently, liminal animals are often seen as invaders of our territories: that is, as "pests" that do not belong here. This attitude often justifies policies that lead to immense suffering and numerous deaths, both by action (such as when we use poison to kill rodents) and by omission (for example, by not

having enough services to help injured animals). The arguments put forward in this thesis hope to convince readers that negative and especially positive duties towards these animals are not dependent on accepting a specific theory, but rather follow from assumptions most people find intuitive. In doing so, besides changing attitudes towards liminal animals, this thesis aims to inform the work carried out by animal welfare organisations, by providing better arguments to sustain their campaigns and guidance on specific policies that could be pushed forward.

Undoubtedly, this thesis leaves many questions unanswered. The part on ethical theories, for example, could have dealt with other theories, such as virtue ethics or right-based theories. More work on these and other theories should be carried out to examine its implications for liminal animals. However, it should not surprise us if the former leads to conclusions that have to do with cultivating virtues such as compassion and care, that may lead to helping needy liminal animals (see Katz, 2024). Similarly, rights-based theories could lead to the view that liminal animals have important claims that lead them to have the right to be helped in situation in which they need it (see Martin, 2023), although authors have traditionally claimed that animal rights would not lead to positive duties towards non-domestic animals (Regan, 1983). A proper analysis of what these and other theories say about our duties towards liminal animals is needed in order to have a complete picture of different normative approaches to the issue.

The part on principles of political inclusion could have included another, although less discussed, principle: the Stakeholder Principle of inclusion, or non-liberal approaches to the assignment of duties towards others. According to the former, those individuals with a stake in the continued existence of the political community should be considered full members of it (Bauböck, 2018). One could argue that liminal animals have a stake in this, in those cases in which the political community prevents them from being harmed, or when it directly benefits them. However, this may not be the case if the existence of the political communities is worse for them than its potential non-existence (see Magaña, 2022). Non-liberal approaches to the assignment of political duties, such as libertarianism, would surely have opposing implications than the ones described in this thesis. This, however, is not a consequence of the way in which liminal animals fit into this theory, but rather a consequence of the theory itself: libertarians think that no political positive duties exist, and that states should be limited to protecting others from harm (Nozick, 1978). However, left-libertarians may disagree, and

could assign positive duties to reduce the inequality that liminal animals may be suffering with regard to humans (Otskuka, 2005).

Especially, the part devoted to practices could have explored many other topics. There are many other practices beyond population control and urban planning with which liminal animals engage and that merit normative reflection. Energy production technologies, for example, such as windmills, reservoir hydropower generators, and solar panels may harm animals during its functioning and installation. Similarly, the ways in which we produce food are also deeply entangled with liminal animals. Factory farms degrade environments in which liminal animals live, harvesting technologies kill small animals who live in between the crops, and changes in land use displace liminal animals from their environments, but they may also give them feeding opportunities. Also, there is a need for greater discussion of the extent to which our transportation systems harm animals, and the duties that emerge from them. It may be the case, for example, that driving is impermissible, that traffic should be severely reduced, or that roads should always integrate safety devices to impede animals from being harmed by cars (see Exposito, 2025). These are all practices that affect liminal animals, and which normative implications are worth exploring. Despite this, this thesis aims to be a first stepping stone that can lead the way into researching these topics. Unfortunately, due to the space and time constraints associated with the development of a PhD thesis, all these worthwhile exploring topics could not be dealt with.

In conclusion, this thesis has contributed to the development of arguments in defence of the view that there are positive duties towards liminal animals. In doing so, it aims to advance the fields of animal ethics and politics by setting a precedent that leads to further research. In addition, and more importantly, it aims to play a part in changing our attitudes, behaviours, and policies towards liminal animals to improve the lives of this often neglected group of animals.

## References

Abdulkarim, A., Goriman Khan, M. A. K. B., & Aklilu, E. (2021). Stray Animal Population Control: Methods, Public Health Concern, Ethics, and Animal Welfare Issues. *World's Veterinary Journal*, 11(3), 319–326. <https://doi.org/10.54203/scil.2021.wvj44>

Abizadeh, A. (2008). Democratic Theory and Border Coercion: No Right to Unilaterally Control Your Own Borders. *Political Theory*, 36(1), 37–65. <https://doi.org/10.1177/0090591707310090>

Abizadeh, A. (2010). Democratic Legitimacy and State Coercion: A Reply to David Miller. *Political Theory*, 38(1), 121–130. <https://doi.org/10.1177/0090591709348192>

Abizadeh, A. (2021). The scope of the All-Subjected Principle: On the logical structure of coercive laws. *Analysis*, 81(4), 603–610. <https://doi.org/10.1093/analys/anab041>

Acampora, R. (2004). Oikos and Domus: On constructive co-habitation with other creatures. *Philosophy & Geography*, 7(2), 219–235. <https://doi.org/10.1080/1090377042000285426>

Adams, C. E. (2021). *Urban Wildlife Management*. CRC Press.

Aguilera, B. (2025). How Bad Can the Lives of Persons and Animals Go? On the Alleged Asymmetrical Effect of Cognitive Capacities on the Potentials for Welfare of Persons and Animals. *Ethical Theory and Moral Practice*. <https://doi.org/10.1007/s10677-025-10504-0>

Ahmed, N. O., El-Halafawy, A. M., & Amin, A. M. (2019). A Critical Review of Urban Livability. *European Journal of Sustainable Development*, 8(1). <https://doi.org/10.14207/ejsd.2019.v8n1p165>

Akhtar, S. (2011). Animal Pain and Welfare: Can Pain Sometimes Be Worse for Them than for Us? In T. L. Beauchamp & R. G. Frey (Eds), *The Oxford Handbook of Animal Ethics* (pp. 495–518). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195371963.013.0018>

Albonetti, P., Marletta, A., Repetto, I., & Sasso, E. A. (2015). Efficacy of nicarbazin (Ovistop®) in the containment and reduction of the populations of feral pigeons

(*Columba livia* var. *domestica*) in the city of Genoa, Italy: A retrospective evaluation. *Veterinaria Italiana*, 51(1), 63–72. <https://doi.org/10.12834/VetIt.337.1448.3>

Ament, R., Jacobson, S., Callahan, R., & Brocki, M. (2021). Highway Crossing Structures for Wildlife: Opportunities for Improving Driver and Animal Safety. *U.S. Department of Agriculture*.

<https://largelandscapes.org/wp-content/uploads/2021/06/Highway-Crossing-Structures-for-Wildlife-Opportunities-for-Improving-Driver-and-Animal-Safety.pdf>

Andrews, K., Birch, J., Sebo, J., & Sims, T. (2024). *Background to the New York Declaration on Animal Consciousness*. [nydeclaration.com](http://nydeclaration.com)

Animal Ethics (2020). *Introduction to Wild Animal Suffering. A Guide to the Issues*. Animal Ethics.

[https://www.animal-ethics.org/wp-content/uploads/Introduction\\_to\\_Wild\\_Animal\\_Suffering.pdf](https://www.animal-ethics.org/wp-content/uploads/Introduction_to_Wild_Animal_Suffering.pdf)

Animal Ethics (2021). *Investigating the welfare of wild animals in urban environments*. Animal Ethics.

<https://www.animal-ethics.org/wp-content/uploads/Welfare-Urban-Animal-Ecology.pdf>

Animals in the Room (n.d.). *Animals in the Room*. <https://animalsintheroom.org/>

Animal Welfare Institute (2016). *Caught by Mistake*. Animal Welfare Institute. <https://awionline.org/awi-quarterly/2016-spring/caught-mistake-pets-suffer-serious-steel-jaw-leghold-trap-injuries>

Appleyard, B., Ferrell, C. E., Carroll, M. A., & Taecker, M. (2014). Toward Livability Ethics: A Framework to Guide Planning, Design, and Engineering Decisions. *Transportation Research Record*, 2403(1), 62–71. <https://doi.org/10.3141/2403-08>

Arrhenius, G. (2003). The Person-Affecting Restriction, Comparativism, and the Moral Status of Potential People. *Ethical Perspectives*, 3, 185–195. <https://doi.org/10.2143/EP.10.3.503884>

Arrhenius, G. (2018). The democratic boundary problem reconsidered. *Ethics, Politics & Society*, 1, 89–122. <https://doi.org/10.21814/eps.1.1.52>

Arrhenius, G. (2019). Democracy for the 21st Century: Research Challenges. In S. Randeria & B. Wittrock (Eds), *Sociology Looks at the Twenty-first Century: From Local Universalism to Global Contextualism* (pp. 165–186). Brill. <https://doi.org/10.1163/9789004385122>

Asa, C., & Moresco, A. (2019). Fertility Control in Wildlife: Review of Current Status, Including Novel and Future Technologies. In P. Comizzoli, J. L. Brown, & W. V. Holt (Eds), *Reproductive Sciences in Animal Conservation* (pp. 507–543). Springer. [https://doi.org/10.1007/978-3-030-23633-5\\_17](https://doi.org/10.1007/978-3-030-23633-5_17)

Ashford, E. (2011). The Alleged Dichotomy Between Positive and Negative Rights and Duties. In C. R. Beitz & R. E. Goodin (Eds), *Global Basic Rights* (pp. 92–112). Oxford University Press.

Atlas, R. M., & Maloy, S. (2014). *One Health: People, Animals, and the Environment*. ASM Press.

Baderin, A. (2021). The Continuity of Ethics and Political Theory. *The Journal of Politics*, 83(4), 1734–1746. <https://doi.org/10.1086/715068>

Baker, S. E., Ayers, M., Beausoleil, N. J., Belmain, S. R., Berdoy, M., Buckle, A. P., Cagienard, C., Cowan, D., Fearn-Daglish, J., Goddard, P., Golledge, H. D. R., Mullineaux, E., Sharp, T., Simmons, A., & Schmolz, E. (2022). An assessment of animal welfare impacts in wild Norway rat (*Rattus norvegicus*) management. *Animal Welfare*, 31(1), 51–68. <https://doi.org/10.7120/09627286.31.1.005>

Baron, J.-P., Le Galliard, J.-F., Ferrière, R., & Tully, T. (2013). Intermittent breeding and the dynamics of resource allocation to reproduction, growth and survival. *Functional Ecology*, 27(1), 173–183. <https://doi.org/10.1111/1365-2435.12023>

Batomen, B., Cloutier, M.-S., Carabali, M., Hagel, B., Howard, A., Rothman, L., Perreault, S., Brown, P., Di Ruggiero, E., & Bondy, S. (2024). Traffic-Calming Measures and Road Traffic Collisions and Injuries: A Spatiotemporal Analysis. *American Journal of Epidemiology*, 193(5), 707–717. <https://doi.org/10.1093/aje/kwad136>

Bauböck, R. (2018). Democratic inclusion: A pluralistic theory of democratic inclusion. In R. Bauböck (Ed.), *Democratic inclusion. Rainer Bauböck in dialogue* (pp. 3–102). Manchester University Press.

Baum, S. D., & Owe, A. (n.d.). On the intrinsic value of diversity. *Inquiry*, 1–25. <https://doi.org/10.1080/0020174X.2024.2367247>

Beatley, T., & Bekoff, M. (2013). City Planning and Animals: Expanding Our Urban Compassion Footprint. In C. Basta & S. Moroni (Eds), *Ethics, Design and Planning of the Built Environment* (pp. 185–195). Springer. [https://doi.org/10.1007/978-94-007-5246-7\\_12](https://doi.org/10.1007/978-94-007-5246-7_12)

Beauchamp, T. L., & Childress, J. F. (2013). *Principles of biomedical ethics* (7th ed). Oxford University Press.

Beausoleil, N. J., Mellor, D. J., Baker, L., Baker, S. E., Bellio, M., Clarke, A. S., Dale, A., Garlick, S., Jones, B., Harvey, A., Pitcher, B. J., Sherwen, S., Stockin, K. A., & Zito, S. (2018). “Feelings and Fitness” Not “Feelings or Fitness”—The Raison d’être of Conservation Welfare, Which Aligns Conservation and Animal Welfare Objectives. *Frontiers in Veterinary Science*, 5. <https://doi.org/10.3389/fvets.2018.00296>

Becker, D. J., Singh, D., Pan, Q., Montourey, J. D., Talbott, K. M., Wanamaker, S. M., & Ketterson, E. D. (2020). Artificial light at night amplifies seasonal relapse of haemosporidian parasites in a widespread songbird. *Proceedings of the Royal Society B: Biological Sciences*, 287(1935), 20201831. <https://doi.org/10.1098/rspb.2020.1831>

Beckman, L. (2014). The Subjects of Collectively Binding Decisions: Democratic Inclusion and Extraterritorial Law. *Ratio Juris*, 27(2), 252–270. <https://doi.org/10.1111/raju.12038>

Beitz, C. R. (1999). *Political Theory and International Relations*. Princeton University Press.

Bell, E. J. (2024). Against Moral Individualism. *Social Theory and Practice*, 50(1), 33–55. <https://doi.org/10.5840/soc theor pract 20231122206>

Belliotti, R. A. (1978). Negative Duties, Positive Duties, and Rights. *The Southern Journal of Philosophy*, 16(1), 518–588.

Belliotti, R. A. (1981). Negative and positive duties. *Theoria*, 47(2), 82–92.  
<https://doi.org/10.1111/j.1755-2567.1981.tb00471.x>

Bender, K. (2025). *Dog Forced to Chew Off Foot to Escape Trap Is Still Looking for a Home Over a Year After His Recovery*. People.com.  
<https://people.com/dog-chewed-off-foot-still-waiting-for-home-year-later-11792074>

Bercovitch, F. B. (2020). A comparative perspective on the evolution of mammalian reactions to dead conspecifics. *Primates*, 61(1), 21–28.  
<https://doi.org/10.1007/s10329-019-00722-3>

Berlin, I. (2002). Two Concepts of Liberty. In I. Berlin & E. by H. Hardy (Eds), *Liberty* (pp. 166–217). Oxford University Press. <https://doi.org/10.1093/019924989X.003.0004>

Bernardino, J., Bevanger, K., Barrientos, R., Dwyer, J. F., Marques, A. T., Martins, R. C., Shaw, J. M., Silva, J. P., & Moreira, F. (2018). Bird collisions with power lines: State of the art and priority areas for research. *Biological Conservation*, 222, 1–13.  
<https://doi.org/10.1016/j.biocon.2018.02.029>

Bertea, S. (Ed.). (2019). Contemporary Approaches to Legal Obligation: A Preliminary Map. In *A Theory of Legal Obligation* (pp. 43–73). Cambridge University Press.  
<https://doi.org/10.1017/9781108566216.003>

Blackett, T. (2015). Squirrels—An overview of common clinical presentations and important diseases. *Companion Animal*, 20(10), 583–588.  
<https://doi.org/10.12968/coan.2015.20.10.583>

Blattner, C. E. (2019). Animal Labour: Toward a Prohibition of Forced Labour and a Right to Freely Choose One's Work. In C. E. Blattner, K. Coulter, & W. Kymlicka (Eds), *Animal Labour: A New Frontier of Interspecies Justice?* (pp. 91–115). Oxford University Press.

Blattner, C. E. (2021). Turning to Animal Agency in the Anthropocene. In B. Bovenkerk & J. Keulartz (Eds), *Animals in Our Midst: The Challenges of Co-existing with Animals in the Anthropocene* (pp. 65–78). Springer. [https://doi.org/10.1007/978-3-030-63523-7\\_4](https://doi.org/10.1007/978-3-030-63523-7_4)

Blau, A. (2017). *Methods in Analytical Political Theory*. Cambridge University Press.

Bonenfant, C., Gaillard, J., Coulson, T., Festa-Bianchet, M., Loison, A., Garel, M., Loe, L. E., Blanchard, P., Pettorelli, N., Owen-Smith, N., Du Toit, J., & Duncan, P. (2009). Empirical Evidence of Density-Dependence in Populations of Large Herbivores. In *Advances in Ecological Research* (Vol. 41, pp. 313–357). Academic Press. [https://doi.org/10.1016/S0065-2504\(09\)00405-X](https://doi.org/10.1016/S0065-2504(09)00405-X)

Boonin, D. (2014). *The Non-identity Problem and the Ethics of Future People*. Oxford University Press.

Bosniak, L. (2007). Being Here: Ethical Territoriality and the Rights of Immigrants. *Theoretical Inquiries in Law*, 8(2), 389–410. <https://doi.org/10.2202/1565-3404.1155>

Bosniak, L. (2020). Territorial Presence As A Ground For Claims: Some Reflections. *Etikk i Praksis - Nordic Journal of Applied Ethics*, 2, <https://doi.org/10.5324/eip.v14i2.3490>

Boudou, B. (2023). Representing non-citizens: A proposal for the inclusion of all affected interests. *Critical Review of International Social and Political Philosophy*, 26(5), 747–768. <https://doi.org/10.1080/13698230.2022.2062216>

Bovens, L., & Fleurbaey, M. (2012). Evaluating life or death prospects. *Economics and Philosophy*, 28(2), 217–249. <https://doi.org/10.1017/S0266267112000235>

Bramble, B. (2016). A New Defense of Hedonism about Well-Being. *Ergo*, 3. <https://doi.org/10.3998/ergo.12405314.0003.004>

Brandt, R. (2024). Procreative Obligations and the Directed Duty of Care. *Journal of Applied Philosophy*, 41(5) . <https://doi.org/10.1111/japp.12755>

Bridge, B., & Harris, S. (2020). Do Urban Red Foxes Attack People? An Exploratory Study and Review of Incidents in Britain. *Human–Wildlife Interactions*, 14(2). <https://doi.org/10.26077/d6f5-f6f3>

Brighenti, A. M., & Pavoni, A. (2021). Situating urban animals – a theoretical framework. *Contemporary Social Science*, 16(1). <https://doi.org/10.1080/21582041.2020.1788131>

Bright Ross, J. G., Newman, C., Buesching, C. D., Connolly, E., Nakagawa, S., & Macdonald, D. W. (2021). A fat chance of survival: Body condition provides life-history dependent buffering of environmental change in a wild mammal population. *Climate Change Ecology*, 2. <https://doi.org/10.1016/j.ecochg.2021.100022>

Bromley, C., & Gese, E. M. (2001). Effects of sterilization on territory fidelity and maintenance, pair bonds, and survival rates of free-ranging coyotes. *Canadian Journal of Zoology*, 79(3), 386–392. <https://doi.org/10.1139/z00-212>

Broome, J. (2012). The Badness of Death and the Goodness of Life. In B. Bradley, F. Feldman, & J. Johansson (Eds), *The Oxford Handbook of Philosophy of Death* (pp. 218–233). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195388923.013.0010>

Brouwer, D. (2018). *Neither Wild nor Domesticated: Positioning Liminal Animals through Labour Rights* [Queen's University]. <https://qspace.library.queensu.ca/handle/1974/24458>

Brown, D. (2013). *Inferno*. Doubleday.

Brown, L. L. (1975). An Annotated Bibliography of the Literature on Livability, with an Introduction and an Analysis of the Literature. *Council of Planning Librarians*.

Bryan, H. M., Smits, J. E. G., Koren, L., Paquet, P. C., Wynne-Edwards, K. E., & Musiani, M. (2015). Heavily hunted wolves have higher stress and reproductive steroids than wolves with lower hunting pressure. *Functional Ecology*, 29(3), 347–356. <https://doi.org/10.1111/1365-2435.12354>

Burgess, J. P. (2016). Logic and Philosophical Methodology. In H. Cappelen, T. S. Gendler, & J. Hawthorne (Eds), *The Oxford Handbook of Philosophical Methodology* (pp. 607–621). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199668779.013.30>

Bykvist, K. (2002). Sumner On Desires and Well-Being. *Canadian Journal of Philosophy*, 32(4), 475–490. <https://doi.org/10.1080/00455091.2002.10716527>

Bykvist, K. (2016). Preference-Based Views of Well-Being. In M. D. Adler & M. Fleurbaeij (Eds), *The Oxford Handbook of Well-Being and Public Policy* (pp. 321–346). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199325818.013.10>

Byrne, J. (2010). The human relationship with nature: Rights of animals and plants in the urban context. In I. Douglas, D. Goode, M. C. Houck, & D. Maddox (Eds), *The Routledge Handbook of Urban Ecology* (pp. 63-73). Routledge.

Calabresi, G., & Bobbitt, P. (1978). *Tragic Choices*. Norton.

Callicott, J. B. (1989). *In Defense of the Land Ethic: Essays in Environmental Philosophy*. State University of New York Press.

Callicott, J. B. (1999). *Beyond the Land Ethic: More Essays in Environmental Philosophy*. State University of New York Press.

Campbell, T. (2021). Personal Identity and Impersonal Ethics. In J. McMahan, T. Campbell, J. Goodrich, & K. Ramakrishnan (Eds), *Principles and Persons: The Legacy of Derek Parfit* (pp. 55–84). Oxford University Press. <https://doi.org/10.1093/oso/9780192893994.003.0004>

Caney, S. (2007). Global Poverty and Human Rights: The Case for Positive Duties. In T. Pogge (Ed.), *Freedom from Poverty as a Human Right: Who Owes What to the Very Poor?* (pp. 275–302). Oxford University Press. <https://doi.org/10.1093/oso/9780199226313.003.0012>

Caponi, G. (n.d.). Affective Geographies: Managing Feral Cat Colonies in Rome. *International Journal of Urban and Regional Research*. <https://www.ijurr.org/spotlight-on/animals-and-the-city/affective-geographies-managing-feral-cat-colonies-in-rome/>

Carens, J. (2013). *The Ethics of Immigration*. Oxford University Press.

Carrus, G., Dadvand, P., & Sanesi, G. (2017). The Role and Value of Urban Forests and Green Infrastructure in Promoting Human Health and Wellbeing. In D. Pearlmuter, C. Calfapietra, R. Samson, L. O'Brien, S. Krajter Ostoić, G. Sanesi, & R. Alonso del Amo

(Eds), *The Urban Forest: Cultivating Green Infrastructure for People and the Environment* (pp. 217–230). Springer. [https://doi.org/10.1007/978-3-319-50280-9\\_17](https://doi.org/10.1007/978-3-319-50280-9_17)

Carruthers, P. (1992). *The Animals Issue: Moral Theory in Practice*. Cambridge University Press.

Casal, P. (2018). Los derechos homínidos. Una defensa ecuménica. *Daimon*, 73. <https://doi.org/10.6018/daimon/217741>

Casal, P. (n.d.). *Distributive justice and animals: Addressing the problem of mice* [Unpublished manuscript]. Law Department. Pompeu Fabra University.

Citylets (2018). £31k Fine for Landlord for Failing to Deal with Pigeons. <https://www.citylets.co.uk/blog/31k-fine-for-landlord-for-failing-to-deal-with-pigeons/>

Claassen, R. (2022). Autonomy and Justice. In B. Colburn, *The Routledge Handbook of Autonomy* (pp. 335–345). Routledge.

Clarke, M., & Ng, Y.-K. (2006). Population dynamics and animal welfare: Issues raised by the culling of kangaroos in Puckapunyal. *Social Choice and Welfare*, 27(2), 407–422. <https://doi.org/10.1007/s00355-006-0137-8>

Cochrane, A. (2009). Do Animals Have an Interest in Liberty? *Political Studies*, 57(3), 660–679. <https://doi.org/10.1111/j.1467-9248.2008.00742.x>

Cochrane, A. (2013). Cosmopolitanism: The Case Against Group-Differentiated Animal Rights. *Law, Ethics and Philosophy*, 1, 127–141.

Cochrane, A. (2018). *Sentientist Politics: A Theory of Global Inter-species Justice*. Oxford University Press.

Cope, H. R., Hogg, C. J., White, P. J., & Herbert, C. A. (2018). A role for selective contraception of individuals in conservation. *Conservation Biology*, 32(3), 546–558. <https://doi.org/10.1111/cobi.13042>

Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. *Official Journal of the European Union*, 206, 7–50. <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31992L0043>

Coutts, C., & Hahn, M. (2015). Green Infrastructure, Ecosystem Services, and Human Health. *International Journal of Environmental Research and Public Health*, 12(8), 9768–9798. <https://doi.org/10.3390/ijerph120809768>

Crary, A., & Gruen, L. (2022). *Animal Crisis: A New Critical Theory*. John Wiley & Sons.

Crocker, L. H. (1980). *Positive Liberty: An Essay in Normative Political Philosophy*. Springer Science & Business Media.

Curtis, P. D., Pooler, R. L., Richmond, M. E., Miller, L. A., Mattfeld, G. F., & Quimby, F. W. (2002). Comparative effects of GnRH and porcine zona pellucida (PZP) immunocontraceptive vaccines for controlling reproduction in white-tailed deer (*Odocoileus virginianus*). *Reproduction Supplement*, 60, 131–141.

Dahl, R. A. (1990). *After the Revolution? Authority in a Good Society. Revised Edition*. Yale University Press.

Dahl, R. A. (1998). *On Democracy*. Yale University Press.

Darhower, S. E., & Maher, C. R. (2008). Effects of immunocontraception on behavior in fallow deer (*Dama dama*). *Zoo Biology*, 27(1), 49–61. <https://doi.org/10.1002/zoo.20165>

Davidson, D. (1982). Rational Animals. *Dialectica*, 36(4), 317–327.

Dawkins, M. S. (1990). From an animal's point of view: Motivation, fitness, and animal welfare. *Behavioral and Brain Sciences*, 13(1), 1–9. <https://doi.org/10.1017/S0140525X00077104>

Dawkins, M. S. (1998). Evolution and Animal Welfare. *The Quarterly Review of Biology*, 73(3), 305–328. <https://doi.org/10.1086/420307>

Deckha, M. (2015). Vulnerability, Equality, and Animals. *Canadian Journal of Women and the Law*, 27(1), 47–70. <https://doi.org/10.3138/cjwl.27.1.47>

DeGrazia, D., & Millum, J. (2021). *A Theory of Bioethics*. Cambridge University Press.

De-Juanas, Á., Bernal Romero, T., & Goig, R. (2020). The Relationship Between Psychological Well-Being and Autonomy in Young People According to Age. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.559976>

Deliso, M. (2023). *Mom of 6-year-old who shot his teacher sentenced to 2 years in prison in state case*. ABC News. <https://abcnews.go.com/US/deja-taylor-newport-news-sentenced/story?id=105691145>

Delon, N., & Purves, D. (2018). Wild Animal Suffering is Intractable. *Journal of Agricultural and Environmental Ethics*, 31(2), 239–260. <https://doi.org/10.1007/s10806-018-9722-y>

Demarchi, L., Sanson, A., & Bosch, O. J. (2023). Brief versus long maternal separation in lactating rats: Consequences on maternal behavior, emotionality, and brain oxytocin receptor binding. *Journal of Neuroendocrinology*, 35(7). <https://doi.org/10.1111/jne.13252>

DeNicola, A. J., & Williams, S. C. (2008). Sharpshooting suburban white-tailed deer reduces deer–vehicle collisions. *Human-Wildlife Conflicts*, 2(1), 28–33. <https://doi.org/10.26077/cqnd-nc30>

Department of Housing, Local Government and Heritage (2022). *Strategic Environmental Assessment: Guidelines for Regional Assemblies and Planning Authorities*. [https://www.opr.ie/wp-content/uploads/2022/03/SEA-GUIDELINES\\_lowres.pdf](https://www.opr.ie/wp-content/uploads/2022/03/SEA-GUIDELINES_lowres.pdf)

Descovich, K., McDonald, I., Tribe, A., & Phillips, C. (2015). A welfare assessment of methods used for harvesting, hunting and population control of kangaroos and wallabies. *Animal Welfare*, 24(3), 255–265. <https://doi.org/10.7120/09627286.24.3.255>

Dobeic, M., Pintaric, S., Vlahović, K., & Dovc, A. (2011). Feral pigeon (*Columba livia*) population management in Ljubljana. *Veterinarski Arhiv*, 81, 285–298.

Dombrowski, D. A. (1997). *Babies and Beasts: The Argument From Marginal Cases*. University of Illinois Press.

Donaldson, S., & Kymlicka, W. (2011). *Zoopolis: A Political Theory of Animal Rights*. Oxford University Press.

Donaldson, S., & Kymlicka, W. (2013a). A Defense of Animal Citizens and Sovereigns. *Law, Ethics and Philosophy*, 1, 143–160.

Donaldson, S., & Kymlicka, W. (2013b). Reply: Animal Citizenship, Liberal Theory and the Historical Moment. *Dialogue: Canadian Philosophical Review / Revue Canadienne de Philosophie*, 52(4), 769–786. <https://doi.org/10.1017/S0012217313000863>

Donaldson, S., & Kymlicka, W. (2016). Comment: Between Wild and Domesticated: Rethinking Categories and Boundaries in Response to Animal Agency. In B. Bovenkerk & J. Keulartz (Eds), *Animal Ethics in the Age of Humans: Blurring boundaries in human-animal relationships* (pp. 225–239). Springer. [https://doi.org/10.1007/978-3-319-44206-8\\_14](https://doi.org/10.1007/978-3-319-44206-8_14)

Donovan, J., & Adams, C. J. (2007). *The Feminist Care Tradition in Animal Ethics: A Reader*. Columbia University Press.

Dorado, D. (2015). Ethical Interventions in the Wild: An Annotated Bibliography. *Relations*, 3.2, 219–238. <https://doi.org/10.7358/rela-2015-002-dora>

Driver, J. (2011). *Consequentialism*. Routledge.

Dworkin, R. (2000). *Sovereign Virtue: The Theory and Practice of Equality*. Harvard University Press.

EAZA Council (2023). *Position Statement on Management Euthanasia/Culling*. European Association of Zoos and Aquaria. [https://strapi.eaza.net/uploads/2023\\_04\\_EAZA\\_Management\\_Euthanasia\\_Culling\\_Statement\\_4779d7a058.pdf](https://strapi.eaza.net/uploads/2023_04_EAZA_Management_Euthanasia_Culling_Statement_4779d7a058.pdf)

Eckerström Liedholm, S., Hecht, L., & Elliott, V. (2024). Improving wild animal welfare through contraception. *BioScience*, 74(10), 695–700. <https://doi.org/10.1093/biosci/biae071>

Ellis, T., Berrill, I., Lines, J., Turnbull, J. F., & Knowles, T. G. (2012). Mortality and fish welfare. *Fish Physiology and Biochemistry*, 38(1), 189–199. <https://doi.org/10.1007/s10695-011-9547-3>

Emel, J., Wilbert, C., & Wolch, J. (2002). Animal Geographies. *Society & Animals*, 10, 407–412. <https://doi.org/10.1163/156853002320936881>

Environmental Council of Sacramento (2021). *Elk Grove Planning Commission Votes Down Hospital Plans* <https://www.ecosacramento.net/about-us/committees/habitat-conservation-committee/cnu-hospital-proposed-for-elk-grove/>

Eötvös, C. B., Magura, T., & Lövei, G. L. (2018). A meta-analysis indicates reduced predation pressure with increasing urbanization. *Landscape and Urban Planning*, 180, 54–59. <https://doi.org/10.1016/j.landurbplan.2018.08.010>

Escamilla-Castillo, M. (2010). The Purposes of Legal Punishment. *Ratio Juris*, 23(4), 460–478. <https://doi.org/10.1111/j.1467-9337.2010.00465.x>

European Commision (1990). *Green Paper on the Urban Environment*. <https://op.europa.eu/en/publication-detail/-/publication/0e4b169c-91b8-4de0-9fed-ead286a4efb7/language-en>

Exposito, D. (2025). Millions of animals die on roads – does this make driving morally wrong? *The Conversation*. <https://theconversation.com/millions-of-animals-die-on-roads-does-this-make-driving-morally-wrong-248178>

Faria, C. (2022). *Animal Ethics in the Wild: Wild Animal Suffering and Intervention in Nature*. Cambridge University Press. <https://doi.org/10.1017/9781009119948>

Faria, C. (2023). Vulnerability and the Ethics of Environmental Enhancement. *Ethics, Policy and Environment*, 26(2), 179–197. <https://doi.org/10.1080/21550085.2023.2200725>

Fehlmann, G., O’riain, M. J., FÜrtbauer, I., & King, A. J. (2020). Behavioral Causes, Ecological Consequences, and Management Challenges Associated with Wildlife Foraging in Human-Modified Landscapes. *Bioscience*, 71(1), 40–54. <https://doi.org/10.1093/biosci/biaa129>

Feinberg, J. (1966). Duties, Rights, and Claims. *American Philosophical Quarterly*, 3(2), 137–144.

Ferri, M., Ferraresi, M., Gelati, A., Zannetti, G., Domenichini, A., Ravizza, L., & Cadignani, R. (2011). Control of the urban pigeon *Columba livia* population and the preservation of common swift *Apus apus* and bats Chiroptera during the restoration of the Ghirlandina tower in the city of Modena (Italy). In J. Jacob & A. Esther (Eds.), *8th European vertebrate pest management Conference: Berlin, Germany, 26 - 30 September 2011*. <https://doi.org/10.5073/jka.2011.432.074>

Ferri, M., Ferraresi, M., Gelati, A., Zannetti, G., Ubaldi, A., Contiero, B., & Bursi, E. (2009). Use of Nicarbazine in the control of urban pigeon colonies in Italy in 1990-2007. *Annali Della Facoltà Di Medicina Veterinaria, Università Di Parma*, 29, 91–102.

Filazzola, A., Shrestha, N., & MacIvor, J. S. (2019). The contribution of constructed green infrastructure to urban biodiversity: A synthesis and meta-analysis. *Journal of Applied Ecology*, 56(9), 2131–2143. <https://doi.org/10.1111/1365-2664.13475>

Fischer, B. (2022). Two Challenges to Johannsen on Habitat Destruction. *Philosophia*, 50(3), 865–873. <https://doi.org/10.1007/s11406-021-00416-5>

Fischer, B. (2024). *Weighing Animal Welfare: Comparing Well-Being Across Species*. Oxford University Press.

Fisher, D. N., Boutin, S., Dantzer, B., Humphries, M. M., Lane, J. E., & McAdam, A. G. (2017). Multilevel and sex-specific selection on competitive traits in North American red squirrels. *Evolution*, 71(7), 1841–1854. <https://doi.org/10.1111/evo.13270>

Fisher, P., Campbell, K. J., Howald, G. R., & Warburton, B. (2019). Anticoagulant Rodenticides, Islands, and Animal Welfare Accountancy. *Animals*, 9(11). <https://doi.org/10.3390/ani9110919>

Flikschuh, K. (2007). *Freedom: Contemporary Liberal Perspectives*. Polity.

FRA (2011). *Fundamental rights of migrants in an irregular situation in the European Union*. European Union Agency for Human Rights. <https://fra.europa.eu/en/publication/2012/fundamental-rights-migrants-irregular-situation-european-union>

Francione, G. L. (2007). Animal Rights and Domesticated Nonhumans. *Animal Rights: The Abolitionist Approach*.

<https://www.abolitionistapproach.com/animal-rights-and-domesticated-nonhumans/>

Francione, G. L. (2008). *Animals as Persons: Essays on the Abolition of Animal Exploitation*. Columbia University Press.

Franklin, J. H. (2004). *Animal Rights and Moral Philosophy*. Columbia University Press.

Fraser, N. (2013). *Scales of Justice: Reimagining Political Space in a Globalizing World*. John Wiley & Sons.

Gamborg, C., Sandøe, P., & Palmer, C. (2020). Ethical management of wildlife. Lethal versus nonlethal control of white-tailed deer. *Conservation Science and Practice*, 2(4).

<https://doi.org/10.1111/csp2.171>

Garfella, C. (2025). Los ecologistas se revuelven contra la ampliación del aeropuerto de Barcelona: “Tendrá un impacto irreversible”. *El País*.

<https://elpais.com/espana/catalunya/2025-06-10/los-ecologistas-se-revuelven-contra-la-ampliacion-del-aeropuerto-de-barcelona-tendra-un-impacto-irreversible.html>

Garner, R. (2013). *A Theory of Justice for Animals: Animal Rights in a Nonideal World*. Oxford University Press.

Garner, R. (2017). Animals and democratic theory: Beyond an anthropocentric account. *Contemporary Political Theory*, 16(4), 459–477.

<https://doi.org/10.1057/s41296-016-0072-0>

Garner, R., & O’Sullivan, S. (2016). *The Political Turn in Animal Ethics*. Rowman & Littlefield.

Gaston, K. J., Davies, T. W., Bennie, J., & Hopkins, J. (2012). Reducing the ecological consequences of night-time light pollution: Options and developments. *Journal of Applied Ecology*, 49(6), 1256–1266. <https://doi.org/10.1111/j.1365-2664.2012.02212.x>

Geffroy, B., Sadoul, B., Putman, B. J., Berger-Tal, O., Garamszegi, L. Z., Møller, A. P., & Blumstein, D. T. (2020). Evolutionary dynamics in the Anthropocene: Life history and

intensity of human contact shape antipredator responses. *PLOS Biology*, 18(9). <https://doi.org/10.1371/journal.pbio.3000818>

Gilabert, P. (2006). Basic Positive Duties of Justice and Narveson's Libertarian Challenge. *The Southern Journal of Philosophy*, 44(2), 193–216. <https://doi.org/10.1111/j.2041-6962.2006.tb00098.x>

Gionfriddo, J. P., Eisemann, J. D., Sullivan, K. J., Healey, R. S., Miller, L. A., Fagerstone, K. A., Engeman, R. M., & Yoder, C. A. (2009). Field test of a single-injection gonadotrophin-releasing hormone immunocontraceptive vaccine in female white-tailed deer. *Wildlife Research*, 36(3). <https://doi.org/10.1071/WR08061>

Giroux, V. (2016). Animals Do Have an Interest in Liberty. *Journal of Animal Ethics*, 6(1), 20–43. <https://doi.org/10.5406/janimaethics.6.1.0020>

Glista, D. J., DeVault, T. L., & DeWoody, J. A. (2009). A review of mitigation measures for reducing wildlife mortality on roadways. *Landscape and Urban Planning*, 91(1). <https://doi.org/10.1016/j.landurbplan.2008.11.001>

González-Crespo, C., & Lavín, S. (2022). Use of Fertility Control (Nicarbazin) in Barcelona: An Effective yet Respectful Method towards Animal Welfare for the Management of Conflicting Feral Pigeon Colonies. *Animals*, 12(7). <https://doi.org/10.3390/ani12070856>

Goodin, R. E. (1985). *Protecting the Vulnerable: A Re-Analysis of Our Social Responsibilities*. University of Chicago Press.

Goodin, R. E. (2007). Enfranchising All Affected Interests, and Its Alternatives. *Philosophy & Public Affairs*, 35(1), 40–68.

Goodin, R. E. (2016). Enfranchising all subjected, worldwide. *International Theory*, 8(3), 365–389. <https://doi.org/10.1017/S1752971916000105>

Goodin, R. E., & Arrhenius, G. (2024). Enfranchising all subjected: A reconstruction and problematization. *Politics, Philosophy & Economics*, 23(2), 125–153. <https://doi.org/10.1177/1470594X241232023>

Grandin, T. (Ed.). (2010). *Improving animal welfare: A practical approach*. CAB International.

Gray, M. E., & Cameron, E. Z. (2010). Does contraceptive treatment in wildlife result in side effects? A review of quantitative and anecdotal evidence. *Reproduction*, 139(1), 45–55. <https://doi.org/10.1530/REP-08-0456>

Greaves, H. (2017). Population axiology. *Philosophy Compass*, 12(11). <https://doi.org/10.1111/phc3.12442>

Grilo, C., Koroleva, E., Andrásik, R., Bíl, M., & González-Suárez, M. (2020). Roadkill risk and population vulnerability in European birds and mammals. *Frontiers in Ecology and the Environment*, 18(6), 323–328. <https://doi.org/10.1002/fee.2216>

Groll, D. (2012). Paternalism, Respect, and the Will. *Ethics*, 122(4), 692–720. <https://doi.org/10.1086/666500>

Gruber, R., Schiestl, M., Boeckle, M., Frohnwieser, A., Miller, R., Gray, R. D., Clayton, N. S., & Taylor, A. H. (2019). New Caledonian Crows Use Mental Representations to Solve Metatool Problems. *Current Biology: CB*, 29(4), 686-692. <https://doi.org/10.1016/j.cub.2019.01.008>

Haag-Wackernagel, D. (1995). Regulation of the Street Pigeon in Basel. *Wildlife Society Bulletin (1973-2006)*, 23(2), 256–260.

Hadley, J. (2015). *Animal Property Rights: A Theory of Habitat Rights for Wild Animals*. Lexington Books.

Haro, P., Trasviña-Muñoz, E., May-Concha, I., López-Valencia, G., Monge-Navarro, F., Herrera-Ramírez, C., Mercado-Rodríguez, J. A., Villanueva-Alonso, H., & Waleckx, E. (2021). Historical Spatial Distribution of Zoonotic Diseases in Domestic, Synanthropic, and Wild Animals in the Mexican Territory of the Yucatan Peninsula. *Journal of Tropical Medicine*. <https://doi.org/10.1155/2021/8699455>

Hart, H. L. A. (1958). Legal and Moral Obligation. In A. I. Melden (Ed), *Essays in moral philosophy*. University of Washington Press.

Hart, H. L. A. (2012). *The Concept of Law*. Oxford University Press.

Harvey, C., & Aultman-Hall, L. (2016). Measuring Urban Streetscapes for Livability: A Review of Approaches. *The Professional Geographer*, 68(1), 149–158. <https://doi.org/10.1080/00330124.2015.1065546>

Healey, R., & Pepper, A. (2021). Interspecies justice: Agency, self-determination, and assent. *Philosophical Studies*, 178(4), 1223–1243. <https://doi.org/10.1007/s11098-020-01472-5>

Heiderich, E., Failing, K., Lierz, M., & Schildger, B. (2017). Auswirkungen der endoskopischen Sterilisation auf das Fortpflanzungs- und Paarbindungsverhalten von Stadttauben (*Columba livia*). *Tierärztliche Praxis Ausgabe K: Kleintiere / Heimtiere*, 44, 94–104. <https://doi.org/10.15654/TPK-150290>

Held, D. (1995). *Democracy and the Global Order: From the Modern State to Cosmopolitan Governance*. Stanford University Press.

Held, D., & McGrew, A. (1998). The End of the Old Order ? Globalization and the Prospects for World Order. *Review of International Studies*, 24(5), 219–245. <https://doi.org/10.1017/S0260210598002198>

Hermerén, G. (2012). The principle of proportionality revisited: Interpretations and applications. *Medicine, Health Care and Philosophy*, 15(4), 373–382. <https://doi.org/10.1007/s11019-011-9360-x>

Hess, G. R., Moorman, C. E., Thompson, J., & Larson, C. L. (2014). Integrating Wildlife Conservation into Urban Planning. In R. A. McCleery, C. E. Moorman, & M. N. Peterson (Eds), *Urban Wildlife* (pp. 239–278). Springer. [https://doi.org/10.1007/978-1-4899-7500-3\\_12](https://doi.org/10.1007/978-1-4899-7500-3_12)

Holtug, N. (2004). Person-Affecting Moralities. In T. Tännsjö & J. Ryberg (Eds), *The Repugnant Conclusion: Essays on Population Ethics* (pp. 129–161). Springer. [https://doi.org/10.1007/978-1-4020-2473-3\\_8](https://doi.org/10.1007/978-1-4020-2473-3_8)

Holtug, N. (2009). Who Cares About Identity? In M. A. Roberts & D. T. Wasserman (Eds), *Harming Future Persons: Ethics, Genetics and the Nonidentity Problem* (pp. 71–92). Springer. [https://doi.org/10.1007/978-1-4020-5697-0\\_4](https://doi.org/10.1007/978-1-4020-5697-0_4)

Honohan, I. (2018). Republicanism and the all subjected principle as the basis of democratic membership. In R. Bauböck (Ed.), *Democratic inclusion: Rainer Bauböck in dialogue* (pp. 143–159). Manchester University Press.  
<https://doi.org/10.7765/9781526105257.00011>

Horta, O. (2010a). Debunking the Idyllic View of Natural Processes: Population Dynamics and Suffering in the Wild. *Telos: Revista Iberoamericana de Estudios Utilitaristas*, 17(1), 73–90.

Horta, O. (2010b). El fracaso de las respuestas al argumento de la superposición de especies: Parte 1: la relevancia moral de los contraejemplos a las defensas del antropocentrismo. *Astrolabio: revista internacional de filosofía*, 10, 55–85.

Horta, O. (2010c). El fracaso de las respuestas al argumento de la superposición de especies. Parte 2: Consideración honoraria y evaluación general del argumento. *Astrolabio: revista internacional de filosofía*, 10, 85–104.

Horta, O. (2010d). What is Speciesism? *Journal of Agricultural and Environmental Ethics*, 23(3), 243–266. <https://doi.org/10.1007/s10806-009-9205-2>

Horta, O. (2013). Animals, Moral Status of. In H. LaFollette (Ed.), *International Encyclopedia of Ethics*. Wiley. <https://doi.org/10.1002/9781444367072.wbiee156>

Horta, O. (2014). The Scope of the Argument from Species Overlap. *Journal of Applied Philosophy*, 31(2), 142–154. <https://doi.org/10.1111/japp.12051>

Horta, O. (2017). Animal Suffering in Nature: The Case for Intervention. *Environmental Ethics*, 39(3), 267–279. <https://doi.org/10.5840/enviroethics201739320>

Horta, O. (2022). *Making a Stand for Animals*. Routledge.

Horta, O., & Teran, D. (2023). Reducing Wild Animal Suffering Effectively: Why Impracticability and Normative Objections Fail Against the Most Promising Ways of Helping Wild Animals. *Ethics, Policy & Environment*, 26(2), 217–230. <https://doi.org/10.1080/21550085.2023.2200726>

Huijser, M. P., & McGowen, P. T. (2012). Reducing Wildlife-Vehicle Collisions. In J. P. Beckmann, A. P. Clevenger, M. Huijser, & J. A. Hilty (Eds), *Safe Passages: Highways, Wildlife, and Habitat Connectivity* (pp. 51–74). Island Press.

Hunold, C. (2019). Green Infrastructure and Urban Wildlife: Toward a Politics of Sight. *Humanimalia*, 11(1). <https://doi.org/10.52537/humanimalia.9479>

Hurka, T. (1987). Why Value Autonomy? *Social Theory and Practice*, 13(3), 361–382.

Hursthouse, R. (2011). Virtue Ethics and the Treatment of Animals. In T. L. Beauchamp & R. G. Frey (Eds), *The Oxford Handbook of Animal Ethics* (pp. 119–143). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195371963.013.0005>

ICAM (2011). *Humane Cat Population Management Guidance*. International Companion Animal Management Coalition. <https://www.icam-coalition.org/wp-content/uploads/2017/03/Humane-cat-population-English.pdf>

IUCN (2022). Human-wildlife conflict. *IUCN Issues Brief*. <https://www.iucn.org/resources/issues-brief/human-wildlife-conflict>

IUCN (2023). *IUCN SSC guidelines on human-wildlife conflict and coexistence*. International Union for Conservation of Nature. <https://doi.org/10.2305/YGIK2927>

Johannsen, K. (2020). *Wild Animal Ethics: The Moral and Political Problem of Wild Animal Suffering*. Routledge. <https://doi.org/10.4324/9780429296673>

John, T. M., & Sebo, J. (2020). Consequentialism and Nonhuman Animals. In D. W. Portmore (Ed.), *The Oxford Handbook of Consequentialism* (pp. 564–591). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190905323.013.32>

Jones, S. J., Lyons, R. A., John, A., & Palmer, S. R. (2005). Traffic calming policy can reduce inequalities in child pedestrian injuries: Database study. *Injury Prevention*, 11(3), 152–156. <https://doi.org/10.1136/ip.2004.007252>

Kagan, S. (1989). *The Limits of Morality*. Oxford University Press.

Kagan, S. (2019). *How to Count Animals, more or less*. Oxford University Press.

Kasperbauer, T. J. (2016). Should Captive Primates Have Reproductive Rights? In B. Bovenkerk & J. Keulartz (Eds), *Animal Ethics in the Age of Humans: Blurring Boundaries in Human-Animal Relationships* (pp. 279–293). Springer.

Katz, T. D. (2023). Widely Agreeable Moral Principles Support Efforts to Reduce Wild Animal Suffering. *Journal of Applied Animal Ethics Research*, 5(2), 221–246. <https://doi.org/10.1163/25889567-bja10038>

Keulartz, J. (2016). Should the Lion Eat Straw Like the Ox? Animal Ethics and the Predation Problem. *Journal of Agricultural and Environmental Ethics*, 29(5), 813–834. <https://doi.org/10.1007/s10806-016-9637-4>

Killian, G., Fagerstone, K., Kreeger, T., Miller, L., & Rhyan, J. (2007). Management strategies for addressing wildlife disease transmission: The case for fertility control. *USDA Wildlife Services: Staff Publications*. [https://digitalcommons.unl.edu/icwdm\\_usdanwrc/758](https://digitalcommons.unl.edu/icwdm_usdanwrc/758)

Killian, G., Wagner, D., & Miller, L. (2005). Observations on the Use of the GnRH Vaccine Gonacon™ in Male White-Tailed Deer (*Odocoileus virginianus*). *Wildlife Damage Management Conferences Proceedings*. [https://digitalcommons.unl.edu/icwdm\\_wdmconfproc/133](https://digitalcommons.unl.edu/icwdm_wdmconfproc/133)

Kimmig, S. (2021). *The ecology of red foxes (Vulpes vulpes) in urban environments* [Freie Universität Berlin]. <https://doi.org/10.17169/refubium-32203>

King, B. J. (2013). *How Animals Grieve*. University of Chicago Press.

King, S. (2025). Council tenant wins compensation after being “forced to live with rats for 18 months”. *Pest Magazine*. <https://www.pestmagazine.co.uk/news/council-tenant-wins-compensation-after-being-forced-to-live-with-rats-for-18-months.html>

Kittay, E. F. (1999). *Love’s Labor: Essays on Women, Equality, and Dependency*. Psychology Press.

Kittay, E. F. (2019). *Learning from My Daughter: The Value and Care of Disabled Minds*. Oxford University Press.

Kjellander, P., Gaillard, J.-M., & Hewison, A. J. M. (2006). Density-dependent responses of fawn cohort body mass in two contrasting roe deer populations. *Oecologia*, 146(4), 521–530. <https://doi.org/10.1007/s00442-005-0188-z>

Klegarth, A. R. (2017). Synanthropy. In *The International Encyclopedia of Primatology* (pp. 1–5). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119179313.wbprim0448>

Komatsu, H., Nakamura, K., & Yonemura, S. (2021). Installation and Verification of the Effectiveness of a Crossing Structure for Japanese Squirrels in a Residential Development Project. *Impact Assessment*, 12(2), 40–51. [https://doi.org/10.20714/jisia.17.2\\_40](https://doi.org/10.20714/jisia.17.2_40)

Korsgaard, C. M. (2018). *Fellow Creatures: Our Obligations to the Other Animals*. Oxford University Press.

Kumar, P., Druckman, A., Gallagher, J., Gatersleben, B., Allison, S., Eisenman, T. S., Hoang, U., Hama, S., Tiwari, A., Sharma, A., Abhijith, K. V., Adlakha, D., McNabola, A., Astell-Burt, T., Feng, X., Skeldon, A. C., de Lusignan, S., & Morawska, L. (2019). The nexus between air pollution, green infrastructure and human health. *Environment International*, 133. <https://doi.org/10.1016/j.envint.2019.105181>

Kurki, V. A. (2019). *A Theory of Legal Personhood*. Oxford University Press.

Kymlicka, W. (2022). Membership Rights for Animals. *Royal Institute of Philosophy Supplements*, 91, 213–244. <https://doi.org/10.1017/S1358246122000078>

Kymlicka, W., & Donaldson, S. (2014). Animals and the Frontiers of Citizenship. *Oxford Journal of Legal Studies*, 34(2), 201–219. <https://doi.org/10.1093/ojls/gqu001>

Kymlicka, W., & Donaldson, S. (2018). Metics, members and citizens. In R. Bauböck (Ed.), *Democratic inclusion* (pp. 160–182). Manchester University Press. <https://doi.org/10.7765/9781526105257.00012>

Larmore, C. (2022). *What Is Political Philosophy?* Princeton University Press.

Leirs, H., Stenseth, N. C., Nichols, J. D., Hines, J. E., Verhagen, R., & Verheyen, W. (1997). Stochastic seasonality and nonlinear density-dependent factors regulate population size in an African rodent. *Nature*, 389, 176–180. <https://doi.org/10.1038/38271>

Lezama-García, K., Mariti, C., Mota-Rojas, D., Martínez-Burnes, J., Barrios-García, H., & Gazzano, A. (2019). Maternal behaviour in domestic dogs. *International Journal of Veterinary Science and Medicine*, 7(1), 20–30. <https://doi.org/10.1080/23144599.2019.1641899>

Lichtenberg, J. (2010). Negative Duties, Positive Duties, and the “New Harms”. *Ethics*, 120(3), 557–578. <https://doi.org/10.1086/652294>

List, C., & Valentini, L. (2016). The Methodology of Political Theory. In H. Cappelen, T. S. Gendler, & J. Hawthorne (Eds), *The Oxford Handbook of Philosophical Methodology* (pp. 525–553). Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199668779.013.10>

Loder, R. T., & Farren, N. (2014). Injuries from firearms in hunting activities. *Injury*, 45(8), 1207–1214. <https://doi.org/10.1016/j.injury.2014.04.043>

Longview (n.d.). Nutty Narrows Bridge. <https://www.mylongview.com/400/Nutty-Narrows-Bridge>

Low, P. (2012). The Cambridge Declaration on Consciousness. *Proceedings of the Francis Crick Memorial Conference*, 1–2. <https://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf>

Mackenzie, C., Rogers, W., & Dodds, S. (Eds). (2014). *Vulnerability: New Essays in Ethics and Feminist Philosophy*. Oxford University Press.

Macpherson, C. B. (1978). *The Life and Times of Liberal Democracy*. Opus Books.

Magaña, P. (2022). *The kitchen and the forum: Nonhuman animals and their political representation* [Pompeu Fabra University]. <http://hdl.handle.net/10803/687308>

Magaña, P. (2024a). The Boundary Problem in Democratic Theory: A Methodological Approach. *Res Publica*, 30(2), 305–322. <https://doi.org/10.1007/s11158-023-09617-z>

Magaña, P. (2024b). Nonhuman animals and the all affected interests principle. *Critical Review of International Social and Political Philosophy*, 27(7), 1253–1276. <https://doi.org/10.1080/13698230.2022.2100962>

Mancini, C., Metcalfe, D., & Hirsch-Matsioulas, O. (2024). Justice by Design: The Case for Equitable and Inclusive Smart Cities for Animal Dwellers. In S. Heitlinger, M. Foth, & R. Clarke (Eds), *Designing More-than-Human Smart Cities: Beyond Sustainability, Towards Cohabitation* (pp. 187–204). Oxford University Press. <https://doi.org/10.1093/9780191980060.003.0011>

Martens, K., & Lucas, K. (2018). Perspectives on transport and social justice. In G. Craig (Ed.), *Handbook on Global Social Justice* (pp. 351–370). Elgar.

Martin, A. K. (2023). *The Moral Implications of Human and Animal Vulnerability*. Springer. <https://doi.org/10.1007/978-3-031-25078-1>

Massei, G., Jacob, J., & Hinds, L. A. (2024). Developing fertility control for rodents: A framework for researchers and practitioners. *Integrative Zoology*, 19(1), 87–107. <https://doi.org/10.1111/1749-4877.12727>

Mccollister, M. F., & Van Manen, F. T. (2010). Effectiveness of Wildlife Underpasses and Fencing to Reduce Wildlife-Vehicle Collisions. *The Journal of Wildlife Management*, 74(8), 1722–1731. <https://doi.org/10.2193/2009-535>

McFarlane, R., Sleigh, A., & McMichael, T. (2012). Synanthropy of Wild Mammals as a Determinant of Emerging Infectious Diseases in the Asian–Australasian Region. *EcoHealth*, 9(1), 24–35. <https://doi.org/10.1007/s10393-012-0763-9>

McKibben, B. (2014). *The End of Nature*. Random House Publishing Group.

McKinney, M. L., & VerBerkmoes, A. (2020). Beneficial Health Outcomes of Natural Green Infrastructure in Cities. *Current Landscape Ecology Reports*, 5(2), 35–44. <https://doi.org/10.1007/s40823-020-00051-y>

McMahan, J. (2002). *The Ethics of Killing: Problems at the Margins of Life*. Oxford University Press.

McMahan, J. (2021). Suffering and Moral Status. In S. Clarke, H. Zohny, & J. Savulescu (Eds), *Rethinking Moral Status* (pp. 23–39). Oxford University Press. <https://doi.org/10.1093/oso/9780192894076.003.0002>

McShane, K. (2013). Ecocentrism. In C. Death (Ed.), *Critical Environmental Politics* (pp. 83–90). Routledge.

Menkel-Meadow, C. (2007). Restorative Justice: What Is It and Does It Work? *Annual Review of Law and Social Science*, 3(3), 161–187. <https://doi.org/10.1146/annurev.lawsocsci.2.081805.110005>

Meutia, I. F., Sujadmiko, B., Putri, D. E., & Kurniawan, D. (2021). The Idea of Youth Detention Center: Education Program and Policy. *Journal of Legal, Ethical and Regulatory Issues*, 24(1).

Miklosi, Z. (2012). Against the Principle of All-Affected Interests. *Social Theory and Practice*, 38(3), 483–503. <https://doi.org/10.5840/soctheorpract201238326>

Milburn, J. (2021). Welcoming, Wild Animals, and Obligations to Assist. *Journal of Agricultural and Environmental Ethics*, 34(6), 33. <https://doi.org/10.1007/s10806-021-09873-0>

Milburn, J. (2022). *Just Fodder: The Ethics of Feeding Animals*. McGill-Queen's University Press.

Milburn, J. (2024). Relational Animal Ethics (and why it isn't easy). *Food Ethics*, 9(1). <https://doi.org/10.1007/s41055-023-00139-1>

Mill, J. S. (2008). *Utilitarianism and On Liberty: Including Mill's 'Essay on Bentham' and Selections from the Writings of Jeremy Bentham and John Austin*. John Wiley & Sons.

Millar, B. (2024). Can Animals Grieve? *Ergo an Open Access Journal of Philosophy*, 11(17), 442–465. <https://doi.org/10.3998/ergo.6157>

Miller, D. (2010). Why Immigration Controls Are Not Coercive: A Reply to Arash Abizadeh. *Political Theory*, 38(1), 111–120. <https://doi.org/10.1177/0090591709348194>

Miller, D. (2016). *Strangers in Our Midst: The Political Philosophy of Immigration*. Harvard University Press.

Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: An observational population study. *The Lancet*, 372(9650), 1655–1660. [https://doi.org/10.1016/S0140-6736\(08\)61689-X](https://doi.org/10.1016/S0140-6736(08)61689-X)

Monsó, S. (2024). *Playing Possum: How Animals Understand Death*. Princeton University Press.

Moreira Soares, J. (2024). PAN quer criar uma linha 112 de emergência animal. *Jornal de Notícias*.

<https://www.jn.pt/nacional/artigo/pan-quer-criar-uma-linha-112-de-emergencia-animal/17808667>

Mosman, J. D., Borland, H. P., Gilby, B. L., Rummell, A. J., Olds, A. D., & Henderson, C. J. (2024). Detrimental effects of urbanisation on animal assemblages and a key ecological function persist across ecosystems. *Landscape Ecology*, 39(12), 204. <https://doi.org/10.1007/s10980-024-01989-8>

Müller, N. D. (2022). *Kantianism for Animals: A Radical Kantian Animal Ethic*. Springer Nature.

Mullineaux, E., & Pawson, C. (2024). Trends in Admissions and Outcomes at a British Wildlife Rehabilitation Centre over a Ten-Year Period (2012–2022). *Animals*, 14(1). <https://doi.org/10.3390/ani14010086>

Murado Carballo, I. (2025). Helping Wild Animals Affected by Disasters. *Journal of Agricultural and Environmental Ethics*, 38(4). <https://doi.org/10.1007/s10806-025-09959-z>

Mysterud, A., Yoccoz, N. G., Stenseth, N. C., & Langvatn, R. (2001). Effects of age, sex and density on body weight of Norwegian red deer: Evidence of density-dependent senescence. *Proceedings of the Royal Society of London. Series B: Biological Sciences*, 268(1470), 911–919. <https://doi.org/10.1098/rspb.2001.1585>

Nagel, T. (Ed.). (2012). Death. In *Mortal Questions* (pp. 1–10). Cambridge University Press. <https://doi.org/10.1017/CBO9781107341050.003>

Nakayama, S. M. M., Morita, A., Ikenaka, Y., Mizukawa, H., & Ishizuka, M. (2019). A review: Poisoning by anticoagulant rodenticides in non-target animals globally. *Journal of Veterinary Medical Science*, 81(2), 298–313. <https://doi.org/10.1292/jvms.17-0717>

Natural England (2023). *Prepare a planning proposal to avoid harm or disturbance to protected species.* <https://www.gov.uk/guidance/prepare-a-planning-proposal-to-avoid-harm-or-disturbance-to-protected-species>

Natural England, & Department for Environment, Food & Rural Affairs (2025). *Protected species and development: Advice for local planning authorities.* <https://www.gov.uk/guidance/protected-species-how-to-review-planning-applications>

NaturScot (2016). *Dealing with construction and birds.* <https://www.nature.scot/doc/dealing-construction-and-birds>

Ng, Y.-K. (1995). Towards welfare biology: Evolutionary economics of animal consciousness and suffering. *Biology and Philosophy*, 10(3), 255–285. <https://doi.org/10.1007/BF00852469>

Niesen, P. (n.d.). *Which All Subjected Principle for Animals?* [Unpublished manuscript]. Faculty of Business, Economics and Social Sciences. University of Hamburg.

Nieuwenhuijsen, M. J. (2021). Green Infrastructure and Health. *Annual Review of Public Health*, 42, 317–328. <https://doi.org/10.1146/annurev-publhealth-090419-102511>

Nozick, R. (1978). *Anarchy, State, and Utopia*. Basic Books.

Nozick, R. (1990). *Examined Life: Philosophical Meditations*. Simon and Schuster.

Nuñez, C. M. V. (2011). Management of wild horses with porcine zona pellucida: History, consequences, and future strategies. In J. Leffhalm (Ed.), *Horses: Biology, Domestication, and Human Interactions* (pp. 85–98). Nova Science Publishers.

Nussbaum, M. C. (2013). *Creating Capabilities: The Human Development Approach*. Harvard University Press.

Nussbaum, M. C. (2024). *Justice for Animals: Our Collective Responsibility*. Simon and Schuster.

O'Brien, G. D. (2023). On Our Moral Entanglements with Wild Animals. *Food Ethics*, 8(2). <https://doi.org/10.1007/s41055-023-00125-7>

Ochoa Espejo, P. (2016). Taking Place Seriously: Territorial Presence and the Rights of Immigrants. *Journal of Political Philosophy*, 24(1), 67–87. <https://doi.org/10.1111/jopp.12061>

OIPA (2024). *Stop Cruelty Towards Liminal Animals*. <https://www.oipa.org/international/stop-cruelty-towards-liminal-animals/>

Oshana, M. (2003). How much should we value autonomy? *Social Philosophy and Policy*, 20(2), 99–126. <https://doi.org/10.1017/S0265052503202041>

Otsuka, M. (2005). *Libertarianism without Inequality*. Clarendon Press.

Our World in Data (2023). *Fertility rate vs. Share living in extreme poverty*. Our World in Data. <https://ourworldindata.org/grapher/fertility-rate-vs-the-share-living-in-extreme-poverty?tab=table>

Overall, C. (1993). *Human Reproduction: Principles, Practices, Policies*. Oxford University Press.

Paez, E. (2022). A republic for all sentients: Social freedom without free will. *Pacific Philosophical Quarterly*, 103(3), 620–644. <https://doi.org/10.1111/papq.12351>

Pali, B., Forsyth, M., & Tepper, F. (Eds). (2022). *The Palgrave Handbook of Environmental Restorative Justice*. Springer. <https://doi.org/10.1007/978-3-031-04223-2>

Palmer, C. (2003). Placing Animals in Urban Environmental Ethics. *Journal of Social Philosophy*, 34(1), 64–78. <https://doi.org/10.1111/1467-9833.00165>

Palmer, C. (2010). *Animal Ethics in Context*. Columbia University Press.

Palmer, C. (2011). The Moral Relevance of the Distinction Between Domesticated and Wild Animals. In T. L. Beauchamp & R. G. Frey (Eds), *The Oxford Handbook of Animal*

*Ethics* (pp. 701–725). Oxford University Press.  
<https://doi.org/10.1093/oxfordhb/9780195371963.013.0026>

Palmer, C. (2016). Saving Species but Losing Wildness: Should We Genetically Adapt Wild Animal Species to Help Them Respond to Climate Change? *Midwest Studies In Philosophy*, 40(1), 234–251. <https://doi.org/10.1111/misp.12058>

Palmer, C. (2018). Should We Offer Assistance to Both Wild and Domesticated Animals? *The Harvard Review of Philosophy*, 25, 7–19.  
<https://doi.org/10.5840/harvardreview201891015>

Palmer, C. (2019). The Laissez-Faire View: Why We're Not Normally Required to Assist Wild Animals. In B. Fischer (Ed), *The Routledge Handbook of Animal Ethics* (pp. 444–454). Routledge.

Palmer, C. (2021). Assisting Wild Animals Vulnerable to Climate Change: Why Ethical Strategies Diverge. *Journal of Applied Philosophy*, 38(2), 179–195.  
<https://doi.org/10.1111/japp.12358>

Paradis, E., Baillie, S. R., Sutherland, W. J., & Gregory, R. D. (2002). Exploring density-dependent relationships in demographic parameters in populations of birds at a large spatial scale. *Oikos*, 97(2), 293–307.  
<https://doi.org/10.1034/j.1600-0706.2002.970215.x>

Parfit, D. (1986). *Reasons and Persons*. Oxford University Press.

Parfit, D. (2011). *On what matters*. Oxford University Press.

Parijs, P. V. (1995). *Real Freedom for All: What (if Anything) Can Justify Capitalism?* Clarendon Press.

Paul, M., Sen Majumder, S., Sau, S., Nandi, A. K., & Bhadra, A. (2016). High early life mortality in free-ranging dogs is largely influenced by humans. *Scientific Reports*, 6, 19641. <https://doi.org/10.1038/srep19641>

Payne, N. (2016). *Wild Indian Elephant Dies Trying to Escape Captivity*. National Geographic.

<https://www.nationalgeographic.com/animals/article/wildlife-asian-elephants-captivity-India>

PAZ (n.d.). *Cohabitons avec les animaux liminaires.*

<https://zoopolis.fr/nos-campagnes/cohabitons-avec-les-animaux-liminaires/>

Pejcic, G. (2024). Aportes para pensar en urbanismos interespecies. *Astrolabio*, 33, Article 33. <https://doi.org/10.55441/1668.7515.n33.42396>

Pennings, F. (2012). EU Citizenship: Access to Social Benefits in Other EU Member States. *International Journal of Comparative Labour Law and Industrial Relations*, 28(3), 307–333. <https://doi.org/10.54648/ijcl2012018>

Pepper, A. (2016). Beyond Anthropocentrism: Cosmopolitanism and Nonhuman Animals. *Global Justice: Theory Practice Rhetoric*, 9(2), 114–133. <https://doi.org/10.21248/gjn.9.2.114>

Pepper, A., & Healey, R. (2024). The Magpies: Reflections on Liminality, Domestication, and Animal Agency. In P. Arcari (Ed), *Heterotopia, Radical Imagination, and Shattering Orders* (pp. 99–112). Routledge.

Perez Vega, C. (2024). *The environmental impact of artificial lighting in urban settings: Gaps, challenges, and sustainable lighting design* [Freie Universität Berlin]. <https://refubium.fu-berlin.de/handle/fub188/43770>

Peters, A. (2018). *These bat-friendly lights show how to make cities safe for nature*. Fast Company. <https://www.fastcompany.com/90179848/these-bat-friendly-lights-show-how-to-make-cities-safe-for-nature>

Pettit, P. (1997). *Republicanism: A Theory of Freedom and Government*. Oxford University Press.

Pogge, T. (1998). A Global Resources Dividend. In D. A. Crocker & T. Linden (Eds), *Ethics of Consumption: The Good Life, Justice, and Global Stewardship* (pp. 501–536). Rowman & Littlefield.

Pogge, T. (2002). *World Poverty and Human Rights*. Polity.

Pogge, T. (2014). Are We Violating the Human Rights of the World's Poor: Responses to Four Critics. *Yale Human Rights & Development Law Journal*, 17, 74–119.

Prevedello, J. A., Dickman, C. R., Vieira, M. V., & Vieira, E. M. (2013). Population responses of small mammals to food supply and predators: A global meta-analysis. *Journal of Animal Ecology*, 82(5), 927–936. <https://doi.org/10.1111/1365-2656.12072>

Proulx, G., & Rodtka, D. (2019). Killing Traps and Snares in North America: The Need for Stricter Checking Time Periods. *Animals*, 9(8), 570. <https://doi.org/10.3390/ani9080570>

Prusak, B. G. (2013). *Parental Obligations and Bioethics: The Duties of a Creator*. Routledge.

Purugganan, M. D. (2022). What is domestication? *Trends in Ecology & Evolution*, 37(8), 663–671. <https://doi.org/10.1016/j.tree.2022.04.006>

Quirós-Fernández, F., Marcos, J., Acevedo, P., & Gortázar, C. (2017). Hunters serving the ecosystem: The contribution of recreational hunting to wild boar population control. *European Journal of Wildlife Research*, 63(3), 57. <https://doi.org/10.1007/s10344-017-1107-4>

Raap, T., Pinxten, R., & Eens, M. (2015). Light pollution disrupts sleep in free-living animals. *Scientific Reports*, 5(1). <https://doi.org/10.1038/srep13557>

Rachels, J., & Rachels, S. (2012). *The Elements of Moral Philosophy*. McGraw Hill.

Ransom, J. I. (2012). *Population ecology of feral horses in an era of fertility control management* [Colorado State University]. <https://www.proquest.com/docview/1046586937/abstract/BDF1CC766A2543F8PQ/1>

Rawls, J. (1999). *A Theory of Justice: Revised Edition*. Harvard University Press.

Raz, J. (1986). *The Morality of Freedom*. Clarendon Press.

Rea, A. W., & Munns, W. R., Jr. (2017). The value of nature: Economic, intrinsic, or both? *Integrated Environmental Assessment and Management*, 13(5), 953–955. <https://doi.org/10.1002/ieam.1924>

Redshaw, J., & Bulley, A. (2018). Future-thinking in animals: Capacities and limits. In G. Oettingen, A. T. Sevincer & P. M. Gollwitzer (Eds), *The psychology of thinking about the future* (pp. 31–51). The Guilford Press.

Regan, T. (1983). *The Case for Animal Rights*. Routledge & Kegan Paul.

Rhyan, J. C., Miller, L. A., & Fagerstone, K. A. (2013). The use of contraception as a disease management tool in wildlife. *Journal of Zoo and Wildlife Medicine*, 44(4). <https://doi.org/10.1638/1042-7260-44.4S.S135>

Rice, C. M. (2013). Defending the Objective List Theory of Well-Being. *Ratio*, 26(2), 196–211. <https://doi.org/10.1111/rati.12007>

Roberts, M. A., & Wasserman, D. T. (2009). *Harming Future Persons: Ethics, Genetics and the Nonidentity Problem*. Springer.

Rödel, H. G., Bora, A., Kaetzke, P., Khaschei, M., Hutzelmeyer, H., & von Holst, D. (2004). Over-winter survival in subadult European rabbits: Weather effects, density dependence, and the impact of individual characteristics. *Oecologia*, 140(4), 566–576. <https://doi.org/10.1007/s00442-004-1616-1>

Rodin, D. (2011). Justifying Harm. *Ethics*, 122(1), 74–110. <https://doi.org/10.1086/662295>

Rollin, B. E. (2006). *Animal Rights & Human Morality*. Prometheus Books.

Rolston III, H. (2004). Life and the Nature of Life—In Parks. *The George Wright Forum*, 21(2), 69–77.

Rowley, J., Richards, N., Carduff, E., & Gott, M. (2021). The impact of poverty and deprivation at the end of life: A critical review. *Palliative Care and Social Practice*, 15. <https://doi.org/10.1177/26323524211033873>

Ruffino, L., Salo, P., Koivisto, E., Banks, P. B., & Korpimäki, E. (2014). Reproductive responses of birds to experimental food supplementation: A meta-analysis. *Frontiers in Zoology*, 11(1). <https://doi.org/10.1186/s12983-014-0080-y>

Rummery, K. (2023). The right to care? Social citizenship and care poverty in developed welfare states. *International Journal of Sociology and Social Policy*, 43(1–2), 33–47. <https://doi.org/10.1108/IJSSP-09-2021-0229>

Sáenz-de-Santa-María, A., & Tellería, J. L. (2015). Wildlife-vehicle collisions in Spain. *European Journal of Wildlife Research*, 61(3), 399–406. <https://doi.org/10.1007/s10344-015-0907-7>

Saitoh, T., Bjørnstad, O. N., & Stenseth, N. C. (1999). Density Dependence in Voles and Mice: A Comparative Study. *Ecology*, 80(2), 638–650.

Salamone, J. D., Cousins, M. S., & Bucher, S. (1994). Anhedonia or anergia? Effects of haloperidol and nucleus accumbens dopamine depletion on instrumental response selection in a T-maze cost/benefit procedure. *Behavioural Brain Research*, 65(2), 221–229. [https://doi.org/10.1016/0166-4328\(94\)90108-2](https://doi.org/10.1016/0166-4328(94)90108-2)

Schilthuizen, M. (2018). *Darwin Comes to Town*. Hachette.

Scruton, R. (2006). *Animal Rights and Wrongs*. A&C Black.

Sebo, J. (2017). Agency and Moral Status. *Journal of Moral Philosophy*, 14(1), 1–22. <https://doi.org/10.1163/17455243-46810046>

Sebo, J. (2022). *Saving Animals, Saving Ourselves: Why Animals Matter for Pandemics, Climate Change, and Other Catastrophes*. Oxford University Press.

Sebo, J. (2025). *The Moral Circle: Who Matters, What Matters, and Why*. W. W. Norton & Company.

Seglow, J. (2018). Parental partiality. In A. Gheaus, G. Calder, & J. De Wispelaere (Eds), *The Routledge Handbook of the Philosophy of Childhood and Children* (pp. 180–190). Routledge.

Seiler, A., & Helldin, J. O. (2006). Mortality in wildlife due to transportation. In J. Davenport & J. L. Davenport (Eds), *The Ecology of Transportation: Managing Mobility for the Environment* (pp. 165–189). Springer. [https://doi.org/10.1007/1-4020-4504-2\\_8](https://doi.org/10.1007/1-4020-4504-2_8)

Sen, A. (1980). *Equality of What?* Cambridge University Press.

Sen, A. (1999). *Development as Freedom*. Oxford University Press.

Senar, J. C., Carrillo-Ortiz, J., Arroyo, L., Montalvo, T., & Perachó, V. (2009). Estima de la abundancia de palomas (*Columba livia* var.) de la ciudad de Barcelona y valoración de la efectividad del control por eliminación de individuos. *Arxiu de la Miscel·lània Zoològica*, 7, 62–71. <https://doi.org/10.32800/amz.2009.07.0062>

Shachar, A., Bauböck, R., Bloemraad, I., & Vink, M. P. (2017). *The Oxford Handbook of Citizenship*. Oxford University Press.

Shafer-Landau, R. (2010). *The Fundamentals of Ethics*. Oxford University Press.

Sheeran, N., Jenkins, A., Humphreys, T., Ter Horst, S., & Higgins, M. (2024). Investigating the Impact of Reproductive Coercion and Intimate Partner Violence on Psychological and Sexual Wellbeing. *Journal of Interpersonal Violence*, 40(3–4), 726–755. <https://doi.org/10.1177/08862605241253026>

Sheikh, H., Foth, M., & Mitchell, P. (2023). Reparative futures of smart urban governance: A speculative design approach for multispecies justice. *Futures*, 154. <https://doi.org/10.1016/j.futures.2023.103266>

Shiffrin, S. V. (2012). Harm and its moral significance. *Legal Theory*, 18(3), 357–398. <https://doi.org/10.1017/S1352325212000080>

Shingne, M. C. (2022). The more-than-human right to the city: A multispecies reevaluation. *Journal of Urban Affairs*, 44(2), 137–155. <https://doi.org/10.1080/07352166.2020.1734014>

Shingne, M. C., & Reese, L. A. (2022). Animals in the city: Wither the human-animal divide. *Journal of Urban Affairs*, 44(2), 114–136. <https://doi.org/10.1080/07352166.2020.1779006>

Shue, H. (2020). *Basic Rights: Subsistence, Affluence, and U.S. Foreign Policy: 40th Anniversary Edition*. Princeton University Press.

Sibly, R. M., Barker, D., Denham, M. C., Hone, J., & Pagel, M. (2005). On the Regulation of Populations of Mammals, Birds, Fish, and Insects. *Science*, 309(5734), 607–610. <https://doi.org/10.1126/science.1110760>

Silber, S. J., Barbey, N., Lenahan, K., & Silber, D. Z. (2013). Applying clinically proven human techniques for contraception and fertility to endangered species and zoo animals: A review. *Journal of Zoo and Wildlife Medicine*, 44(4). <https://doi.org/10.1638/1042-7260-44.4S.S111>

Simkulet, W. (2015). The Compensation Principle. *Filosofiska Notiser*, 2(1), 47–60.

Singer, M. G. (1965). Negative and Positive Duties. *The Philosophical Quarterly*, 15(59), 97–103. <https://doi.org/10.2307/2218209>

Singer, P. (1972). Famine, Affluence, and Morality. *Philosophy & Public Affairs*, 1(3), 229–243.

Singer, P. (1993). *Practical Ethics*. Cambridge University Press.

Singer, P. (2023). *Animal Liberation Now*. Random House.

Sinnott-Armstrong, W. (2009). How strong is this obligation? An argument for consequentialism from concomitant variation. *Analysis*, 69(3), 438–442. <https://doi.org/10.1093/analys/anj076>

Slater, M., & Weiss, E. (2020). Sterilization Programs and Population Control. In S. White (Eds), *High-Quality, High-Volume Spay and Neuter and Other Shelter Surgeries* (pp. 453–475). John Wiley & Sons, Ltd. <https://doi.org/10.1002/9781119646006.ch24>

Sleat, M. (2022). Realism and Political Normativity. *Ethical Theory and Moral Practice*, 25(3), 465–478. <https://doi.org/10.1007/s10677-021-10239-8>

Smith, K. K. (2012). *Governing Animals: Animal Welfare and the Liberal State*. Oxford University Press.

Sol, D., Jovani, R., & Torres, J. (2000). Geographical variation in blood parasites in feral pigeons: The role of vectors. *Ecography*, 23(3), 307–314. <https://doi.org/10.1111/j.1600-0587.2000.tb00286.x>

Sol, D., Lapietra, O., & González-Lagos, C. (2013). Behavioural adjustments for a life in the city. *Animal Behaviour*, 85(5), 1101–1112. <https://doi.org/10.1016/j.anbehav.2013.01.023>

Sol, D., Santos, D. M., Garcia, J., & Cuadrado, M. (1998). Competition for Food in Urban Pigeons: The Cost of Being Juvenile. *The Condor*, 100(2), 298–304. <https://doi.org/10.2307/1370270>

Song, S. (2009). Democracy and noncitizen voting rights. *Citizenship Studies*, 13(6), 607–620. <https://doi.org/10.1080/13621020903309607>

Song, S. (2016). The Significance of Territorial Presence and the Rights of Immigrants. In S. Fine & L. Ypi (Eds), *Migration in Political Theory: The Ethics of Movement and Membership* (pp. 225–248). Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199676606.003.0011>

State of California (2020). *California Northstate University Medical Center Project*. <https://ceqanet.lci.ca.gov/2019050019/3>

Steward, H. (2009). Animal Agency. *Inquiry*, 52(3), 217–231. <https://doi.org/10.1080/00201740902917119>

Stocker, M. (1992). *Plural and Conflicting Values*. Clarendon Press.

Strauss, L. (1988). *What is Political Philosophy? And Other Studies*. University of Chicago Press.

Suppakittpaisarn, P., Jiang, X., & Sullivan, W. C. (2017). Green Infrastructure, Green Stormwater Infrastructure, and Human Health: A Review. *Current Landscape Ecology Reports*, 2(4), 96–110. <https://doi.org/10.1007/s40823-017-0028-y>

Swart, J. A. A. (2005). Care for the Wild: An Integrative View on Wild and Domesticated Animals. *Environmental Values*, 14(2), 251–263. <https://doi.org/10.3197/0963271054084902>

Szondy, D. (2020). Power line 'flappers' prove best deterrent for preventing bird deaths. New Atlas. <https://newatlas.com/science/flappers-deterrant-power-line-bird-deaths/>

Tännsjö, T. (1999). Impersonal Morality: A Defense. In *Genes and Morality* (pp. 43–50). Brill.

Taylor, S. (2017). *Beasts of Burden: Animal and Disability Liberation*. The New Press.

Teixeira, C. P., de Azevedo, C. S., Mendl, M., Cipreste, C. F., & Young, R. J. (2007). Revisiting translocation and reintroduction programmes: The importance of considering stress. *Animal Behaviour*, 73(1), 1–13. <https://doi.org/10.1016/j.anbehav.2006.06.002>

The White House (1998). *The Clinton-Gore Livability Agenda*. <https://clintonwhitehouse4.archives.gov/CEQ/011499.html>

Thomas, N. (2016). *Animal Ethics and the Autonomous Animal Self*. Springer.

Thompson, G. G., Thompson, S. A., & Pusey, A. (2023). Poor welfare outcomes resulting from poor management decisions in a translocation of western grey kangaroos (*Macropus fuliginosus*). *Pacific Conservation Biology*, 29(2), 130–140. <https://doi.org/10.1071/PC21037>

Toit, J. du (2019). *The Ethics of Domestication*. Routledge.

Torres, R. T., Linck, P., Pinto, N., Ares-Pereira, G., Barroqueiro, C., Fonseca, C., & Carvalho, J. (2023). Landscape and population drivers of ungulate-vehicle collisions in Portugal. *Applied Geography*, 151. <https://doi.org/10.1016/j.apgeog.2022.102859>

Tribe, A., Hanger, J., McDonald, I. J., Loader, J., Nottidge, B. J., McKee, J. J., & Phillips, C. J. C. (2014). A Reproductive Management Program for an Urban Population of Eastern Grey Kangaroos (*Macropus giganteus*). *Animals*, 4(3), 562–582. <https://doi.org/10.3390/ani4030562>

Turner, A., & Kirkpatrick, J. F. (2002). Effects of immunocontraception on population, longevity and body condition in wild mares (*Equus caballus*). *Reproduction Supplement*, 60, 187–195.

Twigg, L. E., Lowe, T. J., Martin, G. R., Wheeler, A. G., Gray, G. S., Griffin, S. L., O'Reilly, C. M., Robinson, D. J., & Hubach, P. H. (2000). Effects of surgically imposed sterility on free-ranging rabbit populations. *Journal of Applied Ecology*, 37(1), 16–39. <https://doi.org/10.1046/j.1365-2664.2000.00471.x>

Tzoulas, K., Korpela, K., Venn, S., Yli-Pelkonen, V., Kaźmierczak, A., Niemela, J., & James, P. (2007). Promoting ecosystem and human health in urban areas using Green

Infrastructure: A literature review. *Landscape and Urban Planning*, 81(3), 167–178. <https://doi.org/10.1016/j.landurbplan.2007.02.001>

UNFPA (2024). *Interwoven lives, threads of hope: Ending inequalities in sexual and reproductive health and rights*. United Nations Population Fund. <https://www.unfpa.org/sites/default/files/pub-pdf/swp2024-english-240327-web.pdf>

United Nations (2017). *UN New Urban Agenda*. United Nations. <https://unhabitat.org/sites/default/files/2019/05/nua-english.pdf>

Urban Wildlife Trust (n.d.). Wellington Cable Car. *Urban Wildlife Trust*. <https://www.urbanwildlifetrust.org/wellington-cable-car-completion/>

UUWR (n.d.). *Urban Utopia Wildlife Rehabilitation*. Urban Utopia Wildlife Rehabilitation. <https://www.urbanutopiawildlife.org>

Vallentyne, P. (2005). Of Mice and Men: Equality and Animals. *The Journal of Ethics*, 9(3/4), 403–433. <https://doi.org/10.1007/s10892-005-3509-x>

van Gerwen, M. a. a. m., Nieuwland, J., & Meijboom, F. l. b. (2023). What if we lack a licence to kill? Thinking out-of-the-box in our relationship with liminal rodents. In H. Schübel & I. Wallimann-Helmer (Eds), *Justice and food security in a changing climate* (pp. 224–229). Wageningen Academic Publishers. [https://doi.org/10.3920/978-90-8686-915-2\\_33](https://doi.org/10.3920/978-90-8686-915-2_33)

Varelius, J. (2006). The value of autonomy in medical ethics. *Medicine, Health Care, and Philosophy*, 9(3), 377–388. <https://doi.org/10.1007/s11019-006-9000-z>

Vasconcelos, P., Paúl, C., Serruya, S. J., Ponce de León, R. G., & Nobre, P. (2023). A systematic review of sexual health and subjective well-being in older age groups. *Revista Panamericana de Salud Pública*, 46. <https://doi.org/10.26633/rpsp.2022.179>

Verhoog, A. (1992). Ethics and Genetic Engineering of Animals. In A. W. Musschenga, B. Voorzanger, & A. Soeteman (Eds), *Morality, Worldview, and Law. The Idea of a Universal Morality and its Critics* (pp. 267–278). Van Gorcum.

Villaseñor, N. R., Escobar, M. A. H., & Estades, C. F. (2013). There is no place like home: High homing rate and increased mortality after translocation of a small mammal. *European Journal of Wildlife Research*, 59(5), 749–760. <https://doi.org/10.1007/s10344-013-0730-y>

Vink, J. (2020). *The Open Society and Its Animals*. Springer Nature.

Visintin, C., Golding, N., van der Ree, R., & McCarthy, M. A. (2018). Managing the timing and speed of vehicles reduces wildlife-transport collision risk. *Transportation Research Part D: Transport and Environment*, 59, 86–95. <https://doi.org/10.1016/j.trd.2017.12.003>

Walter, J. A., Grayson, K. L., & Johnson, D. M. (2017). Variation in Allee effects: Evidence, unknowns, and directions forward. *Population Ecology*, 59(2), 99–107. <https://doi.org/10.1007/s10144-017-0576-3>

WECT (2024). *Ocean Isle Beach commissioners approve proposal for turtle-friendly street lights*.

<https://www.wect.com/2024/06/10/ocean-isle-beach-commissioners-vote-turtle-friendly-street-lights-proposal/>

Wenz, P. S. (1988). *Environmental Justice*. State University of New York Press.

Whisson, D. A., Holland, G. J., & Carlyon, K. (2012). Translocation of overabundant species: Implications for translocated individuals. *The Journal of Wildlife Management*, 76(8), 1661–1669. <https://doi.org/10.1002/jwmg.401>

White, A. E., Sebo, J., Franks, B., Minelli, A., Wyman, K. M., Krupa, D., Morris, V., Sims, T., & Caplan, A. L. (2024). *Wild Animal Welfare in Local Policies on Land Use and the Built Environment*. Guarini Center on Environmental, Energy & Land Use Law.

White, T. (2010). Domination, resistance and accommodation in China's one-child campaign. In E. Perry & M. Selden (Eds), *Chinese Society. Change, Conflict and Resistance* (pp. 171–196). Routledge.

Wilcox, M. G. (2021). The Intrinsic Value of Liberty for Non-Human Animals. *The Journal of Value Inquiry*, 55(4), 685–703. <https://doi.org/10.1007/s10790-020-09762-1>

Wild Animal Initiative (n.d.). *Wild Animal Initiative*. <https://www.wildanimalinitiative.org/>

Williams, C. K., Davey, C. C., Moore, R. J., Hinds, L. A., Silvers, L. E., Kerr, P. J., French, N., Hood, G. M., Pech, R. P., & Krebs, C. J. (2007). Population responses to sterility imposed on female European rabbits. *Journal of Applied Ecology*, 44(2), 291–301. <https://doi.org/10.1111/j.1365-2664.2006.01264.x>

Wilson, G. R., & Edwards, M. (2019). Professional kangaroo population control leads to better animal welfare, conservation outcomes and avoids waste. *Australian Zoologist*, 40(1), 181–202. <https://doi.org/10.7882/AZ.2018.043>

Wolch, J. (2002). Anima urbis. *Progress in Human Geography*, 26(6), 721–742. <https://doi.org/10.1191/0309132502ph400oa>

Woppard, F. (2012). The Doctrine of Doing and Allowing II: The Moral Relevance of the Doing/Allowing Distinction. *Philosophy Compass*, 7(7), 459–469. <https://doi.org/10.1111/j.1747-9991.2012.00492.x>

Yaffe, G. (2018). *The Age of Culpability: Children and the Nature of Criminal Responsibility*. Oxford University Press.

*Yick Wo v. Hopkins*, 118 U.S. 356 (1886). <https://supreme.justia.com/cases/federal/us/118/356/>

Zask, J. (2020). *Zoocities: Des animaux sauvages dans la ville*. Premier Parallèle.

Zellmer, A. J., & Goto, B. S. (2022). Urban wildlife corridors: Building bridges for wildlife and people. *Frontiers in Sustainable Cities*, 4. <https://doi.org/10.3389/frsc.2022.954089>

Zentall, T. R., & Stagner, J. (2011). Maladaptive choice behaviour by pigeons: An animal analogue and possible mechanism for gambling (sub-optimal human decision-making behaviour). *Proceedings. Biological Sciences*, 278(1709), 1203–1208. <https://doi.org/10.1098/rspb.2010.1607>

Zhong, K., Chen, X., Zhang, J., Jiang, X., Zhang, J., Huang, M., Bi, S., Ju, C., & Luo, Y. (2024). Recent Advances in Oral Vaccines for Animals. *Veterinary Sciences*, 11(8), 353. <https://doi.org/10.3390/vetsci11080353>

Zuber, S., Venkatesh, N., Tännsjö, T., Tarsney, C., Stefánsson, H. O., Steele, K., Spears, D., Sebo, J., Pivato, M., Ord, T., Ng, Y.-K., Masny, M., MacAskill, W., Lawson, N., Kuruc, K., Hutchinson, M., Gustafsson, J. E., Greaves, H., Forsberg, L., Fleurbaey, M., Coffey, D., Cato, S., Castro, C., Campbell, T., Budolfson, M., Broome, J., Berger, A., Beckstead, N. & Asheim, G. B. (2021). What Should We Agree on about the Repugnant Conclusion? *Utilitas*, 33(4), 379–383. <https://doi.org/10.1017/S095382082100011X>

Zutlevics, T. L. (2001). Libertarianism and Personal Autonomy. *The Southern Journal of Philosophy*, 39(3), 461–471. <https://doi.org/10.1111/j.2041-6962.2001.tb01828.x>