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Learning to Live with Rats

Tobias Linné *

Abstract

Throughout the centuries, rats have been cast as humanity's dark shadow. Rats have had an enormous impact on human civilization, not least through the spread of diseases. They have long been associated with dirt, death and destruction. In medieval Europe people loathed rats for their so-called brutishness, seemingly limitless sexual appetite and fecundity.

The brown rat, Rattus *norvegicus*, is one of the species best adapted to modern society. Today almost all wild brown rats are synanthropic, meaning they live in close association with humans, eating our leftovers and using human structures for shelter. Global urbanization is also projected to be bringing humans into even closer contact with brown rats in the future.

This project studies urban conflicts between rats and humans, to gain a deeper understanding of how these conflicts could be resolved. The project conceptualizes rats as liminal animals, with the right to exist in urban spaces, and asks how humans can manage their behavior to avoid conflict with rats, and how a future of less bloody human-rat relations could be possible.

Keywords: rats, pests, human-animal relations, liminal animals, killing.

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與鼠共存之道

托比亞斯・林奈*

摘要

幾個世紀以來，老鼠一直被視爲人類的黑暗面。牠們對人類文明產生了巨大影響，尤其是疾病的傳播。老鼠長期與污穢、死亡與毀滅相聯繫。在中世紀歐洲，人們痛恨老鼠，認爲牠們性情粗野，具有近乎無限的性慾與繁殖力。

棕色老鼠（學名：Rattus *norvegicus*）是最適應現代社會的物種之一。如今，幾乎所有野生棕鼠都是「共棲型生物」，意指牠們與人類密切共生，吃人類的剩食，並利用人類建築作爲庇護所。全球都市化趨勢也預示著未來人類與棕鼠的接觸將更加頻繁。

本研究探討城市中老鼠與人類之間的衝突，旨在更深入理解這些衝突如何得到解決。該研究將老鼠概念化爲「邊界動物」，主張牠們有權存在於都市空間中，並探討人類如何調整自身行爲以避免衝突，以及如何實現一個血腥衝突減少的人鼠關係未來。

關鍵詞：老鼠、害蟲、人—動物關係、邊界動物、殺戮

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In memory of Dobben and Dumle who taught me what it means to love a rat.

Introduction

The brown rat (Rattus *norvegicus*)[1] is ubiquitous and resilient, and among the most evolutionary successful mammalian species living alongside humans in urban environments (Burt, 2006). Believed to have originated in northern China and Mongolia, the brown rat spread westward over centuries. It reached Europe by the early 17th or 18th century, overtaking the black rat (*Rattus rattus*) in both urban and rural ecologies (Hendrickson, 1983, p.67-70). Today, brown rats are found on every continent except Antarctica (Hendrickson, 1983; Twigg, 1975). Often regarded as pests and threats to hygiene and human health, brown rats are also deeply entangled in human histories, ecosystems, and spatial, social and cultural landscapes. They have lived alongside humans for centuries, drawn to the spaces humans occupy, the waste produced at farms and in cities, and the warmth and shelter of human urban infrastructure.

Despite their ecological adaptability and intelligence, rats are commonly treated as intruders - pests to be controlled or exterminated. The reasons for exterminating them may vary from public health concerns to the damage they cause to urban infrastructure by chewing and burrowing (Byers et al, 2019, p. 2). But regardless of the reasons for their extermination, rats are across the world are subject to the cruellest methods of culling (Arluke & Sanders, 1996, p. 179). This article challenges the human treatment of rats by

[1] The brown rat is one of the largest members of the Muridae family, typically measuring between 30 and 45 centimeters in length and weighing between 300 grams and 1.5 kilograms, with an average lifespan of one to two years (Twigg 1975; Burt 2006). Brown rats live in large, often socially complex colonies that may include more than 150 individuals, depending on food availability. Territories can span up to 50 meters in diameter. Within colonies, social organization typically includes subgroups, such as mated pairs, harems (with or without offspring), unisexual groups, and solitary individuals (Byers et al, 2019; Twigg, 1975; Burt 2006). Primarily nocturnal or active at dusk, brown rats spend these hours foraging, digging burrows, and building nests. They construct complex burrow systems with tunnels and chambers that serve as shared nests and food storage sites (Byers et al, 2019). Their nightly excursions can take them considerable distances along learned routes to reliable food sources. The brown rat is a true omnivore. Although it will consume almost anything, cereals form a substantial part of its diet, with vegetables accounting for approximately 70–80 percent of its intake. Foraging behavior is often population-specific and shaped by environmental conditions and available food sources.

exploring the complex, entangled lives of rats and humans in cities, drawing on theoretical perspectives from human-animal studies, and empirical data from qualitative interviews conducted in the southern Swedish city of Lund.

From a multispecies perspective, the city is not exclusively a human space, but a shared habitat where many different species interact and shape one another's existences (Haraway, 2008). Rats can be said to exemplify this interspecies entanglement. As commensal animals, their lives are intimately connected to human infrastructures, waste, and behaviours.[2] The Anthropocene makes visible these relationships and how the city's ecology is co-produced by animals and humans alike. The brown rat, though frequently excluded from visions of legitimate urban life, is a key figure in understanding how multispecies entanglements manifest in cities. This is a central aim of human-animal studies, as Lynda Birke (2011, pp. xvii–xviii) notes, "to acknowledge the importance of other species of animals in the creation of our societies, our cultures and histories, as well as our roles in creating and sometimes destroying theirs."

This study explores how people perceive and experience rats in a public urban area, and what these perceptions and experiences can teach us about the ethics and possibilities of coexistence between humans and rats. The analysis draws on semi-structured qualitative interviews with individuals who frequent areas in Lund where rats are commonly observed, particularly around the Lund University Library Park and Campus Paradis located in the city centre. Interviews were conducted with 18 individuals between March and May 2025. The participants were selected based on their presence in two public spaces with notable rat populations—Campus Paradis and the University Library Park—both located within Lund University's central campus. The interviews were conducted following qualitative research practices emphasizing open-ended questions and thematic flexibility (Kvale & Brinkmann, 2009). The interviews allowed the informants to express their views on their own terms, while at the same time enabling comparative thematic analysis across interviews (Kvale & Brinkmann, 2009). The interviews began with broad questions about the participants' backgrounds before narrowing to their experiences and perceptions of rats. All interviews were recorded in full and lasted between one and two hours. The interviews were then fully transcribed and analyzed. The quotes used as part of this article have been translated from the original Swedish to English.

The central questions addressed in this article is: What would it mean to view rats not

[2] The relationship between rats and humans is one of commensalism—from the Latin *commensalis*, meaning "sharing a table." This term describes a symbiotic relationship in which one species benefits while the other is largely unaffected.

as urban pests, but as co-inhabitants with a right to exist in shared spaces? And what changes in public understanding, city policy, and education would be needed to support a peaceful multispecies cohabitation between humans and rats?

The Shadow of the Human

Throughout history, rats have existed as paradoxical figures—simultaneously familiar and reviled. Within Western cultural and religious traditions, rats have often been associated with filth, disease, and chaos.[3] Gertrude Jobes' classic *Dictionary of Mythology, Folklore and Symbols* (1962, p. 1323) lists among the symbolic associations of the rat: "death, desertion, destruction, enmity, informing, major troubles, renegade, sneak."[4]

This association reflects not only the material environments in which rats are found, but also the symbolic roles they play as animals that challenge human order. As Burt (2006) argues, the rat has long operated as a 'shadow of the human,' projected with fears and anxieties about modernity, bodily decay, and moral failure. Burt writes:

> Cultural attitudes to the rat reveal that it is a pollutant with the ability to move between bodily and symbolic boundaries with an overall trajectory that seems to make it an especially threatening phenomenon as much in the realm of language and thought as in the granary or the food store. Like other dangerous objects, the rat constantly pushes at the edges of the borders set to contain it. (2006: p. 12)

The idea that rats thrive in the ruins and refuse of civilization reinforces their place as what Burt (2006, p. 18) calls a "totem animal" of dark modernity. They exploit the very networks of transport and urbanization that define human progress. As such, rats reveal the destructive capacities of modern civilization, from colonial conquest to trench warfare (Burt, 2006, p. 83).

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[3] In medieval Europe, rats were not yet the object of widespread moral condemnation but were viewed more pragmatically as pests and thieves. It was not until the 18th and early 19th centuries that the rat became the object of visceral loathing—less for its association with filth and more for its unchecked appetite and uncontrolled reproduction. This disgust preceded their association with sewers and dirt, which only emerged with sanitation reforms in the 19th century. As Burt (2006) notes, the intensification of anti-rat sentiment in modern societies coincided with increasing attention to hygiene, order, and social control.

[4] Despite their reputation, brown rats have also been domesticated at various points in human history. In Japan, a tradition of keeping fancy rats emerged during the Edo period (1603–1868). In Europe, domestication occurred in the early 1800s, often for entertainment such as blood sports. The popularization of pet rats took off more broadly around 1900, while a different form of selective breeding emerged in the 20th century through laboratory experimentation.

The most common cultural label given to rats is that of a pest or vermin, making it an animal that can be killed without much ethical considerations (Arluke & Sanders, 1996, p. 179). In human-animal studies, pests are often defined as animals whose movements transgress human-imposed boundaries (Philo & Wilbert, 2000, p. 5). These transgressions may be spatial, such as entering buildings, or moral, by occupying places associated with disease, decay, or disorder. Rats symbolize this kind of boundary-crossing: living in sewers and basements, under floors and behind walls. They transgress domestic, hygienic, and social borders. They challenge human norms not only by where they live, but by how they live—opportunistically, adaptively, and often invisibly. The rat's symbolic transgressions stem not solely from its association with dirt, but from deeper anxieties around unregulated reproduction, promiscuity, and an absence of familial bonds (Burt, 2006, p. 12).[5]

Popular culture reinforces and amplifies these negative images of rats. From horror films to urban legends, rats are framed as threats to human security and civility. Yet the rat is also strikingly like humans in terms of intelligence, adaptability, and social behaviour. In *More Cunning Than Man: A Social History of Rats and Man*, Robert Hendrickson (1983) outlines the many ways in which rats seem to mirror human behaviour:

> Rats so well resemble humans: ferocity, omnivorousness, adaptability to all climates, migration from east to west in the life journey of their species, irresponsible fecundity in all seasons, with a seeming need to make genocidal war on their own kind (Hendrickson, 1983, p. 44).

Their adaptability, territorial expansion, reproductive strategies, and capacity for intraspecies violence offer a disturbing reflection of humanity. This closeness may itself be unsettling, amplifying the ambivalence that characterizes human attitudes toward rats, and reflecting deep cultural anxieties about difference and sameness, purity and pollution.

Liminal Animal Denizens

In their 2011 book *Zoopolis: A Political Theory of Animal Rights* Sue Donaldson and

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[5] In reproductive terms, rats are indeed extraordinary. Wild rats reach sexual maturity within two to three months and are polygynandrous—both sexes mate with multiple partners (Twigg 1975, p. 53-58). A female can give birth up to seven times per year, with litters of four to eight pups. Estrus occurs roughly every two weeks, and postpartum estrus allows mating within 18 hours of giving birth. Males provide no parental care, while females nurse the altricial offspring for approximately 40 days. Despite not being strictly seasonal breeders, mating increases during warmer months, contributing to explosive population growth (Twigg 1975, p. 53-58).

Will Kymlicka offer a compelling theoretical framework for rethinking urban animal life, like that of rats. In the book, the authors present a model of human - animal relationships proposing a shift in animal rights discourse from a framework centred exclusively on negative rights (such as the right not to be killed or owned) toward one that includes positive rights and relational duties. Rather than imagining animals solely as individuals to be protected from harm, Donaldson and Kymlicka argue that we must also consider our obligations to animals as co-inhabitants of shared social spaces (Donaldson & Kymlicka, 2011, p. 9). Donaldson and Kymlicka propose a set of positive duties and responsibilities to support animal well-being, such as designing urban environments that accommodate animals' needs, rescuing animals harmed by human activity, and caring for animals who have become dependent on humans.

Crucially, their theory introduces the idea of relational duties - that human moral obligations to animals do not only stem from their intrinsic characteristics (such as sentience), but also from the specific historical and spatial relationships that have developed between particular groups of humans and animals (Donaldson & Kymlicka, 2011, 6). To that end, they propose a threefold political model distinguishing between different categories of animals. The first category consists of those animals who have been bred into dependency and live closely with humans, such as dogs and cats. These should be regarded as co-citizens and their interests and preferences should be considered in political and legal decision-making, including urban planning and housing policies (Donaldson & Kymlicka, 2011, p 101). The second category consists of those truly wild animals who maintain distance from human communities, and that according to Donaldson and Kymlicka (2011, p. 157) should be treated as sovereign entities. These animals inhabiting their own territories, should be respected through principles akin to international justice.

The third category is that of liminal animals: including animals like rats, pigeons, raccoons, and foxes. These are species that have not been domesticated but who live in close proximity to humans, having adapted to urban environments. These animals neither belong to the wilderness nor to the domestic sphere but instead occupy an ambiguous "in-between" status (Donaldson & Kymlicka, 2011, p. 210-213). For these animals who live in human spaces but are neither domesticated nor wild, Donaldson and Kymlicka (2011, p. 214) argue for a moral and political recognition grounded in denizenship. They propose that liminal animals should be recognized as 'denizens' of human communities. Like citizenship, denizenship is a relationship governed by norms of justice, but it is a less intimate and cooperative relationship, and therefore characterized by a reduced set of rights and responsibilities. (Donaldson and Kymlicka, 2011, p. 214).

As denizens, liminal animals like rats are co-residents of human communities but not full members. Their presence in human spaces often goes unnoticed until conflict arises, at which point they are frequently stigmatized as pests or intruders. Urban environments, based on a dichotomy between nature and civilization, often render liminal animals invisible or illegitimate. Because they do not fit neatly into existing categories of wild or domesticated, their existence is seen as anomalous - something to be managed, removed, or eradicated. Instead of these kinds of treatment, Donaldson and Kymlicka suggest that liminal animal denizens should be entitled to secure residency - the right to exist in human environments without being treated as alien trespassers. They also deserve fair terms of reciprocity, meaning among other things that urban environments should be designed with consideration of the risks they impose on these liminal animals as well. And not least should liminal animals be awarded with anti-stigma protection, where societies work to avoid reinforcing hierarchies that mark denizens as inferior and dangerous. This approach avoids both the idealization of wildness and the restrictive control of domestication. Instead, the concept of denizenship opens up an ethical space for non-violent coexistence between humans and urban animals. Instead of viewing rats as pests to be exterminated, cities should consider adopting policies that acknowledge their presence and seek to minimize conflict through design, education, and shared infrastructure.

Other authors have been building on Donaldson and Kymlickas work arguing in similar ways for rights of denizenship for rats. De Bondt et al. (2023) draws on Donaldson and Kymlickas work to explore how urban rats in Amsterdam can be seen as engaging in more-than-human acts of denizenship. Drawing on ethnographic research the article investigates the ways in which rats participate in the political and spatial ordering of the city - not as citizens with legal rights, but as denizens whose actions compel responses from and negotiation with humans over the temporal and spatial limits to their urban belonging (Bondt et al. 2023, p 79). The rat’s appropriation and shaping of urban space can be understood as acts of claiming rights to the city, albeit unconscious and unintentional on part of the rodents.

The Rats of Lund

Lund is a medieval city located in southern Sweden with a population of approximately 95,000. It is known primarily for Lund University, and for its rich academic history and vibrant university life. The central university campus - especially areas like Campus Paradis and the University Library Park which are studied in this article - are

densely populated during weekdays, with students and university staff frequenting the surroundings. These areas are also habitats for a range of different urban birds, as well as a substantial rat population, made visible by their presence in green spaces, near trash bins, and occasionally even during daytime hours.

Public discourse in Lund has increasingly framed rats as an urban problem. In September 2024, local authorities announced a new campaign titled 'The Party Is Over,' aimed at reducing rat populations in city parks and around campus buildings (Sydsvenskan, September 2024). In a newspaper interview earlier that year the chairman of the city council of Lund talked about the rat situation in the city:

> They have become more numerous, larger and increasingly fearless. I have been contacted by several Lund residents that say that there is a rat invasion and that it has increased explosively. (Sydsvenskan, June, 2024)

According to the municipality's strategy document there is a need to reduce access to food and nesting sites for rats, and for strong extermination measures to be taken, both using trapping and specially trained dogs to hunt for the rats (Sydsvenskan, April, 2025).

However, these kinds of extermination efforts are not only ethically questionable but also practically ineffective. As Donaldson and Kymlicka observe:

> campaigns of mass relocation or extermination are futile; they don't work, and often makes things worse. But, more importantly, they are morally untenable. Liminal animals are not aliens or trespassers who belong elsewhere. In most cases, liminal animals have no place else to live; urban areas are their home and their habitat (2011,p. 212).

The persistence of rats despite decades of control measures thus suggests the need for alternative approaches grounded in coexistence rather than eradication.

An Uneasy Feeling

Rats in the urban landscape of Lund elicit feelings of unease, disgust, and even fear among many of the interviewees. These reactions are often rooted in perceptions of dirt, disease, unpredictability, and associations with transgression. Such responses can be understood as deeply informed by cultural imaginaries and affective associations historically tied to rats. For many of the informants, rats symbolize filth, disease, or unwanted proximity. These reactions are not merely personal fears but can be seen as

shaped by broader sociocultural discourses that have constructed rats as threatening and out-of-place (Arluke & Sanders 1996, p. 179-180).

> I see them mostly in the mornings, when i come to work, it's still a bit dark, and they move fast across the pavement. I dont know…there´s just something about them that give me the chills. (Informant 3)

The uneasy feelings described here by the informant underscore the emotional and symbolic weight carried by urban rats. Disgust and fear towards rats are not inherent reactions, but products of cultural conditioning, visual tropes, and narratives of contamination and danger, affective responses shaped by historical discourses and maintained through media, policy, and everyday practices of urban sanitation. (Burt, 2006; Jarzebowska, 2023). While none of the informants reported being directly harmed by rats, their emotional responses revealed a deeper discomfort with the presence of rats in shared urban spaces.

> It's not like I'm terrified or anything, but when I see one running across the path or around the bins, I get this… reaction. Like a little jolt in my stomach. It's more of an instinctive thing. I just don't like them, I think they are a bit gross and their long tails, I think the tail is what grosses me out the most. (Informant 11)

The quote above illustrates how rats can trigger an affective response that is not entirely rational but deeply embodied. The reaction described here is not grounded in concrete danger but in a visceral discomfort — an "instinctive" aversion. Such feelings reflect broader cultural associations of rats with dirt, disease, and social disorder. As Burt (2006, p. 12) notes, rats have historically been constructed in the cultural imagination as carriers of plague, morally suspect, and intimately linked with human fear of the breakdown of boundaries between the clean and the unclean. These kind of perceptions are often linked to the concept of pest animals, animals that violate human spatial and symbolic boundaries and are "out of place" in normative urban orderings (Arluke & Sanders, 1996, p. 179). Rats, by inhabiting both literal and metaphorical borderlands (sewers, trash bins, undergrowth), disturb the illusion of human control over the urban environment.

> They're sneaky. Like, you don't see them until they're suddenly right there, and they move so fast. That's what makes me uncomfortable, I think. That they're unpredictable. (Informant 2)

Unpredictability and invisibility are recurring themes in how the informants describe

their discomfort. These traits highlight the rats' liminal status as non-domesticated species that live alongside humans but are neither wild in the traditional sense nor domesticated. As liminal animals, rats provoke anxiety by being neither fully inside nor fully outside the boundaries of human social worlds.

> When I saw one digging near the bushes, I just thought: this is not right. This is not how it's supposed to be in a university area. (Informant 5)

Here, the presence of a rat is perceived as a disruption of the normative use of space - especially spaces coded as 'civilized,' like a university campus. The discomfort can be understood as arising from a symbolic breach of the human-animal boundary and a perceived transgression of order (Arluke & Sanders, 1996, p. 176). As informant 5 puts it, the rat is simply "not right" in that space. This again resonates with the concept of rats as social transgressors — beings that blur distinctions between nature and culture, clean and dirty, wild and domestic (Burt, 2006).

Aivelo and Huovelin (2021, p. 328, 333) points to how rats cause more fear than actual danger, showing that negative feelings towards rats are more likely to by culturally mediated and socially learned, than based on actual experiences. The disgust many feel upon seeing a rat is less about the individual animal and more about the symbolic associations the species carries. Rats elicit unease not primarily because they pose an immediate threat, but because of their unpredictability, dirtiness, and proximity to human infrastructure violate the imagined purity of public space. However, these reactions are not fixed and can be transformed, a topic taken up later in this article.

An Ungovernable Animal That Should Be Controlled

As touched on in the previous section, many of the informants expressed concerns about rats as uncontrollable elements within the urban environment, an animal whose presence disrupts not only aesthetic and sanitary norms but also a sense of human dominance over urban space. The rats are framed not just as pests, but as a challenge to human authority and governance. These views often lead to demands for stronger management, control, or eradication measures by municipal authorities.

> I think the city needs to do something. There are so many rats now, and it feels like they're everywhere. You see them even during the day. That's not normal, but I guess that is what Lund has become these days. (Informant 1)

The above quote captures a sense of alarm and loss of control. The sight of rats "even during the day" is interpreted as a sign of urban disorder — a violation of the expected temporal boundaries between human activity and non-human visibility. As Lee et al. (2024, p.10-11) shows in their study of resident's rat complaints in Vancouver, Canada, increased rat visibility in daylight hours is often interpreted by urban residents as a sign of municipal failure or a city in decay. These kinds of perceptions are intimately tied to how rats are categorized as pests. Pests are animals whose presence necessitates human intervention precisely because they are seen to escape control - to spread, multiply, and infiltrate spaces designated as human. Rats are therefore not just animals but symbols of the breakdown of governance and spatial authority.

> I've lived in Lund my whole life, and I don't think I've ever seen this many rats. Back in the day, you might spot one late at night near a dumpster or something. But now? It's broad daylight, and they're running across footpaths like they own the place. It's gotten worse, and it feels like no one is doing anything about it. I've seen traps, sure, but they don't seem to help. We need to get rid of them properly. (Informant 1)

Here, the informant expresses both a desire for action and frustration at the perceived inefficacy of existing measures. This echoes findings from other studies suggesting that people are often sceptical about the effectiveness of municipal actions against rats (Lee et al,, 2024). The quote also reflects a reliance on extermination as the dominant mode of response - a reflection of the pest-control paradigm that views co-existence as impossible. The idea that rats must be "gotten rid of properly" also implies the absence of alternative imaginaries for urban multispecies living. This is where the framework developed by Donaldson and Kymlicka (2011) becomes relevant. As they argue, the notion of *denizenship* challenges the extermination logic by asserting that liminal animals like rats have a right to live in cities. Another informant reveals ambivalence when taking about the rats of Lund, an acknowledgment of the impossibility of total eradication, but also a continued desire for control:

> They're just too many now, and they are not shy anymore! I don't think you can ever get rid of them completely, but something has to be done. We can't just let it go on like this. (Informant 2)

This also reflects a paradox of urban rat governance: even when people recognize the failure of extermination, which they often do, they at the same time struggle to imagine

alternative modes of cohabitation. Glimpses of alternatives can be seen in how city residents sometimes try to adjust their behaviour and waste practices because of the rats' presence in the city, rather than calling for their extermination (de Bondt et al., 2023, p. 73). However, the dominant discourse remains rooted in the pest-control paradigm, where visibility and unpredictability are taken as signs of failure and mismanagement. Yet even within these perspectives, there is recognition that total control is elusive. There is an ambivalence at the heart of human–rat relations: rats are detested and exterminated, yet they thrive in human-made environments. This coexistence reveals the contradictions in anthropocentric ideals of total control and purity in cities.

Their Place Too

While many of the informants expressed fear or frustration with the presence of rats, others articulated more reflective and open perspectives, suggesting that rats might have a rightful place in the urban landscape. This section focuses on informants who emphasize coexistence and challenge the dominant extermination logic. These views mark a shift in tone and orientation, acknowledging rats not simply as pests, but as fellow inhabitants of the city — creatures with whom humans share space and infrastructure. Sometimes this seems to come from a recognition of the ambivalence with which different urban animals are treated.

> One morning I saw a handwritten sign taped to the wall of the building, this building where I work, and it said something like, 'To whomever are feeding the birds here. You are also feeding the rats!! Please stop.' And I mean, I get it. I've seen the bread left out there too, and yeah, of course that attracts rats. But it also made me think. We put out food for birds because we like them, right? We think they're cute or something, and then rats come and eat the same food and suddenly it's a huge problem. It's strange, really, when you think about it - how we draw this line between animals that are welcome and animals that aren't. Like, some deserve care and others deserve traps. That feels kind of contradictory to me. (Informant 3)

Another of the informants shares a relational, and even empathetic view of rats.

> Well, they live here too, right? They didn't choose to come here, they just are here. Just like us, they are trying to survive in this environment. (Informant 13)

The informant recognizes the rats' struggle for survival and sees them not as invaders but as urban cohabitants. This framing resonates strongly with Donaldson and Kymlicka's (2011) concept of liminal animals, who dwell in human societies without being domesticated or truly wild. Rather than seeing rats as intruders, the informant invokes a multispecies ethic of shared urban living.

> I guess rats are part of the city in the same way pigeons are. They're always around. They live off what we throw away. That says more about us, doesn't it? If we create an environment full of leftovers and hiding spots, of course they'll come. It's not a rat problem—it's a human mess problem. (Informant 13)

Here, the informant reframes the rats' presence as a reflection of human consumption and waste. This insight aligns with Meijer's (2022; 2023) view that shifting human perceptions of animals often begins with recognizing shared dependencies. The informant also suggests that the problem lies not in the rats themselves, but in human behaviour that enables their proliferation — an important departure from extermination narratives. Instead, the informant reimagines the rat as an ordinary feature of the urban ecology — akin to pigeons or squirrels.

> When you think about it, they have adapted to city life in amazing ways. People trying to keep them out and trying to kill them all the time and everywhere, and they still find a way to thrive. That's actually kind of impressive. We should maybe respect that more. (Informant 13)

In this quote, admiration replaces disgust. Rather than associating rats with dirt or disease, the informant expresses appreciation for their adaptability — a trait often celebrated in humans but pathologized in rats. This inversion of the moral lens recalls Burt's (2006, p. 121) discussion of rats as a dark twin of the human, one of "the totem animals of modernity", figures who thrive precisely in the spaces humans create and discard. The recognition of rats' agency here complicates the pest discourse and open an ethical space for inclusion.

These expressions of admiration and tolerance echo findings made by Bondt et al who document similar shifts among residents of Amsterdam observing how rats appropriate human cities and infrastructure for their own purposes (2023, p 73). When given the opportunity to reflect on rats not only as a nuisance but as agents with needs and capacities, some city dwellers move toward practices of *denizenship* — relational,

contingent forms of urban coexistence. One of the informants interviewed for this study express similar views:

> I know a lot of people don't like them, but I think we can learn to live with them. They're not going anywhere anyway, and they're not doing anything really, they're surviving. We created this environment - trash everywhere, giving food to birds, shelter in every hedge - and then we blame them for existing (Informant 3)

This pragmatic yet compassionate position suggests the possibilities for an emerging ethics of cohabitation. Acknowledging the resilience of rats and the inevitability of their urban presence can lead to a reconsideration of how humans might interact with them, asking not how to get rid of them, but how we want our relationships with them to be.

Emphasizing relationality and shared urban belonging suggest the possibility of developing more compassionate and context-sensitive approaches to urban animal governance. They also align with human-animal studies' broader project of rethinking human exceptionalism and embracing the reality of multispecies cities. The following section explores how familiarity and knowledge further can transform people's perceptions of rats.

Getting Familiarized with Rats

While earlier sections explored both fear and tolerance, this section centres on interviewees who expressed a form of appreciation or even fascination with rats, often grounded in personal experiences, observation, or newly acquired knowledge. These more positive views suggest that familiarity plays a key role in reconfiguring rats from dangerous outsiders into more legitimate urban cohabitants:

> I've started seeing them quite often in the mornings when I walk to work. At first I was a bit grossed out, but now I think it's kind of interesting to watch them. Once I saw two rats fighting over a chicken wing someone had thrown next to a bench. It was kind of funny - like a little wrestling match! They're clever, they move quickly, and they seem to have their own routines. (Informant 9)

This quote exemplifies a shift in perception that arises from repeated exposure. As the informant's initial aversion gives way to curiosity, the rats are reframed not as contaminants but as active, social beings:

> At first I thought they were just pests, but the more I saw them, the more I realized they are kind of smart. I saw one swimming across the pond and it was quite impressive. (Informant 9)

Meijer (2022) emphasizes that affective change toward animals often emerges through sustained encounters in shared environments. Although her research focuses on mice in laboratory settings, the mechanisms she identifies — familiarity, observation, and recognition of animal agency — are clearly at work here. Familiarity fosters recognition, and recognition opens the door for ethical reflection and the possibility of relationship.

> There are so many myths about rats, like that they're super dirty or spread lots of diseases. But when you actually learn a bit about them, it's not really true. I even read that they're really social and take care of each other. (Informant 9)

Here the power of information in reshaping emotional responses is highlighted. The act of "learning a bit" about rats — whether through reading or informal discussion — dismantles common stereotypes and opens space for more nuanced attitudes. This confirms findings from Aivelo (2023) and Aivelo and Houvelins (2020) studies of Finnish urban residents who were invited to take part in citizen science project where they surveyed rat occurrence in their own near environments. Knowledge about rat behaviour and ecology can reduce fear, build empathy and tend to foster less negative views of the rodents. Informant 9's comment about rats' social behaviours recalls Meijer's (2022) notions of awareness rooted in the recognition of emotional and communicative capacities in nonhuman animals. As such, becoming familiar with rats does not simply involve tolerating their presence, but rethinking their moral status and social complexity;

> I saw a rat swimming in the pond once. I didn't even know they could swim. It looked almost elegant. Not at all what you expect when you think of rats. (Informant 15)

Here, the informant is momentarily captivated by an unexpected display of grace. The phrase "not at all what you expect" captures how direct observation can disrupt cultural scripts that associate rats with filth and menace. This can be viewed as an aesthetic reconfiguration, where the rat ceases to be a symbol of modern degeneration and becomes instead a creature worthy of wonder:

> When you see them every day, it doesn't feel as unpleasant anymore. It's more like they are part of the place. (Informant 15)

The above quote echoes many of the themes already discussed. The informant points to habituation as a transformative process — one that leads to a quiet reclassification of the rat from aberration to a legitimate component of the urban ecosystem. Familiarity here acts as a soft force, one that gradually reweaves the rat into the fabric of the everyday:

> I don't mind them anymore. I even told my friend that I kind of like seeing them around. It's like a little reminder that humans aren't alone here. (Informant 15)

Here the presence of rats is not only accepted but valued as a sign of multispecies urban life. This perspective resonates strongly with Donaldson and Kymlicka's (2011) call to recognize liminal animals as denizens of shared spaces - beings whose presence reminds us of our entanglement with other forms of life.

> It's funny how quickly your feelings can change. I used to hate rats. But now I see them and think, well, they're just doing their thing. (Informant 13)

The informant here describes a transformation that is both emotional and cognitive. The shift from hate to benign observation is subtle but significant, signalling the erosion of fear-based narratives in relation to rats. As Meijer (2022; 2023) argues, these micro-shifts in perception carry a potential to contribute to broader cultural and ethical changes in how animals are viewed.

The quotes in this section underscore the importance of proximity, observation, and education in reshaping human-rat relations. These informants move beyond mere tolerance toward appreciation, expressing empathy, curiosity, and even aesthetic admiration. The shift is not necessarily radical, but cumulative - formed through repeated, low-stakes encounters that make the rats presence less threatening. This process aligns with multispecies theory's insistence on entanglement and relationality, and with calls for urban animal governance that acknowledges animals as agents and denizens rather than pests to be eliminated. Moments of admiration disrupts the common narrative of rats as purely disgusting or dangerous, instead, evoking curiosity and respect. These sentiments suggest that positive contact, rather than avoidance or extermination, could be a foundation for new human-animal relations in the city. Such shifts in perspective reflect the potential of multispecies education - an approach that foregrounds animals' subjectivity and promotes empathetic, cross-species understanding (Meijer, 2023). Seeing rats not as pests but as complex beings capable of adapting, surviving, and even impressing, opens the door to

more ethical cohabitation. The next section builds on this insight to explore how multispecies education might further support peaceful co-existence.

Re-imagining Rat Relations with Multispecies Education

How can perceptions of rats shift from disgust and fear to recognition and respect? How can people learn to see rats not as pests to be eradicated but as urban cohabitants with their own lifeways and ecological roles? What kinds of knowledge and emotional sensibilities are needed to support more peaceful rat-human co-existence?

The previous empirical sections demonstrated that human perceptions of rats are not static. Rather, they shift in relation to familiarity, context, and knowledge. Several interviewees described how their initial fear or disgust softened when they encountered rats repeatedly, learned about their behavior, or observed them closely. This suggests that education - not merely in the formal sense, but as a broader set of social and experiential learning practices such as the citizen science projects described by Aivelo and Houvelin and Aivelo (2023) - plays a key role in reconfiguring the human-rat relationship. Multispecies education as outlined by Meijer (2023, p. 1) - "education that prepares human and nonhuman animals for co-existing in multispecies communities" - offers a conceptual and pedagogical framework for fostering these shifts. Rooted in human-animal studies and critical pedagogy, it emphasizes the importance of teaching and learning with and about nonhuman animals in ways that acknowledge their agency, subjectivity, and embeddedness in shared environments. Importantly, it moves beyond utilitarian or purely biological understandings of animals to promote ethical and relational modes of co-existence.

Multispecies education should cultivate empathy across species lines, attentiveness to animal ways of being, as well as a willingness to be transformed by these encounters (Meijer, 2023). In the context of rats in cities, this might mean encouraging people to notice and reflect on the behaviour of rats in their daily surroundings, to question dominant narratives about rats as dirty and dangerous, and to engage with alternative sources of knowledge - including citizen science like in Aivelo & Houvelins (2020) study, but also art and animal advocacy. Several scholars in the field of human-animal studies emphasize that changing human-animal relations requires more than top-down policy reforms. It involves cultural, emotional, and epistemological transformation - a shift in how people see, feel about, and relate to animals (Donaldson & Kymlicka, 2011; Haraway, 2008; Meijer, 2022). The informants who began to appreciate or even admire rats did so not because they were

told to, but because they had experiences that disrupted existing beliefs and opened space for alternative understandings.

Multispecies education can play a catalytic role in creating these kinds of experiences. In schools, public campaigns, museum exhibitions, or neighbourhood events, people can be invited to reconsider their assumptions about urban animals, including rats. These initiatives can highlight the ecological roles rats play - such as consuming food waste that actually makes the city cleaner, not dirtier - and their social behaviors, including cooperation, play, and care for offspring. They can also introduce the idea, as Donaldson and Kymlicka (2011) suggest, that rats are not invaders but denizens - animals who live among us, not outside of us. Such a transformation would also require dismantling the pest label. As Donaldson and Kymlicka (2011) argue, liminal animals like rats challenge our governance structures. Recognizing their denizenship means accepting not only their presence but also their stake in urban life. This shift could entail designing waste management systems with multispecies impacts in mind, or developing public narratives that frame rats as survivors and co-dwellers rather than as threats.

Such education does not aim to romanticize rats or deny the risks they can pose, but rather to situate them within a broader ethical and ecological framework. It invites people to ask not “How do we get rid of them?” but “How can we live with them?” This is a question of political imagination as much as of practical management. As the interview material showed, some people are already asking these questions - often tentatively, occasionally with ambivalence, but nevertheless in ways that point toward more inclusive and compassionate multispecies futures. In this sense, multispecies education serves not just to inform but to transform. It challenges anthropocentric hierarchies and opens space for new kinds of urban citizenship that include other-than-human animals. It supports the emergence of a new cultural ecology in which animals like rats are no longer banished to the margins of human society but are acknowledged as part of the urban collective. This vision remains aspirational, but as this study shows, it is not without seeds in the present. Multispecies education also implies institutional commitment - from schools, municipalities, and researchers - to teach about nonhuman agency, complexity, and ethics. If urban citizens begin to see rats not as enemies but as neighbours, policy could follow toward more peaceful, sustainable relations.

Conclusion

This article has examined how urban rats are perceived by people in the city of Lund,

Sweden, and how such perceptions both reflect and reinforce broader cultural narratives of pestilence, control, and species boundaries. Drawing on qualitative interviews, as well as theoretical perspectives from human-animal studies and political animal philosophy, the article has argued for a fundamental rethinking of human-rat relations in urban contexts. Through the lens of liminality and denizenship, the article challenges the dominant framing of rats as pests and instead argues for a more peaceful coexistence built on recognition, familiarity, and shared urban space.

The analysis shows that public attitudes toward rats are ambivalent and varied. Many informants expressed discomfort or unease when encountering rats in public spaces, associating them with dirt, disease, or fear. Rats are also commonly framed as uncontrollable intruders whose very presence demands action, often in the form of municipal extermination efforts. These perspectives align with dominant narratives that construct rats as liminal threats - beings out of place -and legitimize their eradication through discourses of public hygiene and order (Arluke & Sanders, 1996, p. 165).

Yet, this is not the whole picture. Some informants articulated a more reflective and even appreciative stance toward rats, recognizing their role in the urban ecosystem or expressing fascination with their behaviour. These more positive or curious perspectives often emerged from direct experience, increased familiarity, or shifts in moral framing.

This article has drawn on the framework developed by Donaldson and Kymlicka (2011), particularly their concept of liminal animals and the associated status of denizenship**.** This perspective redefines urban animals, such as rats, not as intruders to be eliminated but as cohabitants with whom we share space, resources, and responsibility. It demands that we move beyond violence as a default mode of urban animal management and develop instead policies and attitudes grounded in respect and compromise.

A key insight that emerged from this study is that changing how we relate to rats is not only a question of policy but also of cultural meaning and public education. By integrating emotional, ethical, and ecological dimensions of rat-human relations, multispecies education can help challenge entrenched fears and prejudices and promote a more inclusive urban ethics. This however will not be an easy task. In the article *"Four-Legged Terror" or "Ultimate New Yorker" ?: Urban Rat Videos and Their Media Reception* (2024) Jarzębowska critically examines the cultural, symbolic, and affective dimensions of how rats are represented within social media and public discourse, more precisely within the context of New York City's subway system. Her analysis shows that rats are hardly ever presented as an integral part of urban fauna. Interestingly, she also shows how the main prerequisite for transitioning between negative and positive rat myths

seems to be the presence or absence of humans. While rats who are ”left to their own devices and filmed as if they are alone” can evoke positive reactions, even sympathy, videos depicting the rodents among people ”seem to automatically frame rats as a threat, even if they do not attack humans.” (Jarzebowska, 2024, p. 358).

It is a sad truth that the human motivation for learning about rats, has often been the desire to control and kill them, and that the foremost experts in wild rat behaviour are their exterminators. As global urbanization is projected to be bringing humans into even closer contact with brown rats in the future (Byers et al, 2019, p. 2) there is a need for rethinking urban rat management, not through extermination, but through multispecies engagement and education. Rats, often vilified, play an important role in urban ecologies. Acknowledging these contributions does not mean ignoring public health concerns or denying the need for management, but it does call for an ethical recalibration - one that recognizes the limitations of extermination and the promise of co-existence.

Future research could explore the efficacy and public reception of non-lethal rat management strategies, investigate children’s perceptions of rats and how they are shaped, or compare urban rat policies across different cultural contexts. There is also a need to examine how structural inequalities - including those of race, class, and geography - shape who is most affected by rat presence and by management policies.

Ultimately, this article contributes to a growing body of literature that challenges anthropocentric and exclusionary models of urban planning and governance. It argues that rats, like many other urban nonhuman animals, are part of the social fabric of the city. They are not simply signs of disorder but participants in a shared multispecies world. We will never get rid of them all, and nor should we try. To learn to live with them - not as threats, but as denizens - is both an ethical and political imperative of urban life in the Anthropocene.

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