

33. What if we lack a licence to kill – thinking out-of-the-box in our relationship with liminal rodents

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Abstract

During previous EurSafe conferences we presented our work about the treatment of liminal rodents in pest management. When it comes to moral status and animal welfare, these animals are generally overlooked. We found that stakeholders involved with pest management feel the need to take the moral position and welfare of liminal rodents more seriously. The outcomes of this study were the start of a multi-stakeholder project to develop an assessment frame for a more responsible rodent management. In order to facilitate ethical decision-making in pest management, various authors have indicated animal research ethics as a valuable source. In this paper we question the relevance of animal research ethics for dealing with liminal animals. Our main concern is that animal research ethics seem to start with the assumption that animal interests can be infringed upon when good reasons are given as a justification. Anecdotal information from professionals in the field of rodent management indicates that it is possible to leave the current default position and minimize or even abolished such infringement of rodent interests, while still addressing the nuisance experienced by humans. We aim to explore the potential of non-killing methods as a means to mediate liminal rodent – human conflicts by employing a thought experiment in which we retract the ‘licence to kill’. We elaborate on this informed by the concept of liminal rodents as denizens, looking into ecological and socio-cultural carrying capacity and ways to overcome stigmatisation due to feelings of fear and disgust. With this paper we hope to inspire other scientists and professionals in the field to think out-of-the-box when it comes to the relation between humans and liminal rodents.

Keywords: animal ethics, animal welfare, liminal animals, commensal rodents, human-animal relationship, rodent management

Introduction

During earlier EurSafe conferences in 2018 and 2019 we presented our work about the treatment of commensal rodents (brown and black rats and house mice) in pest management. Discussions about moral status and welfare of animals usually focus on livestock, pets or lab animals. Commensal rodents living at the fringes of human societies are generally overlooked. These animals are neither fully wild, nor domesticated. In between nature and culture, these animals can be considered liminal (Donaldson and Kymlicka, 2010). In most countries people kill liminal rodents, often with methods inflicting significant levels of suffering (Broom, 1999; Mason and Littin, 2003). We found that stakeholders involved in rodent management feel the need to take the moral position and welfare of liminal rodents more seriously (Van Gerwen and Meijboom, 2018). They urge for a better application of preventive measures by all people involved in rodent control. A survey among 129 Dutch pest controllers (Van Gerwen *et al.*, 2020) showed that they consider animal welfare during their work and see more room to improve the welfare of liminal rodents, mainly through prevention. They see differences in the welfare

impact of different control methods used. Furthermore, they indicate that in different real-life scenarios a different weight may be attributed to animal interests in comparison to the human interests at stake. This weighing may have consequences for the methods to use. Together with stakeholders we work to develop an assessment frame for a more responsible rodent management, in which the moral position and welfare of commensal rodents is included.

Various authors have previously indicated animal research ethics as a valuable source in order to facilitate such ethical decision-making. This includes the specific way of justifying research by means of a harm-benefits analysis and application of the '3Rs principle' (replacement, reduction and refinement) in order to prevent unnecessary suffering (Meerburg *et al.*, 2008; Yeates, 2010). Replacement means the application of non-lethal or preventive methods or solutions that do not have a direct impact on the rodents itself. Reduction can be applied by designing rodent management in such a way that as few animals as possible become victim of the intervention. Refinement is applied by choosing methods that inflict the lowest possible welfare impact.

Although the ethical principles from animal research seem promising for implementing animal ethics and welfare in rodent control, in this paper we question the use of animal research ethics for the treatment of liminal rodents. Our main concern is that animal research ethics seem to start with the assumption that animal interests can be infringed upon when good reasons are given as a justification (Nieuwland and Meijboom, 2021). In daily practice it seems that, when it comes to rodent management, people will quickly allow for any form of management when this resolves the nuisance experienced. In that sense, one rat or mouse is already one too many. The harm-benefit analysis then plays out to the disadvantage of rodents in most cases. As a result, infringing animal interests including killing is still part of the default intervention. The presumed license to kill is always there to be used. Besides the ethical problems that rise from this, we believe the approach with the license to kill as default prevents people from creative thinking. It is focussed on the conflict only and does not leave much room to work on creative ways to establish a sustainable co-existence between liminal rodents and humans.

Anecdotal information from professionals (personal communications) in the field of rodent management indicates that it is possible to leave the current default position and minimize or even abolished such infringement of rodent interests, while still addressing the nuisance experienced by humans. Also, the respondents of our survey (Van Gerwen *et al.*, 2020) have faith in preventive methods. They indicate that on average 62% of the nuisance could possibly be solved by preventive methods solely. It seems that there is a lot to gain in a proper application of preventive methods, both for maximizing human benefits as for minimizing harm to liminal rodents.

In this paper we aim to explore the potential of preventive – non-killing – methods as a means to mediate liminal rodent – human conflicts by employing a thought experiment in which we retract the 'licence to kill' from the list with control options. What would the relationship between humans and liminal rodents look like if killing was not allowed? Are new more creative forms of this relationship possible? We will elaborate on this approach inspired by the concept of liminal animals by Donaldson and Kymlicka (2011), anecdotal information from professionals (personal communications) in the field and literature on the psychology of moral decision-making.

Liminal rodents as denizens

The term 'liminal animals' (Donaldson and Kymlicka, 2011) refers to animals that are not fully wild nor domesticated. Rats and mice are considered liminal animals. They live in-between nature and culture amidst people. While they lack close interactions with humans, liminal animals greatly rely on human societies for their survival. Not on us directly, but on the food, shelter and nesting possibilities we offer

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them. They are experts in using the opportunities we, for a large part unintended, create for them. As they make use of these opportunities, liminal animals are subsequently stigmatised as aliens or invaders who do not belong and do not have the right to be there (Donaldson and Kymlicka, 2011).

Donaldson and Kymlicka start with domesticated animals, which they believe should be endowed full membership of society in terms of citizenship. Liminal animals resemble the status of denizens, not fully part of society but also not completely detached. As such, liminal animals are eligible to a more limited range of entitlements in comparison to domesticated animals, including the right to live their lives. Liminal rodents are to a great extent protected against encroachment of the mixed human-animal society at which fringes they live their lives. Donaldson and Kymlicka describe how liminal rodents navigate these often-urban territories. As these animals are opportunists, they are able to adapt to many different circumstances and move into new niches. Denizenship protects liminal animals against most control methods that are often used in current pest management. These animals not only have a right to life, they also have political entitlements that call for mediation whenever human-animal conflicts arise. Humans have to make every reasonable effort to honour these political entitlements, and to adjust their way of life to accommodate co-existence with liminal animals. We realize that for many people this may be a bit far out-of-the-box. However, we believe that we need to think further than we do normally in order to find creative future proof solutions for the 'rodent problems' many people experience. Liminal rodents will always be around us and belong to the city whether we like it or not. We thus rather invest in a relationship with them instead of being in a conflict situation forever.

One way of averting conflict is to allocate space. As one can imagine, there are locations where rats and mice cannot be allowed because of certain hygiene and health risks. On these locations neither other animals are allowed for that reason. Examples are hospitals, food storage locations and supermarkets. In a society in which liminal rodents and humans co-exist these areas could be marked as human areas that are closed off for rodents and other animals. Next to these types of locations, there should also be areas where liminal rodents are welcome and may live their lives. These areas are free from pest control activities, liminal rodents are left alone by humans and may fulfil certain responsibilities for the whole society. Rats in particular are very good at something we humans find often challenging, namely: getting rid of organic waste. By eating our left-overs and waste, they are recycling champions. This seems like a win-win situation doesn't it? Why would we then continue our rodent control activities at waste disposal companies?

Drawing the line between different areas as described above, is something to deliberate on together as a society. Thereby taking both interests of animals and humans into account. Obviously, the eventual decision about how to share the city habitat should be clear for all inhabitants, including liminal rodents. We should thus communicate the eventual decision in a language they understand. We believe communicating by altering the ecological carrying capacity of certain location by means of preventive methods can be useful.

Carrying capacity

Preventive methods to manage liminal rodent populations can reduce ecological carrying capacity, improve rodent welfare, protect both the environment and other animals and benefit the effectiveness of the intervention. Preventive methods may consist of all forms of interventions that lower rodent carrying capacity of an area and therefore prevent rodent populations to establish or flourish. In order to influence the ecological carrying capacity (ECC) we need location specific knowledge about the ecology and behaviour of liminal rodents and the environmental characteristics. Furthermore, we need to know how many individuals live in a certain area. At the moment, much remains unknown about the lives and ecology of liminal rats (Parsons *et al.*, 2015). We simply do not know how many rats and mice there are.

The ECC is one way to look at carrying capacity. There is another type of carrying capacity we, and professionals in the field, believe to be very important to consider in the relation between humans and liminal rodents. We can call this the socio-cultural carrying capacity (SCCC). The term socio-cultural carrying capacity is also used in the context of (sustainable) tourism. It there refers to the psychological threshold beyond which locals will negatively perceive and act against tourism (Mansveld and Jonas, 2006). Using this definition for the context of liminal animals we here define the socio-cultural carrying capacity as:

the threshold beyond which humans will negatively perceive and act against the presence and activities of liminal rodents and human quality of life can no longer be safeguarded.

How to assess the SCCC? This, we believe, is a challenge and only at its very beginning. SCCC appears to be quite subjective since for some people one rat or mouse is already one too many, as for others these animals clearly belong in the city. Liminal animals are frequently stigmatised (Donaldson and Kymlicka, 2011) and fear and antipathy of liminal rodents has been embedded in European culture for centuries (Meerburg *et al.*, 2008). These rodents are associated with filthy environments and illness. Besides these subjective or psychological components, SCCC depends on risks of the presence of liminal rodents for public safety and health, food losses and damage to human property. In order to identify risk in a quantifiable manner, we propose to perform location specific risk assessments that take into account the number of liminal rodents, the pathogens they carry, the risk for pathogens to transfer to and infect humans or other animals, etc. In Europe these types of assessments are already performed for invasive alien species following Regulation (EU) No 1143/2014.

The combination of ecological and socio-cultural carrying capacity can inform the ways in which we shape urban landscapes, drawing attention to the conditions required for both rodents and humans. The goal is to search for a balance between ecological and SCCC. At which number of liminal rodents this balance is found is location specific. This may mean that at some locations ECC needs to be lowered (less opportunities to nest and feed for liminal rodents), whereas SCCC needs to be increased (more acceptance of the presence and activity of liminal rodents by humans).

How to deal with stigmatisation and disgust?

Increasing the SCCC, as explained before, partly depends on the subjective experiences of individuals. It appears that in general, liminal rodents are stigmatised (Donaldson and Kymlicka, 2011) and trigger feelings of disgust (Haidt, 2001; Meerburg *et al.*, 2008). These aspects make it challenging to ensure more acceptance of liminal rodents by humans. We propose two ways to deal with stigmatisation and disgust. One is to build in anti-stigma safeguards, as Donaldson and Kymlicka (2011) propose. This could be done by protecting the interests of liminal rodents through legislation. Setting up legal protection of liminal animals and their basic interests helps to prevent bias (including disgust and stigma) to result in unjustified disadvantage.

The other is trying to alleviate the bias of disgust and fear more directly in moral decision-making. Basic ethical principles that call upon reason, such 'do not harm unnecessarily', may have difficulty addressing these biases if they insufficiently engage individuals at a more emotional level. In other words, even if one is rationally open to the idea of not harming unnecessarily, such a principle could falter in the midst of aversion, repulsion and disgust. A fruitful way to overcome such psychological currents running underneath one's moral agency is to foster compassion. In interspecies conflict, compassion can function as a key moral faculty, as it requires one to engage with the experience of all sentient beings involved. Moreover, this engagement has to be wholeheartedly, not merely rational (Nieuwland and Meijboom, 2021). Of course, emotional involvement has its downsides in moral deliberation, for example, as

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empathy can increase moral concern for those with whom you share affinity in some way (Bloom, 2017). Then, moral consideration is channelled through the already existing emotional attachment between you and the other. You feel the others pain, like when your child or beloved spouse hurts her or himself. Compassion, however, can overcome these forms of partiality and many other forms of bias. It calls for a more encompassing form of engagement, 'characterized by feelings of warmth, concern and care for the other, as well as a strong motivation to improve the other's wellbeing. Compassion is feeling for and not feeling with the other' (Singer and Klimecki, 2014: r875). Also, if the other is a rat, associated with aversion, through a compassionate outlook we can recognize their suffering as well.

While it is difficult to foster compassion on the spot, caught up in interspecies conflict, there are ways of communicating that push in this direction. For example, perhaps assisted by storytelling, one can facilitate others to open up to the lives of liminal rodents. Not only in terms of ecological facts, but in terms of how rodents experience the space that they share with humans, including their fears and joys (Nieuwland and Meijboom, 2021). Also, one has to make the consequences of current rodent control in terms of animal welfare more transparent. In current rodent control there is a tendency for humans to keep control measures at a distance (Jackson, 1980 in: Meerburg *et al.*, 2008; Van Gerwen and Meijboom, 2018). Rodents die often out of sight and people see little of the suffering they go through. While animal protection NGO's show video footage of animals in slaughterhouses or pet animal abuse and neglect, they hardly show such footage of animals involved in pest control. Would it change attitudes when people would see more of how rodent control is performed and what is means for animal welfare? We know that animals can actually find rats and mice cute and have feelings of care for them. The fact that these animals are kept as pets with their own social media accounts shows that this is possible too. Furthermore, we sometimes see situations in which humans help liminal mice or rats in trouble. In early 2019, for example, a video made in Germany was picked up by various international media (BBC, 2019). Local individuals together with animal rescue persons and firefighters freed a brown rat that was trapped in a manhole cover. In the same year, in the Netherlands a man called the animal ambulance to free a mouse after he found the mouse trapped on a glue trap he fabricated and placed himself (AD, 2019). Efforts to stimulate an attitude shift among pest controllers could also be integrated in pest management education. However, we did not see any effect of an ethics course in the attitudes of Dutch pest controllers participating in a survey (Van Gerwen *et al.*, 2020). We believe there is still room to improve this type of education and its content.

Concluding remarks

Although animal research ethics form a good start to embed ethical decision-making in rodent management, they still allow a license to kill as part of default. We explored the potential of preventive – non-killing – methods as a means to mediate liminal rodent – human conflicts by employing a thought experiment in which we retract the 'licence to kill' from the list with control options. We did so by: (1) giving denizenship to liminal rodents; (2) looking into ecological and socio-cultural carrying capacity; and (3) ways to overcome stigmatisation due to feelings of fear and disgust. With this paper we hope to inspire other scientists and professionals in the field to think out-of-the-box when it comes to the relation between humans and liminal rodents.

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