

Media-analysis on the societal debate about the wild boar and red deer in the Netherlands

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Introduction

The Netherlands is one of the highest populated countries in Europe and while its population is steadily growing, so is that of the big mammals that live there (CLO, 2024; Cromsigt & Kuijper, 2018). With their grazing behavior and distribution dynamics, they shape the landscape. The population of wild boar and red deer has been subject to fluctuations because of overhunting on the one hand and better management on the other (Broekhuizen et al., 2016). Until the 1800s, there was a small group of rich people that wanted to hunt in the Netherlands. By the middle of the 19th century, the wild boar had completely disappeared from the Netherlands and only a few small groups of red deer roamed the middle of the country (Van Zanden et al., 2021). In recent years, populations have increased and the animals are increasingly being spotted outside the habitat designated for them, causing friction among people who live or operate nearby (De Groot et al., 2016).

Since 1991, the wild boar is allowed to occur in two areas, the Veluwe and the Meinweg. After the Nature Protection Act came into force in 2017 and fauna management was decentralized, the province of Limburg added the 'Meerlebroek' area. The red deer are also allowed in three areas: the Veluwe, the Oostvaardersplassen and in the Weerterbos (De Groot et al., 2016). Current wildlife management is mainly done by stating a maximum amount of animals that is allowed in an area. When the population exceeds this number, hunters are allowed to shoot the excess animals. In most of the Netherlands, this number is zero and every animal that is spotted in the so-called zero-state area is removed. Although both the wild boar and red deer are protected species on a national level, the zero-state policy applies and the animals are shot when they are spotted outside their designated areas (Zoogdierverseniging, 2021).

The Netherlands being a crowded country, it is inevitable for all sorts of people to interact with the animals and/or their management, whether that is inside or outside the designated area. Recreants strolling and riding through the forest, farmers seeing their lands uprooted and site managers trying to find a balance between animals' and humans needs of nature. Their behavior is a contribution to the ecosystem, but their increasing number also raises concerns about damage to farmlands, spreading of disease and traffic collisions (Cromsigt & Kuijper, 2018). Especially in the case of the Oostvaardersplassen, the influences of the interaction and contradictions resulting from it were clearly visible. The nature area in the province of Flevoland originated in 1968 (NOS, 2018b). In 1983, the first big grazers, which consisted of 32 cows, 18 horses and 40 red deer, were introduced to keep the landscape open for the geese to live. In 2018, this number increased to 5230. Many animals died of hunger in winter. Their dead and starving bodies caused citizens to protest against what they claimed to be unnecessary suffering. In 2018, the commission Van Geel decided that 1850 animals should be shot to reach a number that can be carried by the area (NOS, 2018a).

This is one example of humans and wildlife closely interacting in the Netherlands. WildlifeNL is a research project that was brought into life as a reaction on the increasing interactions and frictions between humans and wildlife. It explores and investigates the human-wildlife interaction in the

Netherlands with a focus on large mammals and big grazers. The consortium, consisting of 20 academic and social partners, tries to learn about the challenges and possibilities of coexistence of humans and animals. WildlifeNL proposes to look into other types of wildlife management that focus more on behavior of both humans and animals and the role of communication between them.

This research aims to provide a starting point for future research within WildlifeNL concerning people's behavior towards animals. It takes into account the view of people from the Netherlands on wild animals and studies the public debate surrounding the wild boar and the red deer in the Netherlands by analyzing the values and norms attributed to these animals by various groups in the Netherlands, ranging from laypeople to experts. Following from this analysis, the research tries to understand how the animals are framed in societal debate and by whom. From this aim, the following research questions came forward:

- What values and norms towards the wild boar and red deer in the Netherlands can be discovered?
- What frames are uncovered from analyzing norms and values and what actors are present in these frames?

Values and norms are not connected one-on-one. People might attribute the same value to an animal, but exert different behavior, i.e. follow different norms, and vice versa. In some parts of the debate, it might seem that there are more differences than there actually are. This research can help to reveal these value-norm connections and shed light on similarities and differences through the developed frames.

Methods

Theoretical considerations

Societal debate about the return or existence of wildlife has proved to come to heated discussions and conflicts on whether wild animals belong in the landscape and how humans should act in relation to them (Coz & Young, 2020; Van Herzele et al., 2015; Van Herzele & Aarts, 2019). In previous research, it appeared that people often argue along the same pathways and while looking for logic in arguments, they tend to repeat themselves (Van Herzele & Aarts, 2019). The logic is found in their reality and understanding of the world around them, also explained through the concept of frames.

Conceptualizing framing

A definition, or perhaps more a description, of framing is taken from Aarts & Van Woerkum (2006): "Framing has to do with making sense, interpreting, and giving meaning to what happens in the ongoing world" (p. 229). Framing can aid in explaining why the debate is formed as it is and is useful in studying conflicts that surface in interactions (Dewulf et al., 2011). Framing can be observed in interactions, as something that happens in any form of communication between actors, and in cognitive processes within an individual's own mind. In this research, the interaction approach to framing is used, because it allows a more flexible way to look at the frames that emerge and how they are used in different scenarios. The context of a situation, including the relationship with the other and the presumed goal, are of influence in choosing the frame through which to look at the situation (Aarts & Van Woerkum, 2006).

Frame of reference

Behind the frames lies a deeper understanding of the world through what Aarts et al. (2015) described as the frame of reference, including knowledge, values, norms, interests and beliefs (fig. 1). In order to change human behavior to decrease conflict, the message needs to fit the people and the behavior that it addresses to such an extent that it does not differ radically from their frame of reference.

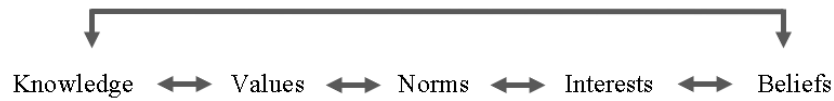


Figure 1: Frame of reference taken from Aarts et al. (2015)

These five components determine the point from where people judge and act in a certain situation. As mentioned before, depending on the context of a situation, frames might shift or used alternately. To deepen the understanding of the context, this research will focus on the values and norms that are constituted in the frame of reference of people when they talk about wildlife in the societal debate. The model is used as a framework to construct the societal debate on wild animals after values and norms have been established from the data collection.

People use instrumental, intrinsic and/or relational values to navigate in their everyday life, as well as to position themselves in relation to nature (Aarts et al., 2015; Himes et al., 2024). There have been many definitions provided of instrumental, intrinsic and relational values when talking about the position of people to nature. Himes et al. (2024) offers definitions based on a systematic literature review of 239 documents in the field of conservation, environmental education, environmental ethics and ecosystem services. In most cases, these values are not specifically mentioned, but have to be deduced from use of language. Thus, table 1 not only gives an overview of definitions, but also how they emerge from newspaper articles based on key words found in the literature and during the data analysis.

Table 1: Description of values, their definitions and key words that were used to discern them in the analysis

Value	Definition	Key words	References
Instrumental - utility	Entities are valued as a means for human preferences – entity is useful to humans	Ecosystem services; economics; resource; dependency – use; benefit; providing	Arias-Arévalo et al. (2017); (Pascal et al., 2022); Riechers et al. (2024)
Instrumental - harm	Entities are valued as a means for human preferences – entity is harmful to humans	Ecosystem services; economics; resource; dependency – damage; harm	Arias-Arévalo et al. (2017); (Pascal et al., 2022); Riechers et al. (2024)
Intrinsic	Entities are valued independently of human judgement	Moral duties; habitat; species; aesthetics	Arias-Arévalo et al., 2017; (Pascal et al., 2022); Feucht et al. (2023)
Relational	Entities are valued as part of a meaningful relationship with humans	Place attachment; care; quality of life; human-nature interactions; reciprocity; well-being	Mattijssen et al. (2020); Arias-Arévalo et al., 2017; (Pascal et al., 2022); Riechers et al. (2024)

Quantitative analysis

For the purpose of this research, 3 national newspapers and 4 regional newspapers were selected for analysis. These were chosen based on reach, demographic diversity and geographic diversity (table 2). Buijs (2014) emphasizes the role of regional newspapers in providing independent news from the region. Furthermore, regional newspapers might frame events in a different way which results in a different sentiment towards the subject (Kingori et al., 2007). Although the connection to regional newspapers has declined since the ‘80s, they are still recognized as fundamental for providing regional news that would not be covered by national newspapers (Buijs, 2014).

Table 2: Dutch national and regional newspapers, including their reach, used in the analysis

Newspaper	Reach	Geographics
AD	747.000	National
De Telegraaf	639.000	National
de Volkskrant	495.000	National
De Gelderlander	189.000	Regional; mid
De Limburger	189.000	Regional; south
De Stentor	169.000	Regional; north/mid
Dagblad van het Noorden	166.000	Regional; north

The time frame of the analysis is the last decade (2014-2024). For this research, the change throughout the years is more interesting than the change within one year. Thus, every year of the aforementioned time frame is equally covered without noting the month of publication.

The database LexisNexis was used to find articles using the following search words in separate analyses:

- wild* zwijn* (wild boar)
- edelhert* (red deer)

After a quick scan, the asterix was added to the search term, because it proved to generate more and an increased variety of articles. For example, wildlife management that does not entail shooting the animal, such as using fences or lowering speed limits, was mentioned more when using the ‘wild* zwijn*’ search term in comparison with ‘wild zwijn’. All articles that are about the animal or the animal in interaction with humans are selected for the analysis. Articles that are excluded from the search are:

- articles that are about the same event and repeating the point of view of specific actors within the same newspaper
- recipes
- articles on topics abroad
- news reports from the editorial of the newspaper on collision in traffic. These are short reports of max. 200 words that do not attribute a certain value to the animal, but merely describe the event.

The last category of exclusion was added after a quick scan. These articles were abundant, thus adding a lot of work for the analysis, without providing insight into values and norms of specific actors.

The articles were coded with the software ATLAS.ti following a coding scheme that is partly based on Runhaar's et al. (2015) media-analysis on reports of badgers in the Netherlands (table 3). To understand the societal debate around the wild boar and red deer, it is needed to look past the plain arguments and opinions given in newspaper articles to find out *why* these arguments and opinions are present (Aarts et al., 2015). Thus, the last two categories are concerning the values (i.e. what value can be deduced from what the actor is saying) and norms (i.e. what standards arise from these values). As Feucht et al. (2023) emphasizes in their research to the perception of nature in this three-value concept, it is not always easy to distinguish between the three of them. For example, the aesthetics of nature can be seen as intrinsic, valuing the beauty and ugliness of nature, or relational, focusing on the experience that humans have with a beautiful landscape (Arias-Arévalo et al., 2017). That is why the context of the situation in the article is determined first, so that the reader is offered a complete image surrounding the value attributed later. The norms, or behavioral rules, in the coding scheme were developed during the coding, as it is only by reading that information on these interactions can be discovered. In order to say something about the societal debate, we also have to know who is present in the debate, hence the actor category. Besides these categories, the articles were coded with the year of publication.

Table 3: Coding scheme

Newspaper	Type of article	Context of the article	Actor who is talking?	Values what value of the animal can be deducted from what the actor is saying
AD	News report	Agriculture	Farmers	Instrumental, utility
De Telegraaf	Interview	Livestock	Politicians	Instrumental, harm
de Volkskrant	Report	Urban environment	Fauna conservation (hunters, FBE, SWN)	Intrinsic
De Gelderlander	Opinion	Traffic	Nature organization or natural park	Relational
De Limburger	Column	Hunt	Civilians	
De Stentor		Nature (development)	Researchers/scientists	
Dagblad van het Noorden			Public authorities	
			Newspaper - column	

Qualitative analysis

The norms were derived deductively during the coding and categorized after the first round of coding for the wild boar was finished. They could be explicit when they were stated clearly in the article, or implicit, deducted from the context (Ophorst et al., 2023). These categories were then used to categorize the norms that emerged during the coding of the red deer literature. When a norm was missing from the pre-existing list, it was added to ensure completeness of the analysis. The frames were developed after categorizing the norms by looking for similarities and differences between these norms.

Results

Quantitative analysis

From the library search, a total of 4490 articles about the wild boar and 3718 about the red deer were skimmed through to make a selection for the analysis. This resulted in 694 articles about the wild boar and 762 articles about the red deer, of which 309 and 321 articles respectively were deleted from the analysis during coding. Some articles contained multiple frames and thus multiple quotations (fig. 2).

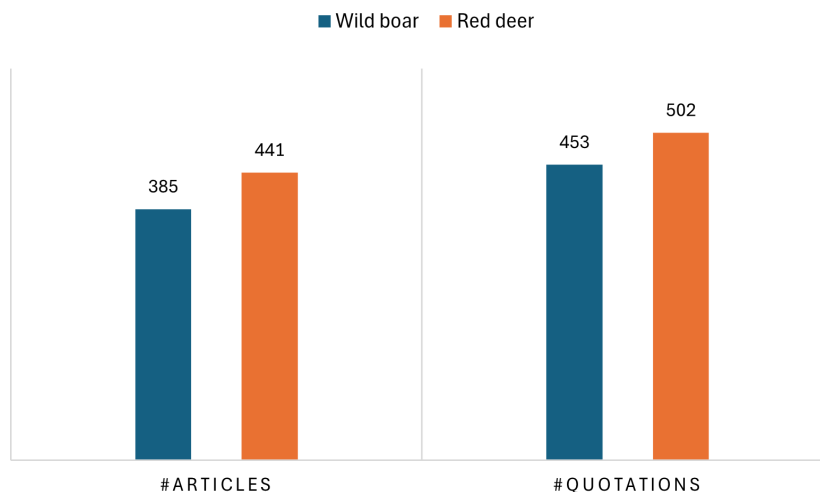


Figure 2: Amount of articles and quotations per animal

From analyzing the articles, nine actors were found to be present in the societal debate (table 4). In most cases, the actor was explicitly mentioned and connected to certain values and norms in the article itself. In the case of opinion papers, the author was always mentioned at the beginning or the end of the article.

Table 4: Overview of actors; a description and examples found in the articles

Actor	Description	Examples
Farmers	Individual farmers; farmers association	LTO
Politicians	Individual politicians from their own point of view	-
Fauna conservation	Organizations or individuals engaging in fauna or wildlife management	Hunters; hunter association; FBE; SWN
Nature organization/natural park	Organizations that manage nature; pursue interests of members or the state	Natuurmonumenten; Staatsbosbeheer (SBB); Park Hoge Veluwe
Civilians	Individuals from their own point of view	Landowners; residents; activists
Researchers/scientists	Individuals working in academics or researchers employed by other organizations	Ecologists; professors
Public authorities	Organizations promoting interests of broader range of individuals in society	Province; municipality
Newspaper – column	Writer of the column of a newspaper	-

From the nine actor categories, three were coded clearly more than the others (fig. 3). These were the citizens, nature organizations and public authorities. The difference in quotations between the wild boar literature and red deer literature is the largest within the nature organization category (51 and 144, respectively). Nature organizations in the Netherlands are, amongst other things, managers of a nature area. As the case of the Oostvaardersplassen was repeatedly in the news, the nature organization that manages this area, Staatsbosbeheer (SBB), was coded as actor many times. The fauna management category shows the second largest difference with almost three times as many quotations in the wild boar than the red deer literature. Most of these quotations were in the context of hunt and specifically about the zero state-policy that applies for these animals in most of the Netherlands.

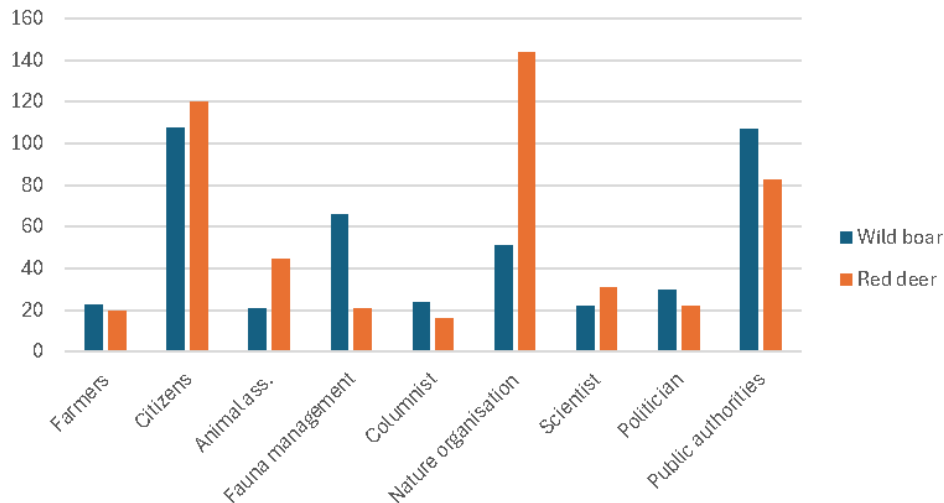


Figure 3: Amount of quotations categorized per actor for the wild boar and red deer

Below is a small summary of the most present sentiments displayed by the actors.

Farmers Animals should not influence farmers activities, for example not destroying land. In that case, farmers are entitled to sufficient damage payment from the government.

Politicians Diverse opinions on animal management. Strong opinions in favor of animal wellbeing by politicians from the Partij voor de Dieren (Party for the Animals, PvdD).

Fauna conservation Animals should be management through numbers, which are defined in nature management laws. Surplus animals should be shot to prevent damage to farmland and villages.

Nature organization/natural park People should be able to enjoy nature and not be afraid to do that. However, people also need to respect nature, not leave trash or feed wild animals.

Civilians Diverse opinions on wildlife management. Residents of villages accept potential damage to gardens as a risk of living nearby nature areas, as long as it does not influence people's safety. Activists protest in favor of animal wellbeing and animal rights.

Researchers/scientists Emphasizing natural processes in nature, such as leaving dead bodies to attract other animals and thus enhance biodiversity.

Public authorities Echoing civilians interests, but also dependent on the law and judicial decisions.

Newspaper – column Diverse opinions dependent on the newspaper and writer of the column.

The amount of quotations per actor gives an indication to which people within the public debate are heard, but it does not give information about the nature of these quotations and the tone of the voice. This is best illustrated within the citizen category, where there are 108 quotations for the wild boar and 120 for the red deer. However, as seen in figure 4, the values connected to these quotations are almost inversed between the wild boar and the red deer. The highest amount of quotations for the wild boar is connected to instrumental and harmful values, while that is the intrinsic value for the red deer.

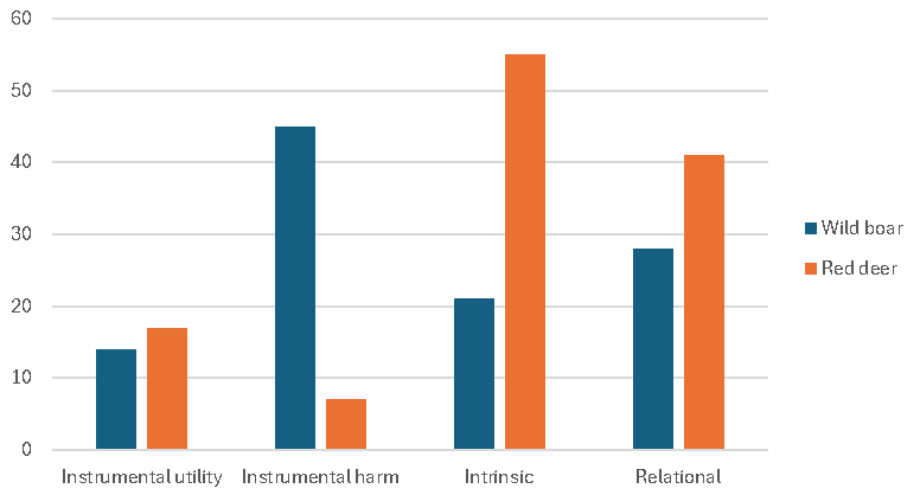


Figure 4: Amount of quotations per value for citizens as actor

For both animals, the amount of quotations in the context of nature or nature development is the highest (fig. 5). For the red deer, this was 75% and for the wild boar 43%. This entails articles where people talk about their experiences in nature, descriptions of specific animals, but also the development of nature corridors to connect nature areas. As seen in figure 5, there were more articles in the context of urban area for the wild boar (26%) than the red deer (3%). This however does not automatically mean that the red deer is less seen in urban areas. The amount of articles in the context of hunt were almost equal (wild boar: 19%, red deer: 17%). Articles in a hunting context could be about the zero state-policy, numbers of shot animals in a specific year or shooting individual animals to prevent harm to people or properties.

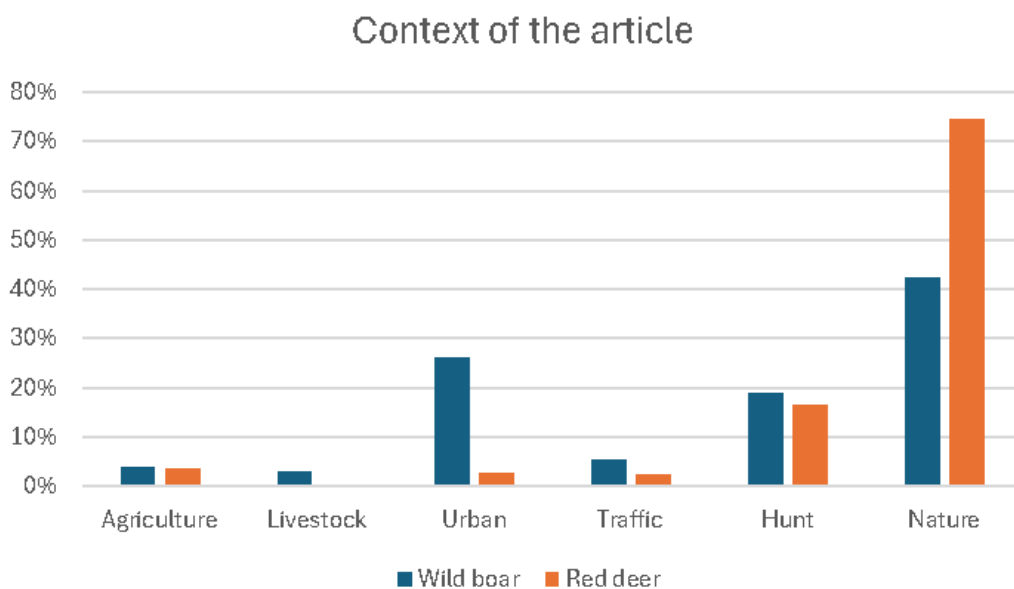


Figure 5: Context category distribution in percentages per animal

In 2018, the amount of publications increased for both the wild boar and the red deer. For the red deer, this increase came also with an increase of intrinsic values (fig. 6), while for the wild boar, there was an increase in instrumental harm values attributed to the animal (fig. 7). The amount of intrinsic values attributed to the animal was overall higher for the red deer than the wild boar. The actor with the most intrinsic quotations was the nature organization group (29%), followed by citizens (27%) and animal organization (17%). The instrumental harm values for the wild boar were counted the most in the public authorities group (42%), followed by fauna management (25%) and citizens (20%).

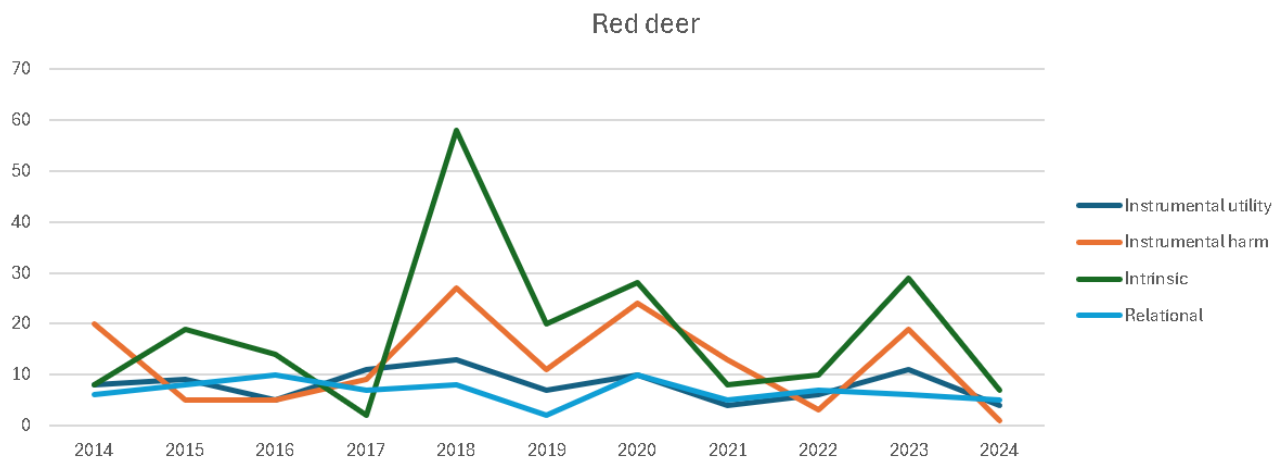


Figure 6: Values attributed to quotations throughout ten years for the red deer

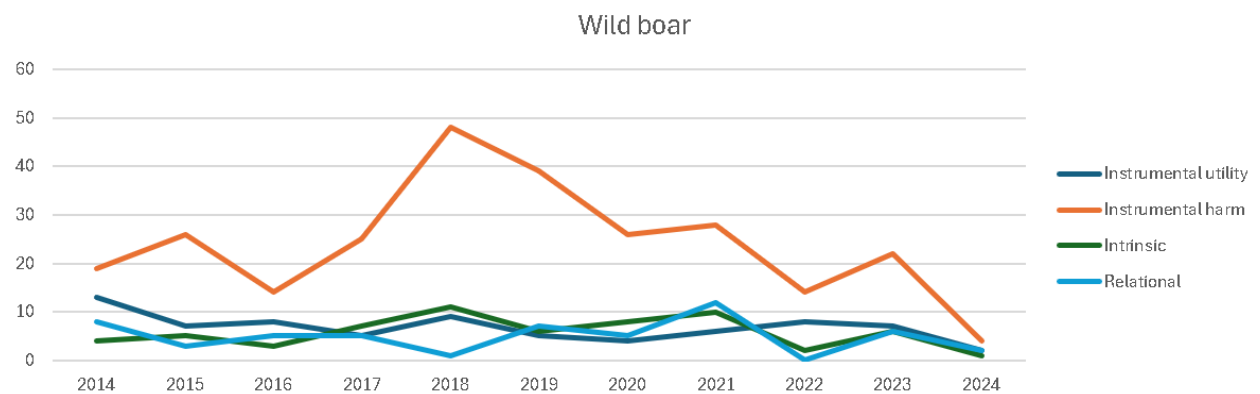


Figure 7: Values attributed to quotations throughout ten years for the wild boar

Frame analysis

The results of the quantitative analysis were combined to develop frames from which the actors look at the wild boar and the red deer in the Netherlands. Information about the context, what was said and by whom aided in forming a picture of the situation and thus in which way the animal was looked upon.

Framing in Dutch newspapers

There were eight frames identified when analyzing the values and norms. Although these frames were found in both the wild boar and red deer, their strength of presence differed between the animals and in different contexts. For example, the frames were used alternately by the actors dependent on who they

were talking to or about. Furthermore, some frames were more dominant than others, while others were almost always used in combination with another frame. It is also important to look what is *behind* the frame whether there is another one hidden. In other words, it is important to ask the question whether frames are used strategically. For example, the animal wellbeing-frame was used often in the context of shooting the animals in the Oostvaardersplassen. However, when looking to this situation in more detail, there is also a people management-frame present through which animals are looked upon as means to steer public action. To separate between the frames, they are categorized in “more dominant” and “less dominant”. This distinction was made based on data from both animals. Thus, if one frame was dominant in the literature of one animal, but almost completely absent in the other, the frame was put in the less dominant category.

More dominant frames:

1. Ecosystem services-frame

The animal has a role in the ecosystem providing services for nature (e.g. rooting in the soil) or humans (e.g. tourism). The wild boar is described as “gardeners of the forest” (AD, 2020) and as a consequence of the arrival of the red deer, “biodiversity as a whole benefits” (AD, 2023). The animal has an instrumental value and can be seen as a tool to influence the ecosystem. There are examples of how this frame is used in politics to justify interventions (Drenthen, 2015).

2. ‘Not in my backyard’-frame

The animals are respected and wanted, but not in certain areas (e.g. near agricultural fields or gardens) or in certain numbers (e.g. when the population gets too high). In some cases, the actor acknowledges the value of creating habitat for the animal, for example with nature corridors, but on the other hand stresses that it is important that “they do not become a pest and thus a threat to public health” (De Limburger, 2021).

3. Management in numbers-frame

People talk about the animals in population numbers that need to be managed. This number is defined in a law that determines a maximum amount of animals in a certain area. When it exceeds that number, the surplus of animals need to be removed. Although both the wild boar and red deer are protected species, they are only allowed to roam in specific areas. Outside of these areas applies the so-called zero state-policy. Another reason for management in numbers can be seen in the Oostvaardersplassen, where the province claims the need of shooting a vast number of animals for the wellbeing of the ones that live. This is an example of two frames overlapping.

4. Animal wellbeing-frame

Animals have an intrinsic value which gives them rights to a certain level of wellbeing. This frame applies in situations where the animal is hit by traffic and shot to “prevent an animal from suffering unnecessarily” (AD, 2019). It concerns the wellbeing of the individual animal in that moment, not taking into account future consequences for the individual or population as a whole. This frame is especially present around the Oostvaardersplassen issues, where citizens were disturbed by the sight of numerous dead animals laying in the nature area. They argued the Oostvaardersplassen to be a “by humans created, enclosed and now barren area” (de Volkskrant, 2018). As a consequence, they started feeding the animals illegally, which was in turn criticized by scientists that claimed the high mortality to be “nature doing his job and restoring balance” (de Volkskrant, 2018).

5. Inclusive-frame:

People accept the animal being present. Whether or not they are happy about it, they acknowledge its place. In some cases, interaction with the animal is seen as a risk of living in an area close to forest. For example, as one citizen puts it, “Of course, I’d rather not see it happen, but of course it’s kind of part of it if you live in the outskirts of the forest” (*AD*, 2023) about the presence of the wild boar. Other ways that the animal is looked upon through this frame, is in a cherishing and loving way. This applies mainly to the red deer. The inclusive-frame also includes a feeling of the animal belonging to the area. For example, a politician stating that “Wild boars traditionally belong in Brabant [the province], just like you and I” (*De Gelderlander*, 2014).

Less dominant frames:

6. Nature experience-frame:

People interact with the animal and experience a certain feeling of awe towards it. The frame was developed from the literature that was connected to the relational value attributed to the animal. This was often displayed by citizens in combination with going out in nature on their own, trying to “get as close to the animals as possible” (*Dagblad van het Noorden*, 2014) or on organized excursions. For the red deer, the rut happening in fall including the loud burling was an important source for the nature experience-frame. For example, a citizen saying that “hearing that in the dark, with a little frost, is quite impressive!” (*De Stentor*, 2019). However, this frame belongs in the less dominant category because this nature experience was not so present in the wild boar literature.

7. People management-frame:

In this frame, it is not the animal needing management, but humans. In other words: humans are managed through interventions in wildlife management. In the literature of the red deer, it appeared that the animals were treated in a certain way to manage people’s response, instead of managing the animal itself. This happened a lot around the Oostvaardersplassen issues that started in 2015 and came to a heated debate in 2018. Nature organization SBB, who is the manager of this area, consciously decided to feed the animals, because “supplemental feeding does not help the weak animals, but is mostly good for the peace of mind of humans.” (*De Stentor*, 2020). In the literature of the wild boar, people management is to be understood in the context of recreation in nature. People going off trail or letting their dog off the leash are addressed or fined. A forest ranger explains that “we don’t do that to tease, but to protect wildlife” (*De Gelderlander*, 2017).

8. Animal behavior-frame

The emphasis in this frame is to understand and research the behavior of the animal for a diversity of purposes. This frame was visible within all value groups. For example, the wild boar as having a harmful, instrumental value, could be prevented to go on the road by using repelling smells on the roadside. For the red deer, building natural corridors to facilitate the spreading of the animal to neighboring nature areas showed an intrinsic value for the animals to not die in crossing the road and improving survival chances of the population. Relational values came forth from people studying the behavior in nature.

Discussion

This study shows what values and norms are attributed to the wild boar and red deer and how they change throughout the past decade. The debate shows to contain many point of views, resulting in eight frames that were found in these values and norms in combination with the context of the article. Furthermore, it appears that these frames are sometimes used together, for example in strengthening the argument in favor of keeping the animal in a specific area, or are used interchangeably, for example when arguing in favor of shooting part of the population.

The research reveals a higher presence of intrinsic value in red deer newspapers and specifically in the nature organization and public authorities group. However, this leads to different frames dependent on the actor and context. On the one hand is the animal wellbeing-frame, where the animal is shot to prevent further suffering. On the other hand, other articles claim that policies were needed to prevent disturbance among people because of mass animal death. This points towards a people management-frame. Looking at the animal from this perspective would result in instrumental harm values, as the animal is the cause of friction in society which was seen by SBB and the public authorities as something to eliminate. It would be interesting to dive deeper into the meaning behind these alternating frames used by the same actor(s). For example, it could depend on the newspaper what quotes are published or from the spokesperson talking in the name of the actor.

For both animals, there was a spike in the number of articles in 2018. For the red deer, this has a clear cause: the report of commission Van Geel that allowed for more than 1,000 red deer in the Oostvaardersplassen to be shot. The increase in articles about the wild boar can be explained by a swine fever outbreak in Belgium in September 2018, which caused a lot of livestock farmers and public authorities to speak up about the destructive consequences if the disease would reach the Netherlands. For both animals, there is a spike in the number of articles that assume an instrumental value of the animal, specifically that it is harmful. The red deer is harmful to wildlife and populations of breeding birds, while the boar is harmful to gardens and farmland. In both cases, the management in numbers-frame comes forth from the articles. It seems like this is the most prominent solution when there is sudden need to intervene.

However, a big difference is that with red deer, the number of articles with an intrinsic value also peaks. With the wild boar this is not the case, both relational and intrinsic value remain at a constant low level in comparison with instrumental values. We do see that intrinsic values seem to peak at the same times as instrumental values, also in the wild boar, but the quantity is a lot lower than for the red deer. A tentative conclusion might be that because of all the commotion with the deer in the Oostvaardersplassen, more people have come to see the intrinsic value of animals showing the animal wellbeing-frame from a citizen perspective. They have seen the animals that the policies are directed towards, as well as the bodies of the dead animals where they would otherwise remain hidden by the forest.

It seems that the wild boar is more associated with harm, as it might bring the dangerous swine fever and because it causes damage to farmland and gardens. Red deer are associated with, like some actors put it, the “experiment Oostvaardersplassen that turned into a fiasco for animal and nature” (*Dagblad van het Noorden*, 2018). They are portrayed as victims of an “unworkable and unsuccessful plan” (*de Volkskrant*, 2020). Furthermore, the rut of the deer in the fall attract many visitors which resulted in the high amount of relational value quotations in the citizen category. These two events, the Oostvaardersplassen and the rut, contribute to a more positive view on red deer. The ‘animal wellbeing-frame’ and ‘nature experience-frame’ are thus more visible for the red deer, while the ‘not in my

backyard-frame' is more present for the wild boar. The zero state-policy applies to both animals, but this concept is more present in the wild boar literature where emphasis lies on the high numbers of animals that is not preferred. This difference in association is also visible when looking at the animals through the 'animal behavior-frame'. For the red deer, the behavior studied is connected to intrinsic values focusing on increased spreading of the animal or descriptions of behavior of the animal. For the wild boar, this frame is mainly connected to instrumental, harmful values where behavior is studied to increase the removal of the animal from certain animals. This confirms the overall view on the animals which also shows from the data on values: the wild boar is something harmful and its spreading should be contained as much as possible, while the red deer is a powerful and, in many citizens' eyes, beautiful animal that is allowed to roam through nature areas.

Limitations

Although there is a diverse range of actors considered in this research, the representation within the actor group is lacking in the newspaper. Many organizations have a spokesperson or someone in charge of public communication, thus these people are in the media more often than others. It also depends on the areas that are highlighted in the newspapers, for example a ranger from one province that has had to deal with many wildlife-human conflicts that end up in the news might exert a different view on wildlife than a ranger that has primarily had positive experiences.

Conclusion

The combination of quantitative and frame analysis allowed for a complete image of how the wild boar and red deer are portrayed in the public debate in the Netherlands. Instrumental, intrinsic and relational values were found in a diverse range of contexts and actors. The following frames were deduced from the values and associated norms:

- Ecosystem services-frame
- 'Not in my backyard'-frame
- Management in numbers-frame
- Animal wellbeing-frame
- Inclusive-frame
- Nature experience-frame
- People management-frame
- Animal behavior-frame

Public debate about the wild boar and red deer is strongly influenced by specific events that set the tone for newspaper articles and thus get a lot of attention, for example in the case of the Oostvaardersplassen and the swine fever approaching the Netherlands from Belgium. When animals cause a lot of damage, we can see more instrumental, harmful values present in the newspaper articles. In case of the red deer, individual animals were visibly suffering which resulted in strong public response showing intrinsic and relational values towards the animal. We now know how values and norms influence framing. Further research could add to this analysis the role of knowledge, interests and beliefs as part of the frame of reference from Aarts et al. (2015). Coming back to the values and norms, it would be interesting to see how they developed throughout the coming decades. Since 2023, the commotion around the Oostvaardersplassen has calmed down as SBB has been able to shoot most animals in the years 2018-2023 (NOS, 2023). Thus, there are no dead bodies lying around and activists have had less reason to protest. Further research within could reveal whether these eventful years have increased people's acceptance and liking towards the red deer on the long term. In other words: will the intrinsic

values remain visible in how the red deer are portrayed in newspapers? The same can be said for the wild boar: will instrumental, harmful values decrease when the threat of swine fever decreases?

Besides further research in public debate in the media, these results will hopefully be a starting point for other research within WildlifeNL about people's attitude and behavior towards Dutch wildlife.

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