

Shedding Light on Blind Spots

An ethical discussion regarding Domesticated Animal Citizens within Agroecology

Melina Katikaridis

Independent project • 30 credits

Swedish University of Agricultural Sciences, SLU
Faculty of Landscape Architecture, Horticulture and Crop Production Science
Agroecology Masters' Program
Alnarp 2025

Shedding Light on Blind Spots. An ethical discussion regarding Domesticated Animal Citizens within Agroecology

Melina Katikaridis

Supervisor: Helena Röcklinsberg, SLU, Department of Applied Animal

Science and Welfare

Examiner: Georg Carlsson, SLU, Department of Biosystems and

Technology

Credits: 30 credits
Level: A2E

Course title: Indepdendent Project in Agricultural Science

Course code: EX0848 VT2025
Programme: Agroecology

Course coordinating dept: Department of Biosystems and Technology

Place of publication: Alnarp Year of publication: 2025

Copyright: All featured images are used with permission from the

copyright owner.

Keywords: agroecology, animal ethics, justice, animal rights theory

Swedish University of Agricultural Sciences

Faculty of Landscape Architectur, Horticulture and Crop Production Science Department of Biosystems and technology

Abstract

Agroecology as a sustainable alternative to our current food system has a strong accentuation on justice. While there is no widely recognized and coherent approach to animal ethics in agroecology, the inclusion of domesticated animals in the farming system is a prerequisite. From an Animal Rights Theory perspective there are hidden power imbalances and blind spots within the agroecological framework, which recreate and reinforce injustice and thereby weaken the agroecological framework. The goal of this thesis is to investigate if and how agroecology can be improved by integrating 'domesticated animal citizens', a concept introduced by Donaldson and Kymlicka (2011), including its practical implications, into the agroecological framework. The concept of domesticated animal citizens outgrows moral hierarchy and, in that way, expands the ecological and welfarist approach present in the agroecological framework. The concept furthermore provides a coherent approach in respect of our moral responsibility towards domesticated animals, namely perceiving them as selves with inviolable rights and relational duties - within the agroecological framework domesticated animals tend to be objectified. Also, it entails dependent agency, which enables the agency of domesticated animals through trusted relationships with humans and elaborates on nine practical aspects. Applying the concept of domesticated animal citizens onto the agroecological framework does not entail the exclusion of domesticated animals from farming systems per se. Rather, it entails a different perspective on animals and a change in how they are integrated. Conclusively, the concept of domesticated animal citizens sheds light on agroecological blind spots, including moral hierarchy, objectification of animals, moral responsibility and the lacking approach to animal ethics, while being an enrichment for the agroecological framework, making it more coherent and its call for justice more consistent.

Keywords: agroecology, animal ethics, justice, animal rights theory

Popular Science Summary

In 1948, the General Assembly of the United Nations adopted the Universal Declaration of Human Rights to support and strengthen justice. This declaration does not only encompass inviolable rights, those are rights which cannot be taken away under any circumstances, but also duties. In the course of the Human Rights Revolution, the idea of inviolable rights for humans, ensuring that humans are not treated as a means for the greater societal good became a widely accepted one. Similarly, to support and strengthen justice, Animal Rights Theory has traditionally been demanding inviolable rights for sentient animals. This idea is however not established in society including the agroecological framework. Agroecology as a sustainable alternative to our current food system has a strong accentuation on justice. While there is no widely recognized and coherent approach to animal ethics in agroecology, the inclusion of domesticated animals in the farming system is a prerequisite. Their inclusion is implicitly justified by emphazising their beneficial effect on agroecosystems (ecological approach) and hence their usefulness to humans as well as that animals in agroecosystems tend to have a decent life (welfarist approach). From an Animal Rights Theory perspective there are hidden power imbalances and blind spots within the agroecological framework, which recreate and reinforce injustice and thereby weaken the agroecological framework. The goal of this thesis is to investigate if and how agroecology can be improved by integrating 'domesticated animal citizens', a concept introduced by Donaldson and Kymlicka (2011), including its practical implications, into the agroecological framework.

The concept of domesticated animal citizens entails that domesticated animals become citizens with rights and duties. It outgrows moral hierarchy, which refers to the elevated moral standing of humans, and, in that way, expands the ecological and welfarist approach present in the agroecological framework. The concept furthermore provides a coherent approach in respect of our moral responsibility towards domesticated animals, namely perceiving them as selves with inviolable rights and relational duties – within the agroecological framework domesticated animals tend to be objectified. Also, it entails dependent agency, which enables the agency of domesticated animals through trusted relationships with humans and elaborates on nine practical aspects of which the use of animal produts is hightly relevant for agroecology. Applying the concept of domesticated animal citizens onto the agroecological framework does not entail the exclusion of domesticated animals from farming systems per se. Rather, it entails a different perspective on animals and a change in how they are integrated. If their full citizenship status is respected, it is for example justifiable to use wool, eggs or dairy. Using animals for meat, however, is not justifiable within that concept.

Conclusively, the concept of domesticated animal citizens sheds light on agroecological blind spots, including moral hierarchy, objectification of animals, moral responsibility and the lacking approach to animal ethics. It is an enrichment for the agroecological framework, making it more coherent and its call for justice more consistent. Its seems that those two approaches fit well together, because both seeks paradigm shifts and provide a vision of hope.

Foreword

This thesis began with a vague idea —with a feeling of dissonance thinking about animals within the agroecological framework. Helena Röcklinsberg supported me patiently in the process of distilling this vague idea into a concrete thesis. I am very grateful for her wisdom and expertise. She made me aware of the book Zoopolis, which was one of the game changers in my process. Another game changer was time: time to let concepts really sink into my system and ripen. Time to discover and time to let go. It was challenging for me to decide which concepts to include and which to leave out, because I was fascinated by so many. Fascination is inspiring and at the same time it is easy to lose focus when fascination is involved. I took some exits in my process, which I did not need to take. I got stuck. Overwhelmed by all the possibilities. Thank you, Helena, for gently guiding me back to the red line.

In respect of my agroecological competences this thesis was quiet a journey. As already mentioned, at the beginning, there was a feeling of dissonance. I was frustrated with agroecology and disappointed because of its lacking approach to animal ethics. Back then I had forgotten about all the positive aspects of the agroecological framework. I had forgotten how much of the agroecological framework was beautiful and elevating. In the course of this thesis, I started reconnecting with the agroecological framework and to appreciate it for what it already is. Being able to see the shortcomings without condemning the whole framework and at the same time not glorifying the framework, because so many things are already great, was such a helpful development for me. Thanks to this development I was able to combine my passion for animals with my reactivated passion for agroecology.

This thesis is for all the small-scale farmers, who rebel against our current food system by integrating agroecological elements into their practice. It is for the uncountable animals cooped up in trucks on their way to their final destination. For a wolf who was slaughtered as a trophy in a bar in Wyoming. For Olli, a caring soul, who was adopted in a hippy town in Mexico and then left behind. And for Rumi, my dog companion, who keeps gifting me with valuable insights.

~Melina Katikaridis

Table of contents

List	of figures	7
Abb	reviations	8
1.	Introduction	9
2.	Material and methods	12
3.	Agroecology	14
3.1	Framework	14
3.2	Food sovereignty, power and justice	16
3.3	Animals	17
4.	Domesticated animal citizens	19
4.1	Moral hierarchy	19
4.2	Moral responsibility	20
4.3	Dependent agency	22
4.4	Practical aspects	24
5.	Discussion	29
5.1	Limitations of the ecological and welfarist approach	29
5.2	From objects to subjects	30
5.3	Integrating domesticated animal citizens into agroecosystems	32
6.	Conclusion	36
7.	Critical reflections	37
References		
App	endix 1: factsheet for agroecologists	40

List of figures

Figure 1:	Visualization of the ten elements of agroecology (FAO 2018)	.15
Figure 2:	Conceptualization of our (1) current treatment of domesticated animals, which	n is
	characterized by moral hierarchy and animals as objects as well as of our (2)
	moral responsibility towards domesticated animals: applying the concept of	
	domesticated animal citizens (Donaldson & Kymlicka 2011), which	
	acknowledges domesticated animals as subjects, as interdependent selves	
	with inviolable rights and relational duties	.31

Abbreviations

Abbreviation Description

ART Animal Rights Theory

TAPE Tool for Agricultural Performace Evaluation

UDHR Universal Declaration of Human Rights

1. Introduction

In this thesis, justice is one of the central elements and a suitable entry point into the following, rather extraordinary concepts. According to the Institutes of Justinian (Roman Law, 6000 AD), justice is defined as "the constant and perpetual will to render each his due" - this definition entails four aspects of justice: (i) individual claim, (ii) obligation, (iii) impartiality and (iv) agency (Miller 2021). The first aspect refers to how individuals are treated and what their entitlements are. The second aspect indicates the obligatory nature of justice including its needed enforcement. Impartiality implies that justice treats similar cases alike, therefore stable rules enforcing justice are required. The last aspect expresses that justice necessitates an agent, meaning an individual who has the capacity for agency.

"No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms." (United Nations 1948)

To support and strengthen justice, especially after World War II, the General Assembly of the United Nations adopted the Universal Declaration of Human Rights (UDHR) in December 1948, (United Nations 2025a). Its core principles, including universality, interdependence, equality and non-discrimination (United Nations 2025b), are in accordance with and support the four aspects of justice. The preceding quote is part of this declaration, more precisely it is its fourth article (United Nations 1948). The UDHR does not only encompass inviolable rights, those are rights which cannot be taken away under any circumstances (for example article 4), but also duties – for example the duties to the community in article 29 (United Nations 1948). In the course of the Human Rights Revolution, the idea of inviolable rights for humans, ensuring that humans are not treated as a means for the greater societal good (Kantian conception of respect for individuals), became a widely accepted one (Donaldson & Kymlicka 2011).

Similarly, to support and strengthen justice, Animal Rights Theory (ART) has traditionally been demanding inviolable rights for sentient animals. This idea is however not particularly popular among the broad society, which is according to Donaldson and Kymlicka (2011) a consequence of misconceptions in respect of (i) comparative loss and of (ii) what it would actually mean, if sentient animals were granted inviolable rights. In respect of the first misconception: comparative loss implies that humans compare the loss of beings and find it tragic to different extents. Since most people find the loss of animals less tragic than of humans, they conclude that animals cannot be granted inviolable rights. However, most

people find the loss of a young human being more tragic than the loss of an old human being, in this case they (hopefully) do not conclude that the inviolable rights of the old human can be taken away. Hence, comparative loss cannot be the decisive factor regarding who should be granted inviolable rights. In respect of the second misconception: expanding the concept of inviolable rights to animals does not mean that animals would have all possible inviolable rights humans have - like the right to vote or religious freedom. Inviolable rights depend on capacities and relationships, this is true in the human case and therefore, if we expand inviolable rights to animals, it will also be true for animals and will not lead to unfeasible outcomes. Traditionally, ART has demanded inviolable rights for animals, but never duties — with their citizenship theory Donaldson and Kymlicka (2011) were to first ones (apart from seeds of it in the Ancient Greek tradition) to also demand duties for animals, including citizenship for domesticated animals.

Premises for the concept of domesticated animal citizens are: (i) (domesticated) animals are sentient beings and should therefore be considered selves, (ii) the historic act of domestication was unjust, which creates a moral responsibility and (iii) animals have the capacity for dependent agency. Citizenship for domesticated animals implies that they become full members of an interspecies society and that their status as a full member is protected. Just like human citizens, non-human citizens are granted universal inviolable (negative) rights and relational (positive) duties. Inviolable rights are not based on citizenship – instead they are given to all selves (sentient beings), ensuring that selves are not treated as means for the greater societal good. Universality refers to a "global ethic, based on values or principles that are accessible to and shared by the world as a whole" (Donaldson & Kymlicka 2011, p.44). Relational positive duties refer to ,,duties arising not just from intrinsic characteristics of animals (such as their consciousness), but from the more geographically and historically specific relationships that have developed between particular groups of humans and particular groups of animals. For example, the fact that humans have deliberately bred domesticated animals to become dependent on us generates different moral obligations to cows and dogs than we have to the ducks and squirrels" (Donaldson & Kymlicka 2011, p.6). Hence, Donaldson and Kymlicka propose citizenship status for domesticated animals, which entails the right to nationality, popular sovereignty and democratic political agency. Being a citizens surely comes with certain responsibilities like complying with social norms, this is true for human citizens so it would also be true for domesticated animal citizens.

Also agroecology has a strong accentuation on justice, including the core principles, rights and duties of the UDHR (FAO 2025). Power-imbalances and exploitation within the food system are highly criticized, while empowerment and

justice are worked towards using a participatory approach (Tittonell 2023). Agroecology seeks a paradigm shift by creating a new food system built on equality and justice, which does not perpetuate hidden power imbalances or blind spots (Gliessman 2015). Donaldson and Kymlickas' citizenship theory and agroecology share quite a few parallels. Both make hidden abuse of power visible and advocate for a paradigm shift, because they heavily criticize dominant narratives/approaches of their field of expertise. They share the political connotation and seek equality and justice. Citizenship for domesticated animals entails rights and duties including (dependent) agency leading to empowerment, which are also key elements of agroecology. Where agroecology calls for empowerment of local farmers and women, Donaldson and Kymlicka call for citizenship and dependent agency for domesticated animals. Where agroecology criticizes the global north for dominating the global south, Donaldson and Kymlicka criticize humans for dominating animals. The concept of domesticated animal citizens provides an applicable solution to an ethical problem, namely the instrumentalization of farming animals. Parallel to this, agroecology provides an applicable solution to an ecological and social problem created by industrial agriculture and our global food system. Both solutions are principle based and do not propagate a one-size-fits-all approach - instead, they consider relationships and acknowledge the influence of different contexts. Built on participation and mutual trust, both solutions are striving for inclusion – they provide a vision of a more just future.

Nevertheless, from an ART perspective there are hidden power imbalances and blind spots within the agroecological framework, which recreate and reinforce injustice and thereby weaken the agroecological framework. The goal of this thesis is to investigate if and how agroecology can be improved by integrating 'domesticated animal citizens', a concept introduced by Donaldson and Kymlicka (2011), including its practical implications, into the agroecological framework. Research questions include: what is the role of animals within agroecology? Which approach to animal ethics exists within agroecology? Can the concept of domesticated animal citizens be integrated into the agroecological framework and to which extent would it improve agroecology?

Following this introduction, the material and method of this thesis and subsequently agroecology and its relation to animals are described. I continue by outlining the four topics moral hierarchy, moral responsibility, dependent agency and practical aspects inherent in the concept of domesticated animal citizens. The heart of this thesis is the discussion, in which I touch upon moral hierarchy, moral responsibility, dependent agency and practical aspects. The discussion is followed by a conclusion and a critical reflection.

2. Material and methods

As literature reviews can be defined as a "systematic way of collecting and synthesizing previous research" (Snyder 2019), this research methodology describes the approach of this thesis – at least in a wider sense. Typically, different literature pieces are reviewed until a level of saturation is reached, meaning that no new information is coming up. This can be considered possible for the agroecology part, however not for the animal ethics part.

In this thesis, the first step was to look for and describe a contemporary and universally accepted framework of agroecology including the role of animals and animal ethics in it. Therefore, the literature review took the ten elements of agroecology (FAO 2018) as a starting point, because they come closest of being a uiniversally accepted framworkare of agroecology. They are internationally recognized on a political level and provide an understanding of agroecology concerning aim, tools and values. The ten elemnts are based on literature by Altieri and Gliessmann as well as on the outcomes of a multi-stakeholder conference, which Tittonell was part of. Keeping those three agroecologists in mind, I continued the search via the online library of SLU. I was searching for books, since I was looking for an elaborate and coherent description of the agroecological framework. My first search string was the following: "Title contains agroecology AND any field contains framework". This search resulted in eight books from which one was listed twice and two weren't relevant based on the title and description. From the five remaining books, two were by Gliessman. The three other books all cited Glissman and Tittonell or Altieri. I replaced the term "framework" in my search string with similar expressions like "definition", "introduction" or "approach". Using the word "approach" in the search: "Title contains agroecology AND title contains approach", led me to the latest book by Tittonell. Knowing that Gliessman and Tittonell both contributed to the ten elements of agroecology and thereby to a universal understanding of agroecology, I decided to start with their latest books to describe the agroecological framework. The role of animals within agroecology was well described in those two books, however I couldn't find a coherent approach to animal ethics. I continued to look specifically for agroecological literature focusing on animal ethics. The search string "Title contains agroecology AND any field contains animal ethics" did not lead to any results, when looking for books only. When including all items the search led to four results, of which none provided additional relevant information, which was not already covered by Gliessman (2015) and Tittonell (2023). Changing the search string to "Title contains agroecology AND any field contains animal" resulted in three books of which only two were relevant based on their title and description. The two remaining books both cited Gliessman and one

Titonell as the original source of information and did not lead to new insights concerning a widely recognized approach to animal ethics within agroecology. Subsequently, I decided it was sufficient to focus on Gliessman (2015) and Tittonell (2023) for describing animal ethics within agroecology.

Having described the agroecological framework including the role of animals and animal ethics in it, the second step was to analyse the book Zoopolis: A Political Theory of Animal Rights by Donaldson and Kymlicka (2011), which provides the ethical foundation in respect of animals in this thesis. Based on the insights of step one, I analyzed the content of the book in respect of overlap and deviations in relation to agroecology concerning scope, aim and ethical values. This content analysis took place in several steps: firstly, I highlighted relevant information directly in the book. Secondly, I summarized the highlighted information in bullet points for each chapter in a word document. Thirdly, I made a coherent text from these bullet points and read through it a couple of times to find recurring or related topics. Fourthly, I defined four recurring topics relevant for this thesis - moral hierarchy, moral responsibility, dependent agency and practical aspects -, assigned each topic a color and colored my bullet points from step two accordingly. And fifthly, based on the colored bullet points, I described those four topics and related them to the agroecological framework.

There are undoubtedly many other animal ethical approaches, which are applicable to agroecology. I do not want to rule out that there is an ethical approach out there, which fits better or as well to agroecology as the concept of domesticated animal citizens. Due to the limited scope of this thesis, I was not able to delve into the wide array of animal ethic theories. Please keep this limitation and potential one-sidedness of this thesis in mind. Also, I want to mention that I am aware that humans are also animals. For matters of readability, I decided against more accurate terms like non-human animals and human animals and stuck with the typical dichotomy of humans and animals. Finally, I want to devote some lines to my situatedness. I am a white female, born in 1997, growing up in the lower middle class in a suburb of Munich in Germany. Privileged with free education, I obtained my Bachelor "Animal and Society" in the Netherlands and then continued to do my Master in "Agroecology" in Sweden. Intermittently I have been working and taking part in projects in the Philippines, Peru and the Caribbean, helping me to broaden my view. I am aware that my privileges limit my view and that I have blind spots, which surely affect this thesis.

3. Agroecology

3.1 Framework

The understanding and framework of agroecology has changed over time and varies across different publications. A frequently cited paper, which outlines the various definitions of agroecology, concludes that agroecology can be understood as a science, practice and social movement (Wezel et al. 2009). Tittonell refers to agroecology as "the use of ecological principles for the design and management of sustainable agricultural systems" and defines the ecological principles as the following: diversity, efficiency, recycling, natural regulation and synergies (Tittonell 2023, p.24). In my words: agroecologists observe ecosystems and try to understand the various relationships between ecosystem components. From here they build an agricultural ecosystem (agroecosystem), which mimics natural ecosystems in a way that it enables useful relationships between different components of their system as well as with the surrounding bigger ecosystem. To make it more tangible, here a few examples: choose many different species with different qualities, helping each other with obtaining needed nutrients or with pest control, support mycorrhizae in the soil so that it can enter into a symbiotic relationship with the plant, provide food for insects and receive their gift of pollination, integrate grazing animals and let them contribute to healthy and fertile soils or recognize water and nutrient cycles and incorporating them into the designed system. Agroecologists move away from the belief of an isolated farming operation with isolated components, to the understanding of an incorporated agroecosystem with incorporated relational components. Subsequently, agroecology is able to develop and embrace context-specificsolutions and to take local knowledge into account instead of pushing a "one-sizefits-all"-solution. It empowers local farmers and communities, while eliminating corporate domination (based in the global north). As a transdisciplinary approach, it aims: "to build a new global food system, based on equity, participation, and justice, that is not only sustainable but also helps restore and protect Earth's lifesupport systems." (Gliessman 2015, p.279).

In the past years, agroecology has gained increasing recognition on a political level and different countries as well as international institutions are incorporating agroecology into their agenda. Subsequently, the need for a widely recognized definition of agroecology including a way of measuring the extent of agroecology present in a country arose. For that matter, in 2018, the ten elements of agroecology were introduced by the FAO (FAO 2018). Those elements are based on scientific literature by Altieri and Gliessman and were defined during a multiactor seminar. The Tool for Agroecology Performance Evaluation (TAPE), which

evaluates the extent of agroecological transition of a farming system or even of a country, emerged from those ten elements one year later (FAO 2019). Contingent on the information provided by FAO (2018), elements of agroecology (figure 1), which are relevant for this thesis will be illustrated (FAO 2018).

In the top-middle we see an icon showing an herbivore, a fish and a plant, situated on soil and water. This icon represents the element diversity. Agroecosystems are characterized by their diversity in respect of species and genes, meaning that the inclusion of different animal species into the farming system is supported. Mechanisms of this desired diversity are next to intercropping or crop-rotations, also crop-livestock-systems or fish polyculture farming.

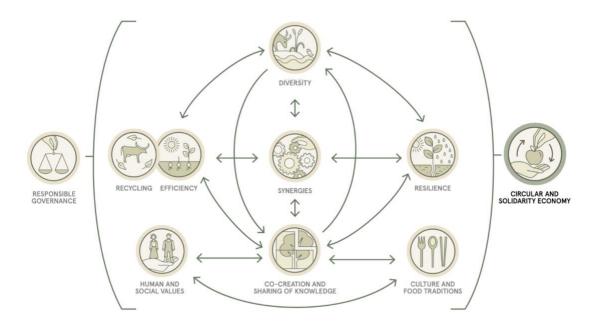


Figure 1: Visualization of the ten elements of agroecology (FAO 2018)

From the very center of the figure, moving to the left, we see two icons very close to each other, efficiency and recycling. Resource-use efficiency, symbolized by three stages of plant growth, has already come up several times and is together with recycling, symbolized by a cow surrounded by three leaves, a focus point of agroecology. They minimize or eliminate the dependency on external resources and create closed farming systems. This has not only positive effects on the farming system (higher productivity, less inputs/costs, higher resilience) but also on the environment (reduced or no pollutants, nutrient cycling and support of other ecological processes). Moving to the bottom-middle we encounter a tree symbol, consisting of different puzzling pieces and thereby the element co-

creation and sharing of knowledge. Context-specific knowledge is a prerequisite for agroecology, incorporating indigenous, practical as well as scientific knowledge. A participatory approach is crucial for the sharing and co-creating of knowledge as well as for building mutual trust. In the lower left corner, there is an icon with an open hand holding two human beings, representing the element human and social values. Agroecology strives to empower humans in the agriculture sector with a focal point on women and youth. Key values are dignity, equity, inclusion as well as justice. On the very left, an icon with a balanced scale can be seen, representing responsible governance, which entails transparency, accountability and inclusivity, while operating on different scales. (FAO 2018)

3.2 Food sovereignty, power and justice

A key word that needs to be included when talking about agroecology is food sovereignty. La Via Campesina (2025) defines it as "the right of peoples to healthy and culturally appropriate food produced through ecologically sound and sustainable methods and their right to define their food and agriculture systems" (La Via Campesina International Peasant Movement 2025). Food sovereignty is inherent in the elements of agroecology and connects them on another level with each other, while painting a picture of the desired outcome and hereby serving as a vision of hope. To realize food sovereignty issues of power and justice need to be acknowledged and addressed: power-inequalities and injustices need to be removed from the food system (Gliessman 2015; Mier Y Terán Giménez Cacho et al. 2018; Altieri & Nicholls 2020; Tittonell 2023). Gliessman (2015) notes: "If agroecology hopes to elicit fundamental change in the food system, it must do more than point out the unsustainable nature of the system in ecological terms or design more sustainable techniques—it must challenge the ideological system that protects the corporate food regime and it must take issue with the concentration of power and the unequal distribution of wealth that lie at the heart of the way the food system operates." (p.310).

Subsequently, empowering humans within the food system, who are due to their financial means, place of birth and/or living or their gender in vulnerable positions, is essential (Gliessman 2015; FAO 2018). Examples include small scale farmers, who are pressured to grow commodity crops for export and to use unsustainable methods in order to make a living; farmers in the global south, whose work is dictated by big-corporations and the global market; women whose work is not recognized or valued and humans whose drinking water is either depleted or polluted due to industrial agriculture. Beings in vulnerable positions and our ecosystems are paying the price for a food system, which generates an abundance of commodity food for a few lucky people. It is a price, which is not even recognized as such. An invisible price. A blind spot. All the injustice, the

power inequalities are blind spots, and our global food system has no interest in making these blind spots visible. While acknowledging power-relations and questions of justice, agroecology "proposes a new model for agriculture and food production that propends to distributive justice, biodiversity and ecosystem restoration, and food sovereignty." (Tittonell 2023, p.3), and it "strives to be a model that doesn't lead to systematic biases and blind spots" (Gliessman 2015, p.303).

3.3 Animals

Tittonell (2023) states: "animals are a crucial component of the agroecosystem, that when properly managed can deliver a series of ecological services besides contributing to farming households' income and nutrition" (p.9). Along those lines, one of the ten categories of TAPE is agricultural biodiversity, measured with the Gini-Simpson index: the higher a farm scores, the more agroecological the farm within this category (FAO 2019). The more plant and animal species and breeds as well as pollinators, beneficial animals and vegetation cover are present, the higher the score (FAO 2019). To enhance the diversity of a farming system, crop-livestock-systems, fish polyculture farming, integrated multi-trophic aquaculture and rotational crop-fish systems are promoted (FAO 2018). For example, fish in a rice-fish co-culture reduces rice pests and the need for fertilizer (Xie et al. 2011) or livestock in a crop-livestock rotation contribute to fertile soils and recycle crop residues (Vall et al. 2023). Tittonell (2023) illustrates another example: "Agroecosystems that raise animals on native or long-term pastures may contribute to biodiversity conservation, carbon sequestration, water regulation and animal welfare" (p.9).

Having outlined that thanks to beneficial characteristics and relationships, including animals in the farming systems is a widespread prerequisite within agroecology, we'll move to a topic that is inherent in this prerequisite: the role of animals. Within agroecology an anthropocentric and ecocentric justification in respect of the use and management of animals in farming systems is implicit: animals are beneficial for humans and ecosystems; therefore, it is legitimate to integrate them into farming systems. Factory farming of animals, however, is highly criticized, mainly because of its detrimental ecological effects, which also affect humans (Gliessman 2015; Tittonell 2023). The following quote by Gliessman (2015) summarizes the role of animals within agroecology very well and reveals that animals ethics are not part of the agroecological framework:

"... the problems lie not so much with the animals themselves or their use as food as they do with the ways the animals are incorporated into today's

agroecosystems and food systems. Animals can play many beneficial roles in agro-ecosystems and therefore make strong contributions to sustainability. Indeed (...) the inclusion of animals in an agroecosystem can often make the difference in realizing ecological sustainability and economic viability." (p.237)

Paradoxically, Tittonell (2023) considers animal welfare as a positive consequence and states that all living beings have an intrinsic value, while Gliessmann (2015) regards domesticated animals as part of our society: "Wherever animals were domesticated, they became an integral part of human societies, receiving both care and respect." (p.240).

Conclusively, animals play a crucial role in agroecology. Their integration into the farming system is warranted based on their usefulness to humans. There is no piece of literature which explicitly explains an agroecological approach to animal ethics: "we see an almost complete absence of animals, despite them often being understood as essential for closing the nutrient cycle in the farming landscape and minimizing the need for external inputs" (Fischer et al. 2024, p.70). Conclusions based on the few statements concerning the role of animals in agroecological literature are contradictory. Domesticated animals are sometimes referred to as mere objects, compared to machines, and sometimes ascribed an inherent value (Gliessman 2015; Tittonell 2023). A widely recognized and coherent approach to animal ethics in agroecology is missing.

4. Domesticated animal citizens

This chapter elaborates on the concept of domesticated animal citizens introduced by Donaldson and Kymlicka (2011). My analysis revealed four relevant topics inherent in this concept and relevant for the agroecological framework. The elaboration is structured along those topics: moral hierarchy, moral responsibility, dependent agency and practical aspects.

4.1 Moral hierarchy

Donaldson and Kymlicka criticize moral hierarchy, which is present in several ethical approaches. With their citizenship approach, acknowledging animals as moral agents, they provide an approach to animal ethics, which makes moral hierarchy, present in society, and its inherent injustice visible. Moral hierarchy is grounded in the belief that humans are more important than other beings. It entails that humans have a higher moral status than animals. Therefore, it is a perequisite that their interests count more than the interests of animals. The question arises: what is the distinct difference between humans and other animals, which justifies the elevated moral standing of humans?

Common ground is that humans are sentient beings: our lives can go better or worse, we experience pleasure and pain, we have an "I" or a self. Recalling the UDHR, human beings are ascribed inviolable rights and cannot be treated as means to an end (United Nations 1948). However, there are also non-human sentient beings – why are those beings not granted those same rights? Donaldson and Kymlicka explain that a common argument is a God-given human superiority, which will not be given further consideration here. Similarly, the denial that animals are sentient beings, does not need to be considered further, because there is an abundance of scientific evidence, which proves otherwise. Another argument why non-human sentient beings should not be granted inviolable rights is that sentience is simply not enough to grant a being inviolate rights. Extra capacities are required to obtain personhood, and personhood is the requirement for being granted inviolable rights. These capacities have been defined in various ways, typically grounded in rationality, for example the ability to reflect upon one's behavior or to take part in an intellectual discussion, nevertheless incapable to draw a distinct line between humans and animals. There always is overlap, no matter how hard one tries to find a set of capacities that truly separates humans from animals. The idea of personhood puts the moral status of humans throughout their lives at risks and therefore opposes the idea of human rights theory to protect the most vulnerable. To restrict inviolable rights to humans only can be considered morally arbitrary or specisist. According to Donaldson and Kymlicka:

"(…) any attempt to restrict inviolability to human beings can only be done by radically weakening and destabilizing the scheme of humans rights protection, leaving many humans as well as animals outside the scope of effective protection." (p.23). Humans are not that different from other sentient beings and perceiving those non-human sentient beings as totally different from us, as "the other" leads to factual and moral error.

They conclude that moral hierarchy based on being human allows humans to exploit animals. There is no convincing reasoning why inviolable rights are only granted to humans. Sentience should be the decisive factor for granting moral consideration and also inviolable rights, which then would include all sentient animals. Moral hierarchy reinforces power imbalances, enables exploitation and generates injustice.

4.2 Moral responsibility

Acknowledging all sentient beings as selves and looking at the historic act of domestication, we have no choice but to recognize it as a tremendous injustice that we have inflicted on domesticated animals. We captivated animals with useful traits for us and through controlled reproduction reinforced these traits and made them increasingly dependent on us. Domestication moves away from the needs and wellbeing of animals and towards a greater dependency on as well as utility for humans.

Within traditional ART, abolitionists regard the ending of domesticated animals as our moral responsibility. Domesticated animals are regarded as inferior. There is a perceived dichotomy between wild and domesticated animals: good and bad, how it should be and how it should not be. The solution is a world in which only wild animals exist, who live completely separated from and are not dependent on humans – human-animal-interactions do not exist anymore. Premises are that humans always inflict domination and abuse on animals, when interacting with them and that positive interactions between animals and humans are therefore impossible.

Donaldson and Kymlicka have a different approach: "there is no reason to assume that the remedy to the original injustice of domestication is to extinguish domesticated species" (p.80). They compare the case of domesticated animals to the case of slaves. Would we say that because people abused as slaves in the past experienced injustice, all those people need to become extinct? Traditional ART then might argue that these two cases cannot be compared to each other because domesticated animals are degenerated and therefore intrinsically not able to live a happy life (whereas people abused as slaves are still people and not inferior).

Also, they might say that keeping them from reproducing (necessary to achieve their extinction) is not coercive. Donaldson and Kymlicka (2011) argue that exactly the opposite is true: animals strive to reproduce, "preventing reproduction involves precisely the sort of coercion and confinement that animal rights theorists say makes domestication unjust" (p.81) and is "compound not remedy to the injustice of domestication" (p.81). In respect of the presumed inability of domesticated animals to live a happy life, Donaldson and Kymlicka identify two catalyzers: (i) the misunderstanding of the relation between dependency and dignity or freedom and (ii) the professed non-naturalness of animal-human interactions.

To explain the first catalyzer, the authors point out that the intention and process of domestication was wrong and that abolitionists think that the resulted neotony (retention of juvenile traits) and domesticated animals' dependency of human care are inherently wrong and undignifying. Donaldson and Kymlicka argue against the belief of abolitionism. Firstly, they state that neotony is not only human induced but also naturally occurring in evolutionary processes: several species self-domesticated themselves in order to be able to live in bigger communities. This is also true for humans, only due to neotonization we are able to live in such an enormous society as we do today. In the human case, neotonization does not take away our (perceived) dignity - why should it then take away the dignity of domesticated animals? Secondly, they state that we all are dependent on each other and that this dependency does not entail indignity, it is our reactions to this dependency, which does. According to the authors: "Indignity arises when needs are belittled, exploited and/or unmet (...), when the fact of dependency is used to occlude or stifle opportunities for agency." (p.84).

The second catalyzer, the professed non-naturalness of animals-human interactions, the authors quickly dismantle. We humans live in a world with animals, and we interact with each other – these interactions are not one sided. Animals have as much initiated interactions with humans as humans have initiated interactions with animals. To live in symbiosis with humans is for several animals a great opportunity. The idea that the power of initiating an interaction lays exclusively in the hands of humans is wrong (and anthropocentric) and therefore animal-human interactions should not be regarded as unnatural. Instead of taking measures to make domesticated animals become extinct, our moral obligation is to find ways to interact with domesticated animals, which recognise and values domesticated animals as selves.

4.3 Dependent agency

Acknowledging our moral responsibility towards domesticated animals and recognizing that they are already part of our community, the step towards citizenship for domesticated animals is not far. Citizenship entails becoming a full member of our community, including the right of residence and agency. Agency is vital to exercise citizenship and according to the political philosopher Rawls agency requires a specific capacity, namely, to intellectually take part in public reason (Rawls 2005) Obviously, animals are not able to discuss topics using their rationality – however, nor are a significant number of humans. Does that then mean humans with disabilities cannot express agency?

The disability movement recognizes that humans with disabilities have the capacity to (i) express their subjective good, (ii) adhere to social rules and (iii) shape "the terms of interaction" (Donaldson & Kymlicka 2011, p.104), if those capacities are enabled through dependent agency. This form of agency requires trusting relationships between humans with disabilities and humans without disabilities, through which humans with disabilities are able to exercise their agency. They give this process the name dependent agency, leading to a new understanding of citizenship, which is characterized by inclusivity and the trust model. "To treat someone as a citizen is to look for evidence of their subjective individualized good, and to look for and support areas of individual agency." (p.107), explain Donaldson and Kymlicka. This understanding acknowledges that we are all interdependent (dependency is not the antidote of autonomy!) and is therefore referred to as the model of interdependent citizenship. A model which does not require rational reflection to exercise citizenship.

Donaldson and Kymlicka adopt this model for domesticated animals. Due to the process of domestication, domesticated animals have the previously mentioned three capacities, needed for dependent agency. "Domesticated animals are capable of forming relations with humans that allow them to manifest [i] subjective good, [ii] to cooperate [adhere to social rules] and to [iii] participate [shape terms of interaction]." (p.105), state the authors.

Even though not being able to reflect upon their subjective good, (domesticated) animals do have a subjective good and are able to express it in different ways. However, if we approach (domesticated) animals with the expectation that they don't have a good or that they are unable to express their good, we will find exactly that. Exposed to settings in which their good does not matter, (domesticated) animals give up trying to communicate it to us. It is on us to recognize that (domesticated) animals do communicate with us, if we are open to it. It is our task to observe and learn the language of the individual animal and respond appropriately, encouraging and enabling her agency. This collaborative process leads to an increase in knowledge, trust and expectations, which then

leads to an expanding repertoire of the subjects' language. (Donaldson & Kymlicka 2011)

Since "a basic framework of security and comfort" (p.112) is crucial for this process the previously mentioned trust model comes in and replaces the negotiation model of the social contract regarding political participation. Hence, domesticated animals exercise their political participation by engaging in trusted relationships and with their presence in public spaces. The authors emphasize in this model humans need to be regarded as enablers of domesticated animals' political participation and domesticated animals themselves need to be regarded as agents not as "coerced or captive participants" (p.115).

Citizenship entails adherence with social norms including an equitable baseline of cooperation which requires self-restraint. "Political theory typically idealizes reciprocal behavior motivated by rational reflection" (p.116), criticize the authors and point out that a well working society requires adequate behavior – adequate motivations are optional. Donaldson and Kymlicka emphasize that adequate or ethical behavior is generally habitual, meaning that we do not reflect prior to an action, whether this action is the right one or not. Motive, character, action and consequence are all integrated components of morality. We accept that in the human case, however in the case of animals we tend to say that because they cannot reflect upon their behavior, they cannot be moral agents. The authors challenge this belief by presenting different scientific findings that show that different animals experience various emotions, behave in an empathic or (reciprocal) altruistic way and chose fairness over inequity. Playing behavior is also regarded as an indication that animals can be moral agents: "Play is related to morality because both involve systems of rules and expectations, and sanctions for violation." (p.118). Moreover, there is evidence that animals approach humans if they or fellow creatures need help. Surely the capacities of different animals vary, it is crucial to base their dependent agency on trusted relations and not on their innate capacities – with time, their capacities can be enhanced by our (adequate) actions. Donaldson and Kymlicka conclude: "(...) under conditions of mutual respect, animals can recognize that cooperative society is negotiated on an ongoing basis." (p.120). The remaining question is, whether domesticated animals choose to interact with humans once actually given that choice.

4.4 Practical aspects

Donaldson and Kymlicka stress that enabled agency and participation of domesticated animals should determine their concrete citizenship rights and responsibilities. Subsequently, the authors do not seek to "provide a conclusive resolution of all the challenges involved but rather show how citizenship framework provides a distinctive lens for thinking about our obligations." (p.123). It is an ongoing process to identify rights and responsibilities to ensure and uphold the full citizenship status of domesticated animal citizens. Keeping that in mind, the nine practical aspects of domesticated animal citizenship introduced by Donaldson and Kymlicka are presented in the following.

- Basic socialization highlights the right of domesticated animals to be (I) socialized in a way that they obtain the knowledge and skills needed to thrive in the community they are living in. Socialization is achieved by exclusively using positive reinforcement and the gentle correction model. The concrete learnings of the socialization process depend on the community the animal is living in and can therefore not be universally defined. There are however recurring aspects, which need to be addressed during socialization: "control over bodily process and impulses, basic communication, rules of social interaction and respect for others" (p.123). It is emphasized that the process of socialization is temporary and ends when the animal has become a full member of the community: "acceptable paternalism allows for a limited period in which adults socialize the young, but it would be pernicious paternalism / domination to turn this into a lifelong relationship of moulder-moulded" (p.125). Not socializing an animal citizen, failing to end the process of socialization as well as socializing an animal citizen in a harsh or coercive way are all regarded abuse.
- (II) Freedom of movement and the sharing of public space needs to be addressed by animal citizenship theory. Since the restriction of mobility (especially from public spaces) is a direct form of social exclusion, "mobility functions as a way to distinguish full citizens from subordinated groups" (p.128), and can therefore (often, not always) be regarded as a marker of inequality. Human right to free movement entails three basic principles: (1) no restraint or confinement, (2) sufficient mobility and (3) opposition to restriction of mobility, if the restriction expresses subordinate citizenship (e.g. segregation) or if certain groups were not considered (e.g. people with disabilities). Due to physical restraint and mobility restrictions, domesticated animals are currently highly limited in their movement

and all of these basic principles are violated. The authors state that animal citizens need to have the same right to free movement as humans do. Hereby Donaldson and Kymlicka question the paradigm that movement of animals can be restricted without any consideration, just because it is more convenient for humans. In their animal citizenship vision "animals would be presumed to have the skills for negotiating social life, a right to be taught those skills and opportunity to appeal arbitrary restrictions on their freedom of movement" (p.130). This also means that humans would need to reconstruct public spaces, eliminating "restrictions that function as markers of inferiority / hierarchy" (p.131), so that public spaces are more accessible to animal citizens. The authors conclude: "recognizing animals as citizens has three key implications for mobility rights [:] (...) general presumption against restraint/confinement, and the positive right to sufficient mobility [;] (...) attend to questions of structural inequality (...) [and] of recognition and respect" (p.131, 132).

- (III) Another practical aspect is our duties of protection. Like human citizens, non-human citizens need to be protected from deliberate harm and negligence leading to harm or death. This would result in the criminalization of the killing of domesticated animals. "Recognizing that domesticated animals are co-citizens would entail viewing that they too are owed full protection under the law, and that the criminal law should be used to reflect and uphold their membership in the community." (p.133), state the authors.
- Use of animal products also needs to be addressed in the context of (IV) domesticated animal citizenship. Within a community it is common that members frequently use each other. In the context of citizenship theory this use is only permissible if it does not harm the membership status of "used members" and creates a permanently subordinated group of members. To comply with this social norm, we need to respect the agency of the member we are using. If domesticated animals were to become citizens, these principles would need to be applied to them as well. Especially, because they are highly dependent on humans and are therefore extremely vulnerable of being exploited. On the one hand because they frequently just cannot leave the exploitative situation or express effective resistance and on the other hand because humans tend to overlook their agency and see what they want to see - a "self-serving picture of animals' needs and preferences" (p.135). The authors further state that: "Turning one

group into a permanently subordinated caste that labors for others is a denial of citizenship, but refusing to consider that group as potential contributors to a common good is also a way of denying citizenship." (p.137). They explain that reciprocal citizenship entails that all the members are enabled to contribute in a way suited to them. If we use animals for things they naturally do (like grazing, pooping on grass or playing with each other), while respecting their full membership status and enabling their agency, their use is legitimate and important. However, killing animals for food is unacceptable.

- Another aspect is the use of animal labor, referring to trained animals, (V) who do different tasks for us. Think of therapy and assistance animals, police animals or herd protectors. The authors regard most therapy and assistance related animal labor as exploitation, because these animals are socialized to submission: "their agency is suppressed in order to turn them into effective tools" (p.141). To move away from exploitation, two basic safeguards are needed: (1) instead of working, animals should always have the choice to do another activity and (2) there needs to be a rigid limitation in respect of their working hours. As citizens domesticated animals should be able to decide by themselves how they contribute to society, how they live and who they interact with. Donaldson and Kymlicka conclude: "For such use [animal labor] to be non-exploitative, the animal must be in a position to give a clear indication that they enjoy the activity, that they thrive on the stimulation and contact, and that the work is not a price they need to pay to receive the love, approval, treats, and care that they are due and need." (p.140). As with the use of animal products, the same risk of humans seeing what they want to see in respect of animals' needs and preference, arises. It is not wrong that we profit from animals, it is however wrong that we do it in a way that limits or obliterates animals' agency as well as animal welfare and the development of their potential.
- (VI) Domesticated animal citizens need to have the same right and access to medical care and interventions as human citizens do. Often animals might not be able to make choices in respect of their treatment, in these situations a paternalistic framework cannot be avoided: humans must decide for the animal. We must base this decision on our best understanding of what is best for the animal. In respect of euthanizing domesticated animals, the authors say the following: "as in the human case, it would be morally fraud and contested, and, if legal, tightly

- regulated." (p.144). This means that under certain conditions animals could still be euthanized, for example if they would have a prognosis, entailing a life of suffering. However, euthanizing an animal would not be as quick and easy as it is currently in many countries there would be strict regulations.
- The following aspect of animal citizens is sex and reproduction. Since humans removed domesticated animals from the wild and therefore from the naturally existing population control, the authors demand "a combination of self-regulation, social-cooperation and external control" (p.146) for animal citizens. This entails rights and responsibilities for animal citizens. Their rights include that their kids are protected, and their sexual and reproductive behavior cannot be inhibited for just any reason. Their responsibilities include not to create an unjustifiable cost on others or an "unsustainable burden on others" (p.147). The population size of domesticated animal citizens should be determined by its sustainability (social and ecological) and humans should take as non-invasive measures as possible to ensure a sustainable population size. Due to us and our intensive breeding businesses, the population size of domesticated animals currently exceeds the boundaries of sustainability by far. The authors emphasize: "(...) management of breeding can be justified if it is of benefit to future animals, and operates under conditions that respect the rights of the breeding pair (as to whether and when they mate)." (p.149).
- (VIII) Domesticated animal diets is another practical aspect of Donaldson and Kymlickas' citizenship theory. Domesticated animals are at differing degrees dependent on us to fulfill their nutritional needs. It is our responsibility to fulfill those needs. In case of domesticated animals whose wild ancestors survived by mainly eating meat, this does not mean that we should kill another animal to provide food. Plenty of research shows that for example dogs can thrive on a vegan diet even though their preference would be meat. Feeding them a vegan diet (and therefore not acting upon their agency) is justifiable on the following basis: "(...) the liberty of citizens is always constraint by respect for the liberties of others" (p.150). The case of cats, being entirely carnivores and therefore unable to thrive on a vegan diet, is more difficult. People with cat companions have an extra responsibility to provide appropriate food (possibilities are for example roadkill, frankenmeat, which refers to meat grown in labs or

- ethically sourced vegetarian proteins) and to ensure that the cat is not endangering other animals.
- (IX) Political representation entails the need that domesticated animal citizens are enabled to shape the terms of social interaction through dependent agency. To achieve this, firstly there needs to be a concept of representation that includes domesticated animal citizens. Secondly, institutional reforms on all relevant levels need to happen.

5. Discussion

In this section I will discuss the role of animals in agroecology through the lens of the previously described animal ethics approach of domesticated animal citizens. The discussion starts at the ecological and welfarist approach to the role of animals present in the agroecological framework, including the inherent moral hierarchy. From here it is explored how moving animals from the realm of objects to the realm of subjects changes our moral responsibility towards them and how that affects the agroecological framework. Finally, it is discussed how integrating domesticated animal citizens into agroecological farming systems could actually be realized.

5.1 Limitations of the ecological and welfarist approach

It is unquestioned within agroecology that it is ethically justified to integrate domesticated animals into agroecosystems: they have a beneficial effect on the agroecosystem and that is why it is ok to integrate them into the system. The following quote by Tittonell (2023) illustrates that very well. He states: "animals are a crucial component of the agroecosystem, that when properly managed can deliver a series of ecological services besides contributing to farming households' income and nutrition. Agroecosystems that raise animals on native or long-term pastures may contribute to biodiversity conservation, carbon sequestration, water regulation and animal welfare" (p.9). Further, both Tittonell and Gliessman, criticize factory farming of animals, among others, because of its negative effects on animal welfare (Gliessman 2015; Tittonell 2023). Subsequently, it can be argued that agroecologists implicitly regard ecological factors and animal welfare as decisive factors in respect of the justification of animal use in farming systems. This means that an ecological approach combined with a welfarist approach to the role of animals is present within the field of agroecology. An ecological approach entails that any interaction with or measurement in respect of animals is justified, if it serves the well-being of the ecosystem. Within the welfarist approach the use of animals for human benefit is justified, if the animal has a "decent life". One's initial reaction to these approaches might be: "Yes, that's reasonable! Producing animal products in a humane way, which does not damage the ecosystem (as much), sounds fair!". This tends to be a common reaction, because those approaches are based on a popular idea in broad society: moral hierarchy (see previous chapter) (Donaldson & Kymlicka 2011).

The premise of the ecological approach is that an intact ecosystem has a higher moral standing, or higher relevance, than individual non-human lives, which justifies measurements harming or killing animals to protect an ecosystem. However, measurements to protect an ecosystem never include harming or killing humans, even though they are the most driving factor in environmental destruction. This is because of our superior moral standing: no ecological value can overrule humans' inviolable rights. Typically, none of the other expressions of nature, including sentient animals, are granted moral consideration for their own sake but are often put into one subordinate moral category, in which the different interests are weighted equally against each other (Donaldson & Kymlicka 2011). Ecological theories cannot explain on which grounds this decision is made. Why do rivers have the same moral standing as deer? Why is it ok to kill foxes to protect farmland breeding birds but not ok to kill humans to reduce the CO2 emissions? (I am not asking this question to imply that we should kill humans to protect ecosystems globally but only to highlight the difference in perceived moral standing.) Within the welfarist approach animals have a moral standing and their welfare matters, however both subordinate to human interest – otherwise humans could not kill animals for dietary reasons. As outlined in the previous chapter, they do not find that there is a sound justification, why being human entails a superior moral standing (Donaldson & Kymlicka 2011).

Moral hierarchy is commonly unquestioned; it is taken as a given and is a blind spot – in society and in agroecology as well. It is contradictory to agroecology and at the same time is present in the agroecological framework. It enables the agroecological framework to dominate and exploit animals. This is not congruent with the agroecological framework, which heavily criticizes exploitative structures within our current food system. Instead, agroecology seeks justice, equality and inclusion.

5.2 From objects to subjects

In agroecological literature domesticated animals are typically set on equal footing as machines, property or simply as objects. Their value is regarded as depended on their positive effect on the agroecosystem or their usefulness to humans. To illustrate, Gliesman (2015) states: "Similar to a crop plant, each type of heterotrophic animal that is an important source of products for human use and consumption has its particular set of adaptations and characteristics that determine where it grows best and under what conditions it is most successful in agricultural production." (p.153). There is no explanation in respect of why it is justifiable to determine the value of animals based on their usefulness to humans or to treat them as mere objects. It is an unquestioned assumption; a prerequisite that domesticated animals are objects.

Perceiving animals as objects hides the injustice of our common treatment of domesticated animals including the injustice created by the historic act of domestication. Perceiving animals as objects seems to be a blind spot of agroecology, which leads to moral error and misconceptions in respect of our moral responsibility. Applying the concept of domesticated animal citizens moves domesticated animals from the realm of objects to the realm of subjects (figure 2). Thereby domesticated animals are ascribed a value on their own. They become moral agents with inviolable rights and relational duties.

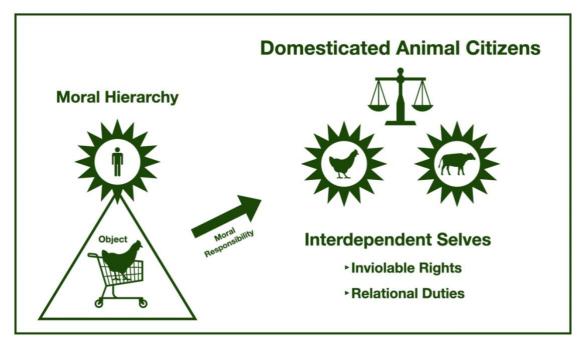


Figure 2: Conceptualization of our (1) current treatment of domesticated animals, which is characterized by moral hierarchy and animals as objects as well as of our (2) moral responsibility towards domesticated animals: applying the concept of domesticated animal citizens (Donaldson & Kymlicka 2011), which acknowledges domesticated animals as subjects, as interdependent selves with inviolable rights and relational duties

By changing the status of domesticated animals, at hand of the concept of domesticated animal citizens the injustice becomes visible and enriches the agroecological framework with a comprehensive understanding in respect of our moral responsibility towards domesticated animals. The injustice becomes visible by limiting moral hierarchy and by recognizing animals as subjects, as selves. Granting domesticated animals citizenship including inviolable negative rights and relational positive duties is our moral responsibility to attempt to render domesticated animal justice. Similarly, the agroecological framework acknowledges that colonialization was unjust and that our global food system is rooted in colonialism, it seeks to render colonized countries' justice by empowering locals through a participatory approach.

5.3 Integrating domesticated animal citizens into agroecosystems

As outlined in the introduction, Donaldson and Kymlickas' citizenship theory and agroecology share several parallels. To briefly recollect, those parallels include the political connotation; making visible of hidden power abuse; advocating for a paradigm shift; seeking equality and justice; enabling forms of empowerment and both approaches are principle based, built on participation and provide a vision of a more just future. Within the agroecological framework, this vision of a more just future concentrates on human requirements, while animals are means to an end: as visualized in the ten elements of agroecology (figure 1), animals contribute to diverse agroecosystems and facilitate recycling (FAO 2018). The concept of domesticated animal citizens, however, does take the requirements of animals into account. Applying this concept onto the agroecological framework does not entail the exclusion of domesticated animals from farming systems. However, it entails a different perspective on animals and a change in how they are integrated. In the following section dependent agency and some of the earlier presented practical aspects will be discussed in the context of agroecology.

Within Donaldson and Kymlickas' concept domesticated animals are citizens and all measures need to be taken to ensure their full citizenship status. That means, if domesticated animals are integrated into agroecological farming systems, the responsible human needs to enter into a trusting relationship with the animal. A relationship, which seeks to explore the subjective good of the animal and supports animal agency. Agroecological farmers, who decide to integrate domesticated animals into their farming systems, need to fully embrace their role as facilitators of animal agency. They need to adhere to the principle of ensuring full citizenship status of domesticated animals. The question remains, whether this principle needs to be safeguarded within the agroecological framework. And if yes, which safeguards are appropriate: a set of rules, an obligatory training or regular checkups through an animal advocacy instance? To realize dependent agency within the agroecological framework, agroecologists need to change their perspective on domesticated animals: away from "how does the animal serve me best", towards "how can I best serve the animal". This is crucial, because humans are the powerful ones in the relationship with animals and it is very easy to abuse ones' power. If humans do not listen or do not respect what was communicated to them, animals won't communicate their subjective good.

Donaldson and Kymlicka (2012) introduce nine practical aspects, which I have briefly presented in the previous chapter. One of these aspects is especially relevant to the agroecological framework: the use of animal products. To recall

Donaldson and Kymlickas' concept: "Using others is legitimate if the terms of the relationship reflect and uphold the membership status of both parties, rather than permanently subordinating one to the other". (p.135). The use of animal products is permissible as long as those products are results of behaviors animals naturally do and as long as their full membership status is respected and dependent agency enabled. This means that for the use of certain animal products, it is legitimate to integrate domesticated animals in agroecological farming systems. One example is grazing animals helping to fertilize the ground. Eating grasses, herbs and shrubs, processing and releasing digested food are natural behaviors, which animals do in any given situation. This fertilizes the soil, increases biodiversity and maintains cultural land. Hence, to use beneficial effects of those behaviors in agroecosystems is permissible within Donaldson and Kymlickas' citizenship theory.

How about wool, eggs and dairy? Similarly to grazing, certain animals naturally grow wool, produce milk or eggs. If sheep, cows and chicken are integrated into agroecosystems it is under certain conditions justifiable to use their wool, milk and eggs. That is if the use of those products does not put them into a subordinate group and their agency is still respected. Subsequently, the priority should not be on harvesting as much wool and milk and as many eggs as possible, but on safeguarding the full citizenship status of those animals. As a result, there would be much less wool, eggs and especially dairy. Sheep would need to be sheered in a very gentle way and only if the sheep indicates that it is ok. Chicken would need to get the possibility to fertilize some of their eggs. And cows should be free to mate when they seek to and if they become pregnant, they should be able to raise their calf. If there is a surplus of milk in that process it would be justifiable for humans to use some of the milk. For agroecological farming systems this would entail a much lower availability of animal products, probably not enough to sell, but for private use only, which means that they cannot rely on income generated from animal products.

To finalize this section concerning the use of animal products another animal product needs to be explored: meat. Animals naturally grow biomass, does that mean it is justifiable within Donaldson and Kymlickas' citizenship theory to kill animals in order to eat their meat? The answer is no. Domesticated animals have citizenship status and therefore inviolable rights. Recalling, inviolable rights are rights that cannot be taken away under any circumstance, including the right not to be harmed, it seems obvious that we cannot incorporate domesticated animal citizens into agroecological farming system for the purpose of meat production. There are however cases, in which it might be trickier. How about a cow companion, who has a physical injury like a broken leg, which did not heal well, and the cow has been in pain ever since. Is it justifiable to euthanize her? And if

so, is it justifiable to eat her? There is no clear answer within Donaldson and Kymlickas' citizenship theory.

Domesticated animal citizens are entitled to health care, does that include euthanasia? Within human health care there is medical assisted suicide – at least in some countries and the regulations are very strict. The difference is that humans are able to vocalize: "I am experiencing so much suffering from my sickness, I no longer wish to live." There is no universal valid law to medically assisted suicide for humans, a universal approach to euthanatizing animals might be even more difficult. It might be more difficult because of the paternalistic framework, which will always lay over these situations: humans decide for animals. Of course, humans can do their very best to recognize the preference of an animal, but the animal is unlikely to give a clear, informed response. There is always the risk of abusing ones' power, to see a self-serving preference in the animals' response. Especially if euthanizing an animal results in the possibility for the human to consume the meat of the animal. However, within Donaldson and Kymlickas' citizenship theory, eating the meat of an euthanized animal would only be legitimate if we would do the same to deceased humans. The authors explain: "If we have a different standard in general for the treatment of animal corpses than for human corpses, this both marks a different level of respect and perpetuates an inability to see them as full members of the community." (p.151)

Looking at the second practical aspect of Donaldson and Kymlickas' concept of domesticated animal citizens, freedom of movement and the sharing of public spaces, the question arises whether this aspect is feasible or rather a Utopia. Here, the authors suggest that domesticated animals should be able to move around freely and that public spaces should be made accessible to them. Their argumentation is the following: the restriction of movement is a marker of inequality, hence domesticated animals should not be restricted in their movement. For agroecologists, this aspect creates a challenging situation. If not restricted in their movement, sheep could just decide to graze elsewhere, or chicken could decide to move in with the neighbor. This adds an arbitrary component to the agroecological farming system: agroecologists can never count on the animals' presence. Furthermore, even if appropriately socialized, it seems unlikely that domesticated animals are able to navigate human infrastructure without frequently harming themselves or others.

Donaldson and Kymlicka state in the seventh practical aspect, sex and reproduction, that domesticated animal citizens should not create an unjustifiable cost on others and that human are allowed to take non-invasive measures if they do. The authors relate it to population size, but it could also be relevant to this second aspect. It seems justifiable to keep grazing animals in a fenced pasture,

where they have sufficient space to roam around, if that prevents them from hurting themselves or others – for example by running into a street.

To conclude, there is room to integrate domesticated animal citizens into agroecological farming systems. Under conditions, which respect their citizenship status it is justified to use some of their products. Eating their meat however, in a society which does not approve of eating human meat, is according to Donaldson and Kymlickas' citizenship theory not justifiable.

6. Conclusion

The role of domesticated animal citizens within the agroecological framework includes shedding light on blind spots and thereby helping to make the agroecological framework more consistent and convincing. One blind spot is moral hierarchy, which enables the agroecological framework to dominate and instrumentalize animals. By enabling exploitative structures and the abuse of power, moral hierarchy weakens the agroecological framework. Integrating domesticated animal citizens into the agroecological framework reduces moral hierarchy by acknowledging domesticated animals as sentient beings with inviolable negative rights.

Another blind spot of the agroecological framework is the injustice created by domestication and our resulting moral responsibility towards domesticated animals. Here, the concept of domesticated animal citizens makes the injustice visible and enriches the agroecological framework with a logical understanding in respect of our moral responsibility towards domesticated animals. Granting domesticated animals citizenship and enabling it through dependent agency is regarded as our moral responsibility to attempt to render domesticated animal justice.

Lastly, the lack of a coherent approach to animal ethics is also a blind spot — that animals are perceived as objects. Integrating the concept of domesticated animal citizens into the agroecological framework provides a coherent approach to animal ethics including several practical aspects and a lens on how to approach domesticated animals. Perceiving domesticated animals as citizens and taking the measures to ensure their full membership in an interspecies community, is the principle. The specific outcomes are based on what domesticated animals actually express through dependent agency. Integrating domesticated animals into the agroecological farming systems and using animal products like wool, eggs and milk is legitimate under certain conditions.

Conclusively, animal ethics is the missing piece in agroecology and the concept of domesticated animal citizens improves the agroecological framework, by making the framework more coherent and consistent. Agroecology evolved with certain sets of values, applying these values to a specific context: food production. Within that context ecosystems and humans were considered. It seems like the next logical step to expand this consideration to ecosystems and all sentient beings. Especially, as Tittonell expresses that animals have an intrinsic value and as Gliessman regards domesticated animals as part of our society – both of these statements are already indicative of domesticated animal citizens.

7. Critical reflections

The previous exploration of Donaldson and Kymlickas' citizenship theory within the agroecological framework was just a fraction of topics, questions and scenarios. There is much more to explore. So far, I have only touched upon two practical aspects introduced by Donaldson and Kymlicka. There are seven more to discuss and especially basic socialization, freedom of movement, sex and reproduction as well as diets is also highly relevant to the agroecological framework. Adding to that also the question what about animals, who are not domesticated? And what about pests? The extension of agroecology with Donaldson and Kymlickas' citizenship theory has much more potential, than what I have so far illustrated in this thesis. Hence, more research is adisable - also in respect of making the concept of dometicated animal citizens or animal ethics in general a forth dimension of the agroecological framework.

Domesticated animal citizens might sound like an impossible concept. Comparably (depending on who is being asked), the agroecological framework sounds impossible as well. Both of these approaches seek paradigm shifts and envision a world where justice and equality are realized. Both of these approaches do not fit into current structures of exploitation – a structure we have become used or even blind to. And maybe that is exactly why domesticated animal citizens and the agroecological framework tend to appear impossible or unfeasible to many. And maybe that is also exactly why they go so well together. Both provide a vision of hope. A world without slavery and exploitation.

References

- Altieri, M.A. & Nicholls, C.I. (2020). Agroecology and the reconstruction of a post-COVID-19 agriculture. The Journal of Peasant Studies, 47 (5), 881–898. https://doi.org/10.1080/03066150.2020.1782891
- Donaldson, S. & Kymlicka, W. (2011). Zoopolis: a political theory of animal rights. 1st ed. University Press.
- FAO (2018). The 10 Elements of Agroecology: Guiding the Transition to Sustainable Food and Agricultural Systems. FAO. https://openknowledge.fao.org/items/74156cdc-0000-4150-8b60-e06162a095c8 [2024-09-25]
- FAO (2019). Tool for Agroecology Performance Evaluation (TAPE) Test version. FAO. https://openknowledge.fao.org/items/8511c796-c7d1-4a04-895d-a28115731ce0 [2024-09-25]
- FAO (2025). Human and social values: protecting and improving rural livelihoods, equity and social well-being is essential for sustainable food and agricultural systems. Agroecology Knowledge Hub. https://www.fao.org/agroecology/knowledge/10-elements/human-social-value/en/?page=3&ipp=5&tx_dynalist_pi1%5Bpar%5D=YToxOntzOjE6IkwiO3M 6MToiMCI7fQ%3D%3D
- Fischer, K., Vico, G., Röcklinsberg, H., Liljenström, H. & Bommarco, R. (2024).

 Progress towards sustainable agriculture hampered by siloed scientific discourses.

 Nature Sustainability, 8 (1), 66–74. https://doi.org/10.1038/s41893-024-01474-9
- Gliessman, S.R. (2015). Agroecology: The Ecology of Sustainable Food systems. Taylor & Francis Group.
- La Via Campesina International Peasant Movement (2025). About La Via Campesina. About La Via Campesina. https://viacampesina.org/en/international-peasants-voice/ [2025-01-24]
- Mier Y Terán Giménez Cacho, M., Giraldo, O.F., Aldasoro, M., Morales, H., Ferguson, B.G., Rosset, P., Khadse, A. & Campos, C. (2018). Bringing agroecology to scale: key drivers and emblematic cases. Agroecology and Sustainable Food Systems, 42 (6), 637–665. https://doi.org/10.1080/21683565.2018.1443313
- Miller, D. (2021). Justice. Stanford Encyclopedia of Philosophy. https://plato.stanford.edu/entries/justice/
- Rawls, J. (2005). Political liberalism. Expanded ed. Columbia Univ. Press.
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. Journal of Business Research, 104, 333–339. https://doi.org/10.1016/j.jbusres.2019.07.039
- Tittonell, P. (2023). A Systems Approach to Agroecology. Springer Nature Switzerland AG.

- United Nations (1948). Universal Declaration of Human Rights.

 https://www.un.org/en/about-us/universal-declaration-of-human-rights [2025-03-29]
- United Nations (2025a). History of the Declaration. United Nations: Peace, dignity and equality on a healthy planet. https://www.un.org/en/about-us/udhr/history-of-the-declaration
- United Nations (2025b). The Foundation of International Human Rights Law. United Nations: Peace, dignity and equality on a healthy planet. https://www.un.org/en/about-us/udhr/foundation-of-international-human-rights-law
- Vall, E., Orounladji, B.M., Berre, D., Assouma, M.H., Dabiré, D., Sanogo, S. & Sib, O. (2023). Crop-livestock synergies and by-products recycling: major factors for agroecology in West African agro-sylvo-pastoral systems. Agronomy for Sustainable Development, 43 (5), 70. https://doi.org/10.1007/s13593-023-00908-6
- Wezel, A., Bellon, S., Doré, T., Francis, C., Vallod, D. & David, C. (2009). Agroecology as a science, a movement and a practice. Sustainable Agriculture, 2, 27–43. https://doi.org/10.1007/978-94-007-0394-0_3
- Xie, J., Hu, L., Tang, J., Wu, X., Li, N., Yuan, Y., Yang, H., Zhang, J., Luo, S. & Chen, X. (2011). Ecological mechanisms underlying the sustainability of the agricultural heritage rice–fish coculture system. Proceedings of the National Academy of Sciences, 108 (50). https://doi.org/10.1073/pnas.1111043108

Appendix 1: factsheet for agroecologists



Domesticated Animal Citizens

Within the framework of Agroecology

CONCLUSION

In respect of animals there are several blind spots within the agroecological framework. The concept of domesticated animal citizens sheds light on these blind spots. Its application onto the agroecological framework makes the agroecological framework more consistent.

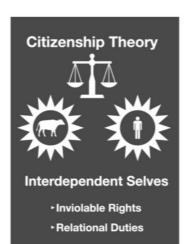
Blind spot: moral hierarchy

Due to the ecological and welfarist approach to animals, moral hierarchy is present in the agroecological framework. It enables the domination and instrumentalization of animals. By enabling exploitative structures and the abuse of power, moral hierarchy weakens the agroecological framework.

Blind spot: moral responsibility

Animals are commonly perceived as objects and together with moral hierarchy this leads to a blindness in respect of our moral responsibility towards domesticated animals. The historic act of domestication was unjust. And so is our (common) current treatment of domesticated animals.

What if sentience was the decisive factors regarding who is treated as a subject?



Blind spot: animal ethics

Animals are crucial components within the agroecological framework. However, there seems to be no coherent approach to animal ethics. This lack in respect of an ethical approach to animals creates an inconsistency in the otherwise very strong call for justice inherent in the agroecological framework.

Donaldson, S. & Kymlicka, W. (2011). Zoopolis: a political theory of animal rights. 1st ed. University Press.

DOMESTICATED ANIMAL CITIZENS

The concept of domesticated animal citizens, introduced by Donaldson and Kymlicka (2011) entails that domesticated animals are granted a full-citizenship status, including inviolable rights and relational duties. This concept limits moral hierarchy, while moving animals from the realm of objects to the realm of subjects. It makes injustice visible and offers a consequent route in respect of our moral responsibility towards domesticated animals.

Domesticated animals should be able to exercise their citizenship rights via dependent agency

Agroecology

Agroecology evolved with certain sets of values, applying these values to a specific context: food production. Within that context ecosystems and humans were considered. It seems like the next logical step to expand this consideration to ecosystems and all sentient beings.





Publishing and archiving

☑ YES, I, Melina Katikaridis have read and agree to the agreement for
publication and the personal data processing that takes place in connection with
this.
\square NO, I do not give my/our permission to publish the full text of this work.
However, the work will be uploaded for archiving and the metadata and summary
will be visible and searchable.