Loved (lions/red squirrels) and unloved others (spotted hyenas/grey squirrels): Spectacles and more-than-human gazes as part of a political ecology of responsibility

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Abstract

Conservation generally benefits from spectacles of protecting 'loved others', i.e., those inspiring a human desire for their continued existence, rather than 'unloved others', i.e., those disregarded, disliked or targeted for death. We juxtapose conservation dynamics related to unloved others with much-loved others: spotted hyenas (*Crocuta crocuta*) and lions *(Panthera leo*) in Tanzania, and grey squirrels (*Sciurus carolinensis*) and red squirrels (*Sciurus vulgaris*) in the United Kingdom. We build a conceptual lens of gazes at micro (local), meso (collective) and macro (global) levels to go beyond spectacles of nature towards being attentive to more-than-human histories and needs amid broader questions of what is (deemed to be) nature. Through methodological and empirical vignettes drawing on academic and policy documents, Twitter pictures, observation and local knowledges, we interrogate human and more-than-human world-making related to our loved and unloved species. We argue that utilizing different natural and social science data together offers a chance to come closer to understanding these loved and unloved others from human and more-than-human vantage points,

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though anthropocentric bias remains. We find that engaging with diverse data can help to nuance the loved-unloved binary and challenge static, monolithic understandings of animals, while looking at loved and unloved others and acknowledging their reciprocal gazes through diverse methods can build more transformative attitudes towards more-than-humans especially at the micro-level. Finally, we place these dynamics in the context of a political ecology of responsibility, which emphasizes the importance of structural power imbalances and human responsibilities structuring human-wildlife interactions.

Key words: conservation, spectacles of nature, political ecology of responsibility, more-than-human perspectives

Résumé

La conservation bénéficie généralement des spectacles de la protection des « autres aimés », c'est-à-dire ceux qui inspirent un désir humain pour leur existence continue, plutôt que des « autres non aimés », c'est-à-dire ceux qui ne sont pas pris en compte, qui ne sont pas aimés ou qui sont ciblés pour la mort. Nous juxtaposons les dynamiques de conservation liées aux « autres non aimés » à celles liées aux « autres très aimés » : les hyènes tachetées (*Crocuta crocuta*) et les lions (*Panthera leo*) en Tanzanie, et les écureuils gris (*Sciurus carolinensis*) et les écureuils roux (*Sciurus vulgaris*) au Royaume-Uni. Nous construisons une lentille conceptuelle de regards aux niveaux micro (local), méso (collectif) et macro (global) pour aller au-delà des spectacles de la nature et être attentifs aux histoires et aux besoins des plus qu'humains dans le cadre de questions plus larges sur ce qu'est (ou est censé être) la nature. À travers des vignettes méthodologiques et empiriques s'appuyant sur des documents académiques, littéraires et politiques, des images Twitter, des observations et des connaissances locales, nous interrogeons la création des mondes (world-making) humains et plus qu'humains lié à nos espèces aimées et mal-aimées. Nous soutenons que l'utilisation conjointe de différentes données naturelles et de sciences sociales offre une chance de mieux comprendre ces espèces aimées et non-aimées à partir de points de vue humains et plus qu'humains, même si le biais anthropocentrique demeure. Nous constatons que l'utilisation de données diverses peut contribuer à nuancer le binaire aimé/non-aimé et à remettre en question les interprétations statiques et monolithiques des animaux, tandis que l'observation des autres aimés et non aimés et la reconnaissance de leurs regards réciproques par le biais de diverses méthodes peuvent engendrer des attitudes plus transformatrices à l'égard des plus-que-humains, en particulier au micro-niveau. Enfin, nous plaçons ces dynamiques dans le contexte d'une political ecology de la responsabilité, qui souligne l'importance des déséquilibres de pouvoir structurels et des responsabilités humaines qui structurent les interactions entre l'homme et la faune sauvage.

Mots-clés: conservation, spectacles de la nature, political ecology de la responsabilité, perspectives plus qu'humaines

Resumen

Por lo general, la conservación se beneficia de los espectáculos de protección de los «otros queridos», es decir, los que inspiran un deseo humano de que sigan existiendo, más que de los «otros no queridos», es decir, los que no se tienen en cuenta, no gustan o son objetivo de muerte. Yuxtaponemos las dinámicas de conservación relacionadas con los «otros no queridos» a las de los «otros muy queridos»: hienas manchadas (*Crocuta crocuta*) y leones (*Panthera leo*) en Tanzania, y ardillas grises *(Sciurus carolinensis)* y rojas (*Sciurus vulgaris*) en el Reino Unido. Construimos una lente conceptual de miradas a nivel micro (local), meso (colectivo) y macro (global) para ir más allá de los espectáculos de la naturaleza y estar atentos a historias y necesidades más que humanas en medio de cuestiones más amplias sobre lo que es (o se considera que es) la naturaleza. A través de viñetas metodológicas y empíricas basadas en documentos académicos, literarios y políticos, imágenes de Twitter, observaciones y conocimientos locales, cuestionamos la creación de mundos humanos y más-que-humanos en relación con nuestras especies queridas y no queridas. Argumentamos que la utilización

conjunta de diferentes datos de las ciencias naturales y sociales ofrece la oportunidad de acercarse a la comprensión de estos otros queridos y no queridos desde puntos de vista humanos y más-que-humanos, aunque sigue existiendo un sesgo antropocéntrico. Descubrimos que el uso de datos diversos puede ayudar a matizar el binario querido-no querido y a cuestionar las concepciones estáticas y monolíticas de los otros animales, mientras que observar a los otros queridos y no queridos y reconocer sus miradas recíprocas a través de diversos métodos puede generar actitudes más transformadoras hacia los más-que-humanos, especialmente a nivel micro. Por último, situamos estas dinámicas en el contexto de una ecología política de la responsabilidad, que subraya la importancia de los desequilibrios estructurales de poder y las responsabilidades humanas que estructuran las interacciones entre los seres humanos y la fauna salvaje.

Palabras claves: conservación, espectáculos de la naturaleza, ecología política de la responsabilidad, perspectivas más que humanas

1. Introduction

Spectacles, i.e., idealized images that mediate social relations (Debord, 1971), are omnipresent in discussions about conserving more-than-human nature.[2] Following Igoe (2010), we understand spectacles of nature as commodified images which mediate social relations towards the environment. These spectacles of nature matter as they can produce and reproduce reality, and shape paradigms, donations and realities for humans and more-than-humans who live with conservation. Conservation often relies on depicting beings, ideas, interactions that inspire a human desire for saving ecosystems or species earmarked as flagship or keystone species or charismatic megafauna (Marchini, 2014; Nature Insight, 2025; Verissimo *et al.*, 2011). Yet on the flip side of these 'loved' others, 'unloved' others can be ignored, disliked or even removed in the name of conservation (Rose & van Dooren, 2011). Asking who is targeted for care, or, in some cases, targeted for death (Hutchinson *et al.*, 2022; van Dooren, 2015) is especially important from a more-than-human perspective (De Silva & Srinivasan, 2019).

Our first contribution is thus to begin to explore spectacles of nature from a more-than-human perspective, constructing the concept of gazes, i.e., the importance of looking at animals' full lives, but also acknowledging that they look back (Derrida & Wills, 2002; Haraway, 2007). Through six vignettes, we investigate two cases of globally much loved (lions in Tanzania and red squirrels in the UK) juxtaposed with unloved others (spotted hyenas in Tanzania, grey squirrels in the UK), to show how differently conservation looks along the loved-unloved continuum, nuance the loved-unloved distinction and challenge monolithic understandings of these species as a 'known' (Margulies & Bersaglio, 2018). To us, this follows De Silva and Srinivasan's (2019, p. 188) proposal towards "less anthropocentric perspectives that prioritize both vulnerable people and wildlife", analyzing the dominant narrative and who controls it to highlight power imbalances in human-animal and human-human relations, and extending this also to the more vulnerable amongst wildlife, the ignored, disliked or targeted for death.

As a further contribution, we argue it is important to recognize that these gazes and mediated relations are co-produced by humans and more-than-humans, and require different disciplinary perspectives and data inputs since we cannot 'hear' directly from more-than-humans (Granelli, 2023). This requires an experimental, interdisciplinary mix of methods. Finally, we place these dynamics in the wider context of a political ecology of responsibility, a concept which emphasizes power imbalances and questions of (human) responsibility in shaping the structures and contexts of human-wildlife interactions (Komi & Nygren, 2023) through a focus on how spectacles and more-than-

[2] For reflections on language regarding multi-species, other-than-human and more-than-human, please see Price & Chao (2023) and González-Duarte & Méndez-Arreola (2024).

human gazes shape these conditions. We build on Komi & Nygren (2023)'s observation that more-than-human analysis can risk masking human responsibility and power differentiation, requiring an attention to more-than-humans' perspectives given humans' outsized power to make and shape worlds and interactions. To us, broader questions about what is deemed nature intersect with all our contributions.

In our study, we juxtapose spotted hyenas and lions in Tanzania, and grey and red squirrels in the UK. Spotted hyenas are one of the three (the other two being lions and leopards) most common large carnivores that attack livestock (cattle, sheep, goats), with higher recorded incidences of depredation (Kissui, 2008; Kissui *et al.*, 2019; Mbise, 2024; Mkonyi *et al.*, 2017). However, most conservation funding, and indeed attention in terms of human-wildlife conflict and coexistence, is heaped on lions as we will show. Similarly, grey squirrels in the UK are commonly represented as destructive invaders, enemies of trees, and killers of the beloved red squirrels. Consequently, they are subject to 'management', often culling (Crowley *et al.*, 2018), partly in the name of protecting red squirrels and trees. These quite different cases were selected as they bring together species who, according to most macro-level, global conservation narratives and logics, are loved (red squirrels/lions) with those that are elsewhere on the unloved-loved spectrum (grey squirrels/spotted hyenas). Through our vignettes, we highlight the need for nuancing between and within macro, meso and micro levels regarding loved/unloved gazes, and prioritizing vulnerable people and wildlife, including through more-than-human perspectives. From these, we do not seek to generalize to all loved/unloved species, but rather use these beings and research questions to problematize wider conservation logics and the ways they, and their inherent spectacles, favor charismatic species. We first develop the lens of gazes in the context of loved-unloved others, discuss our methods and six methodological-empirical vignettes, before reflecting on our experimental, interdisciplinary mix of methods, conceptual and empirical contributions.

2. Spectacles of nature and more-than-human gazes: A political ecology of responsibility for loved and unloved others

The ways that nature is represented, and with what implications, has drawn ample interest (Barua, 2010, 2016; Brandon, 2021, 2024; Krauss, 2018; Margulies & Bersaglio, 2018). Building on Stuart Hall's seminal work (Hall, 1997), representations are the signs and symbols which communicate concepts, ideas and feelings, and thus are central to (re)producing meaning. Creating these meanings hinges on spectacle, which mediates humans' relationships through representations (Debord, 1971). This is a continuous process: Spectacle is both the canvas on which reality is continuously painted and re-painted, but simultaneously the fabric that constitutes and re-constitutes that same reality, while reaffirming the separation and alienation between reality and image which is part and parcel of spectacle (Debord, 1971). Igoe coined the idea of spectacles of nature as commodified images that crucially mediate relationships between people and the environment (2010, p. 376).

These processes of re-presenting, making and negotiating meaning directed at humans regarding more-than-humans can briefly alleviate the alienation from nature brought about by the present economic system, yet their fleeting character requires constant renewal (Adorno, 1991; Büscher, 2016; Igoe, 2010), for instance through images and social media. Online platforms have recently grown exponentially to the point of a social media(tion) of conservation (Brandon, 2021, 2024). Nevertheless, the fundamental relationship remains between humans and images of landscapes and exotic nonhumans being used by conservation organizations "to communicate urgent problems in desperate need of the timely solutions that these organizations claim to be uniquely qualified to

offer" (Igoe, 2010, p. 378). Partly as more palatable alternatives to lives actually lived (Igoe, 2010), 'derivative value' plays a role, i.e., gaining online attention, clicks or donations based not on what is, but what should be (Büscher, 2010). Human world-making projects imbue this economy of appearances with meaning and (monetary) values, often in ways which perpetuate western philosophers' problematic representations of humans as separate from nature, with nature there to be mastered and managed (Tsing, 2005, 2015). They often fail to acknowledge the diversity and agency of this 'nature.' As images are commodified and consumed (Baudrillard, 1998) and mediate distant relationships, spectacles of nature can reproduce western world-making projects and understandings of humans, more-than-human nature and the ways they interact. What is more, they then write these flawed ideas and practical implementations into present reality and the future without considering underrepresented and/or animal voices, nor who was responsible for structuring human-more-than-human representations and relations in the first place.

In keeping with Igoe's (2010), Tsing's (2005, 2015) and Hall's (1997) question about what meanings are built into and through representations and spectacles, it is vital to ask to what, and whom, spectacles of nature do *not* draw attention nor give voice to. Those not in focus generally encompass humans that live with the injustices of conservation, particularly across Africa, Asia, South America and the Caribbean (Barua, 2014; Collins *et al.*, 2021), or who experience conservation differently based on intersecting dimensions such as race, gender, caste or class etc. (Banerjee & Sharma, 2022; Pandya, 2022). Moreover, Plumwood highlights the abiding force of *Othering* discourses delineating humans from nonhuman nature, upon which colonization and colonial thinking are based (Plumwood, 2003). We need to reflect on the racialized origins of subjugating, managing and categorizing nature, and the implications for who or what are loved and unloved (Collins *et al.*, 2021; Tsing, 2005, 2015).

Spectacles of nature are premised on there being an image or 'imaginary' of more-than-humans that is of sufficient interest to warrant human attention and engagement in the name of 'conservation'. Crucially, more-than-humans are thus not considered on their own merit, but as part of a human world-making project subject to significant biases. Physical attractiveness based on visual representations is one decisive factor in supporting conservation of a species (Gunnthorsdottir, 2001). These processes of selection are intricately linked to what is seen as desirable by humans, and – in the case of animals – to ideas of nonhuman charisma (Krause & Robinson, 2017; Lorimer, 2007), including invasive species (Boonman-Berson, Turnhout & van Tatenhove, 2014; Jarić *et al.*, 2020). There is a history of higher donations being made to conservation organizations for campaigns centered on charismatic others, or those seen as more akin to humans (Colléony *et al.*, 2017; Curtin & Papworth, 2018; Gunnthorsdottir, 2001). Conversely, the growing literature around human-wildlife conflicts and coexistence (Chapron & López-Bao, 2020; Frank *et al.*, 2019; Madden & McQuinn, 2014; Pooley *et al.*, 2017, 2021) predominantly focuses on 'loved' creatures including charismatic megafauna such as elephants or lions (Marchini, 2014).

Rose and van Dooren (2011) emphasize the distinction that conservation makes between loved others that inspire a human desire for their continued existence – because they are cuddly, elegant or dangerous – and unloved others whom humans disregard, dislike or target for death, because they are deemed invasive[3] or destructive, including to loved others (van Dooren, 2015). Human attitudes to wildlife are affected by social, economic, psychological and symbolic factors, and are rarely proportional to the damage wildlife may inflict (Dickman *et al.,* 2014; Zimmermann *et al.*, 2020).

[3] We do not delve here into the myriad problematic logics underlying categorisations such as 'invasive' species (cf. e.g. Boonman-Berson, Turnhout & van Tatenhove, 2014).

Clearly, spectacles of nature play a role both in reproducing these loved others to those who have material or emotional attachments to them, and in producing (un)loved others' reality. By contrast, unloved others chime with Ginn, Beisel and Barua's (2014) idea of 'awkward creatures', with whom living or coexisting is difficult (Mathur, 2021) and who do not generally lend themselves to being posterchildren of conservation, revealing the flip side of dominant conservation thinking's logics of care, or lack thereof (van Dooren, 2015). Singleton, drawing on rubbish theory and its distinction between durables, transients and rubbish, highlights that how others are viewed and categorized expresses (fluid) societal value systems (Singleton, 2021), prompting us to think of loved-unloved as more of a continuum and variegated over time and across individual/micro, collective/meso, global/macro or more-than-human viewpoints.

More-than-humans, to the extent that they feature at all in discussions of spectacle (Tsing, 2017), will generally be deployed in dominant human world-making projects. Human exceptionalism has been variously challenged (Haraway (2008; Barua, 2016; Kirksey & Helmreich, 2010; Madden, 2014; Rose & van Dooren, 2011; van Dooren & Rose, 2016), yet 'spectacle' has neglected to engage with animals' lives or viewpoints, and with more-than-human perspectives. According to Derrida (2002), going beyond a human-centric world involves being seen by an animal, through their reciprocal gaze (Lorimer, 2007). Consequently, never meeting an animal's gaze or only engaging with them as literary or scientific subjects leads to imperfect understandings of species, many of whom are our companions in everyday life (Haraway, 2007).

Consequently, meeting species as equitably as possible (Haraway, 2007; Hinchliffe, 2010; van Bommel & Boonman-Berson, 2022) while rejecting static understandings of 'the animal' as something known (Margulies & Bersaglio, 2018) and recognizing more-than-human actors in (geo)political processes (Sundberg, 2014), has conceptual and methodological implications. Our conceptual contribution, the conceptualization of gazes, thus involves reflecting on the ways animals are represented through spectacles of nature. We ask how meaning is made, by whom, and at different scales – micro/individual, meso/collective, macro/global, more-than-human. Crucially, we also problematize how animals look at us. This means considering our research methods within the limits of human cognition to understand their relational, interpretive lives and how they co-constitute spaces (Haraway, 2007), as well as their histories and needs (De Silva & Srinivasan, 2019).

The Special Section this article appears in promotes a dialogue with ecological and ethological data as an important step towards centering more-than-human lives, as we recognize abiding anthropocentric limitations and biases in collecting and interpreting data (Toncheva & Fletcher, 2022). We do so in the diverse data types used in vignettes below. The article emphasizes the diversity of people who gaze at animals, the diversity of gazes and spectacles involved and, with Derrida (2002) and Haraway (2007), how animals gaze back differently. We also acknowledge who bears primary responsibility in shaping the conditions of human/more-than-human interactions. Komi & Nygren (2023) have called this as a political ecology of responsibility, i.e., in the interest of justice, we must pay attention to the political, political-economic and asymmetrical power structures which shape the conditions within which humans and more-than-humans encounter each other, while acknowledging humans' outsized responsibility in this relationship. In addition, a decolonization of understandings is needed to facilitate an intersubjective ethics of responsibility for each other (Rose, 2004). As we will show, it is important to analyze the gazes and spectacles involved in the process of humans, from different geographies, backgrounds, status etc. encountering more-than-humans.

3. Methods

Justification of the case studies

Our study builds on earlier analyses of conservation and care (or not) for feral pigs in Hawai'i (van Dooren, 2015) and street dogs in India (Srinivasan, 2019), and focused on juxtapositions in two different contexts: spotted hyenas vs. lions in Tanzania, and grey vs. red squirrels in the UK. Spotted hyenas do not receive the same attention or funding as lions in conservation initiatives. Both kill livestock and kill or injure humans. Both are feared by communities, and coexist in the same landscapes. Spotted hyenas, unlike charismatic lions, are an aesthetically un-appreciated species which is seen as unattractive and ugly (de Pinho *et al.*, 2014; Glickman, 1995). In terms of charisma (Lorimer, 2007), spotted hyenas, which feature in the famous Disney's 'Lion King' saga, could thus not be further removed from lions, who are globally loved, serving as emblems of sports teams and cities. Spotted hyenas are viewed with fear and disgust at the micro- and meso- level in Tanzania, being commonly associated with witchcraft since they feed on dead prey nocturnally, and kill livestock. There is local tolerance of spotted hyenas' depredation observed in Ethiopia (Yirga *et al.*, 2014), but as we highlight in the following sections, spotted hyenas inflict the most livestock depredation and economic costs to local pastoralist communities in Tanzania.

Arguably, there is no animal and context that better illustrates the dichotomy between capturing human imagination and being a targeted, vilified other' 'than the UK's squirrels. Grey squirrels were introduced into the UK from North America in the 19th century (Wauters *et al.*, 2023). Since then, they have become part of the landscape, far outnumbering their red counterparts at an estimated 30:1. Both occupy similar habitats, although there is a disease that greys carry, but is only dangerous for reds (Signorile *et al.*, 2016). While red squirrels are not on a globally endangered list, but in the 'least concern' category, they are officially classed as endangered in England, Wales and Northern Ireland, and they have 'near-threatened' status in Scotland which has substantial conifer woodlands (Mathews & Harrower, 2020).

Research design

Starting from 2022, we utilized a mix of different methods to experiment with their usefulness for our purposes. We wanted to center more-than-humans beyond anthropocentric foci on spectacles, nuance the continuum and 'static knownness' of loved-unloved others, and illustrate humans' outsized role in building the spectacles and gazes which shape human-wildlife interactions from a political ecology of responsibility perspective.

For both Tanzania and the UK, we firstly drew on a review of academic articles, policy documents and technical reports from government agencies and conservation organizations to identify gazes related to spotted hyenas and lions vs. grey and red squirrels.[4] Building on bibliometric analyses such as Mabele *et al.* (2022) and Patel (2020), we analyzed Web of Science Core Collection databases: Firstly, related to spotted hyenas in Tanzania using the search syntax "spotted hyenas" AND "Tanzania." The intention was to decipher the cumulative scientific knowledge and research trends across natural and social sciences. Our scope was therefore Tanzania and limited to academic peer-reviewed articles written in English, and we removed publications that appear online somewhat randomly such as conference papers and book chapters to avoid biases (Apostolopoulou *et al.*, 2021). Our search returned 50 records, 42 valid in terms of content, focus, geographical area and containing

[4] For Tanzania, academic articles were obtained from Google Scholar, with lion records outnumbering spotted hyenas by ca. 5:1.

an abstract to enable assessment of main themes. For grey squirrels in the UK, given their considerable interactions with red squirrels, the Web of Science search focused on "grey squirrels" OR "red squirrels" AND "UK, England, Wales, Scotland, Ireland or Britain", returning 366 records, which reduced to 278 in terms of relevant content, focus, geographical area and containing an abstract. This ensured that we were drawing on the full scope of disciplines, incorporating studies from wildlife biology, zoology, ecology, ethology, anthropology, development studies and geography, while suggesting which studies would be most useful to analyze in-depth. For both the hyena and squirrel searches, we coded these abstracts by primary and secondary theme (such as 'conservation', 'disease', 'forestry', 'population' etc.) and whether the respective loved others (lions and red squirrels) were equally reported on in the abstracts.

In addition, for the UK where Twitter was used by members of the public, there was a sample of 1,034 Twitter pictures collected with the Mozdeh tool (Thelwall, 2018, 2021), of which 506 were eligible.[5] Reflecting the insight that public visual recordings can be a useful source of information on animal behavioral ecology (Jagiello *et al.*, 2019), the Mozdeh tool was deployed with the keyword "squirrel", implementing seven total retrievals of the previous week's pictures. In keeping with ethical approval from the University of Sheffield (038895), only Twitter posts set to 'public' were analyzed, only picture and tweet themes were saved, and no pictures, URLs or Twitter user names were retained to address concerns about individual Twitter users posting publicly, but not consenting explicitly to research (Ahmed *et al.*, 2020; Beninger *et al.*, 2014). In addition, JK visually observed grey squirrels in a green space in the north of England for one hour on 30 days (Ejsing, 2023; Granelli, 2023), keeping observation times constant following guidance from the UK Forestry Commission (Gurnell *et al.*, 2001), categorizing them between adults and juveniles (Bonnington *et al.*, 2014), but also seeking to get to know them individually. This mix of data sources and methods, explained further for each vignette below (Alexiou *et al.*, 2024), was employed deliberately to test which methods were best suited to engage more fully with human and more-than-human gazes, loved-unloved dynamics, and their intersections with a political ecology of responsibility.

4. Living with (un)loved others: Tanzania (MBM & WK)

Vignette 1: The dreaded and glorified lions

Tanzania has the largest population of lions in Africa (Packer *et al.*, 2005). The country is home to over 50% of East Africa's lion population, with an estimated population of 14,912 in 2010 (Ministry of Natural Resources and Tourism, 2023). The lion plays an important ecological role owing to its status as an apex predator in the ecosystem (Macdonald *et al.*, 2015; Ripple *et al.*, 2014). Historically, gazes on lions have branded them as a 'flagship species' defined as "a species used as the focus of a broader conservation marketing campaign based on its possession of one or more traits that appeal to the target audience" (Verissimo *et al.*, 2011, p. 2) to attract funding for conservation flowing to conservation NGOs and governments (Macdonald *et al.*, 2015). Lions are an important Tanzanian economic asset. As one of the iconic 'big five' species, they bring revenues crucial for the country's Gross Domestic Product through international nature-based tourism, trophy hunting and photographic tourism (Dickman, 2009; Kushnir, 2009; Ministry of Natural Resources and Tourism, 2020). For instance, in 2006, Tanzania generated around US$13 million from trophy hunting (Dickman, 2009), with lions contributing significantly, as Tanzania is the world's most popular destination for sport hunting of lions (Packer *et al.*, 2011).

[5] Twitter became X in July 2023.

Furthermore, there are diverse social and cultural gazes vis-à-vis lions. Apart from their important economic value, they have societal importance, e.g., as a symbol for royalty or as a sports emblem (e.g., Simba Sports Club, a major Tanzanian football club), or a symbol of strength (e.g., Simba Cement), and totems (Lindsey *et al.*, 2017), and cultural significance (e.g., being the worthy opponent for the Maasai's *olamayio*, 'organized hunts with a spear'). Particularly, for the Maasai, one of the largest pastoralist communities in the country, interactions with lions are complex and varied. According to Goldman *et al.* (2010, p. 336), within Maasai communities, lions provoke an "intense feeling of awe and admiration as well as fear and resentment." Maasai women have a fearful attitude towards lions possibly as they have less exposure to them, cultivating a desire for lion removal away from communities and avoiding the possibility of attacks on cattle (de Pinho *et al.*, 2014; Goldman *et al.*, 2010). Maasai *ilmurran* (the warriors) admire the lion as a brave and smart animal, embodying characteristics that Maasai admire in humans and being a worthy adversary, whose defeat maintains *ilmurran*'s image as the defender of the community and cattle (de Pinho *et al.*, 2014; Goldman *et al.*, 2010). Thus, for the Maasai, the lion is feared (for cattle depredation) and glorified (smart, brave and worthy opponent for *ilmurran*). Interestingly, the Maasai's response, '*olamayio*', is both reactionary (through retaliatory killings) and preventive (killing lions perceived as preparing to attack, ensuring that lions stay away from them) (Goldman *et al.*, 2013).

Despite the above varying socio-cultural gazes, among the large carnivores found in Tanzania, lions have been reported to be the most feared and dreaded predators – and for good reason (Dickman & Hazzah, 2016). The major impact on people is cattle depredations, with many reported cases from central and northern Tanzania where livestock numbers are highest (Ministry of Natural Resources and Tourism, 2020). These attacks occur the most during wet season as lions spend about 6 months outside of protected areas following migratory wild ungulates closer to villages, leading to increased opportunities for cattle depredation (Felix *et al.*, 2022; Kissui, 2008), but are then more vulnerable to Maasai *olamayio* (Goldman *et al.*, 2013). Livestock depredations cause significant economic losses for pastoralists (Mkonyi *et al.*, 2017) and cultural trauma due to cattle losses, as cattle are the symbol of wealth and respect (Kissui, 2008).

Moreover, attacks on people result in injury or death. Between 1990 and 2007, lions attacked more than 1,000 people, killing at least two-thirds of the victims (Kushnir, 2009; Packer *et al.*, 2024). The vast majority of the fatal attacks occur in the first hours after sunset, when humans are more vulnerable (Packer *et al.*, 2005, 2011). However, there is spatial variation. For instance, in the Idodi-Pawaga area within the Greater Rungwa-Ruaha ecosystem, lions are reported to cause 60% of attacks on people (Ministry of Natural Resources and Tourism, 2020). However, more than 45% of all reported cases of lions' attacks on people occurred in southern coastal districts (Ministry of Natural Resources and Tourism, 2020), with cultural and religious backgrounds being the main factors (Packer *et al.*, 2005, 2024). Despite being one of the most dreaded and feared mammal carnivores in the country for both livestock and human safety, lions still retain a charismatic aura in the country even within Maasai communities, especially for the *ilmurran,* highlighting the relevance of human-produced representations and spectacles and their role in shaping human-wildlife interactions.

On the other hand, ethological research shows how lions have 'gazed back' in the face of human-created conditions for human-wildlife interactions. *Olamayio* responses by Maasai (either as retaliatory or preventive killings) have been found to affect the lion's spatiotemporal patterns of habitat use in northern Tanzania (Jansson *et al.*, 2024; Oriol-Cotterill *et al.*, 2015) and their male coalitions (Felix *et al.*, 2022). Due to the human-caused risk of lion mortality, they have partitioned their activities spatiotemporally with those of humans when using high-risk areas for foraging opportunities (Oriol-Cotterill *et al.*, 2015). For instance, lions forage in areas closer to people (pastoral land or *boma* – Maasai homestead surrounding a cattle corral) when human activities are lowest,

between 23:00 and 05:00, and during higher rainfall and lower moonlight levels, i.e., hours and periods of lower risks of detection by people (Oriol-Cotterill *et al.*, 2015). Lions move significantly faster and straighter when closer to *bomas* and pastoral land, where there are greater human-induced risks (Oriol-Cotterill *et al.*, 2015). Likewise, Jansson *et al.* (2024, p. 16) report on intra-population (by sexes – males and females, and life stages – nomadic and resident males) differences in terms of how the lion 'gazes back' at humans in Ngorongoro Conservation Area. When either far (2km) or near (500m) to humans, females avoid humans whenever possible through stronger use of cover, with lesser temporal and seasonal variations. Resident males display significant human avoidance at night and during the dry season when pastoralists use the landscape more intensively, and take less cover during the wet season, while young nomadic males display behavioral conflict avoidance with humans during the day, as they are unfamiliar with the territory (Jansson *et al.*, 2024). Besides, in responding to the Maasai gaze perceiving lions as depredators, lion male coalitions become smaller in size and with a shorter tenure period when located near high retaliation risk areas, i.e., the periphery of protected areas, closer to villages and in active hunting blocks (Felix *et al.*, 2022). These behavioral adaptations affect foraging intake for lions (Oriol-Cotterill *et al.*, 2015), dispersal between lion sub-populations (Jansson *et al.*, 2024) and pride and offspring survival (Felix *et al.*, 2022), and may result in falling population levels over time.

Vignette 2: Spotted hyenas as 'shenzi'

Tanzania is the most important country for spotted hyenas in the world, having between 10,200 and 12,200 individuals (Dickman, 2009). They live in large social groups called "clans", which are structured in a strict female-dominated linear hierarchy (Green & Holekamp, 2019). They are highly adaptive in, and tolerant of, human-dominated landscapes (Boydston *et al.*, 2003), making them a regular threat to livestock (Kissui, 2008; Kissui *et al.*, 2019; Mbise, 2024; Mkonyi *et al.*, 2017). Small stock (sheep and goats), calves, donkeys and dogs are the primary targets of spotted hyena attacks, which occur with higher prevalence during the night and in the dry season (Kissui, 2008; Mbise, 2024). There is also a spatial variation in their attacks. Within the Greater Rungwa-Ruaha ecosystem, 97% of the spotted hyenas' population in the eastern section of the Ruaha National Park live within 30 km of the Park-village border (Abade *et al.*, 2014). The 2020-2024 'National Human-Wildlife Conflict Management Strategy' cites spotted hyenas as being responsible for most livestock depredation in areas such as the Maasai Steppe, Simanjiro Plains and Idodi-Pawaga wildlife management area (Ministry of Natural Resources and Tourism, 2020). For instance, Kissui (2008) reports that the spotted hyenas are responsible for 58% (n=231/396) of livestock losses in the Maasai Steppe, northern Tanzania, while lions accounted for 25% (n=99/396). In the same study site, Mponzi *et al.* (2014) found that 52% of livestock attacks were due to hyenas, followed by lions at 27% (n=1042) across 18 villages. In villages outside the Serengeti National Park, spotted hyenas cause over 97% of livestock depredation (Holmern *et al.*, 2007).

Together with lions, spotted hyenas are ferocious carnivores that attack people, resulting in injury or death. In Idodi-Pawaga, in the eastern part of the Ruaha National Park, spotted hyenas are responsible for 30% of attacks by large carnivores on people (Ministry of Natural Resources and Tourism, 2020) and 42.4% (n=111) of attacks on livestock (Dickman *et al.*, 2014). They are second to lions when it comes to attacks on people. For instance, between 2016 and 2018, spotted hyena attacks resulted in 14 deaths and 24 injuries (Ministry of Natural Resources and Tourism, 2020).

Contrary to varying human gazes on lions and their attacks on cattle and humans, humans consistently look at the spotted hyena as unaesthetic, and thus unadmired and un-appreciated. Mkonyi *et al.* (2017) report that livestock kills as a result of spotted hyena attacks bring larger financial losses than lion kills. For instance, in Simanjiro district, between 2013 and 2014 spotted hyenas' attacks on

just small stock caused a total financial loss of US$60,278, while lions' depredation on all livestock (cattle, small stock, calves and donkeys) totaled US$38,704 (Mkonyi *et al.*, 2017). Spotted hyenas caused a total loss of US$ 81,904 for all livestock kills – 1,340 kills compared to 129 by lions. However, lions' attacks on people or livestock induce more fear, trauma and dread and it seems the Maasai have higher tolerance for small stock kills by hyenas than cattle depredation by lions. The spotted hyena has an incredibly bad reputation within Tanzanian rural communities. According to Glickman (1995), it is regarded as a greedy animal with a boundless appetite and unpleasant odor, believed to be digging up graves of the dead. The spotted hyena's tendency to attack livestock in the *bomas* at night intensifies its associations with sorcery. People regard them as stupid or perverse, since they prefer bones to good meat.

Thus, the spotted hyena has long been spoken of with a combination of disgust, fear and derision in communities around Tanzania (Glickman, 1995). This reputation is also depicted in the 'Lion King' films. In the films, *shenzi* (literally translated as savage, barbaric or uncouth) is the name of the leader of a spotted hyena clan. Attitudes towards animal species are a key determinant of conservation support (Curtin & Papworth, 2018). Despite these unpleasant human representations, the spotted hyena exhibits greater behavioral plasticity towards human presence than any other large African carnivore (Boydston *et al.*, 2003; Holekamp & Dloniak, 2010). It can reproduce throughout the year, be diurnal or nocturnal, occupies diverse habitat types, and survives on diverse foods ranging from carrion to termites and elephants (Boydston *et al.*, 2003; Holekamp & Dloniak, 2010). Still, the spotted hyena 'gazes back' at humans, such as when female spotted hyenas move faster and travel longer in landscapes where livestock grazing occurs (Green & Holekamp, 2019), displaying behavioral conflict avoidance similar to lions. Even though their behavioral plasticity makes them more adaptable and tolerant to human-induced environments than the lion (Holekamp & Dloniak, 2010), local community attitudes to them are more negative.

Vignette 3: More programs for lions, less for spotted hyenas

Within Tanzanian government wildlife conservation circles, lions hold a glorified and commodified image. A large body of research and funding on carnivores mostly focuses on lions, with their declining populations in most parts of Africa used as justification for increased research and funding (Lindsey *et al.*, 2017). Although the IUCN population trends in the two main hyena species (spotted hyena and striped hyena, *Hyaena hyaena*) found in Tanzania are reported to be decreasing (Ripple *et al.*, 2014), nonetheless, the spotted hyenas do not attract such attention and funding from conservation agencies. Yet, as we have indicated above, they cause the most livestock attacks, which inflict the heaviest economic losses and disrupt local livelihoods. As we have shown, lions mostly kill cattle, while spotted hyenas kill small stock (sheep and goats), dogs, donkeys and calves. However, cattle have a larger economic value and cultural significance within Maasai communities, and their loss activates stronger retaliatory or preventive killings (*olamayio*) (Kissui, 2008; Mkonyi *et al.*, 2017). The loss of small stock due to spotted hyena attacks, however, occurs in large numbers, leading to significant local economic losses (Mkonyi *et al.*, 2017).

There are no concentrated national or international programs to address this form of human-wildlife conflict. There are no NGOs specifically working on human-spotted hyena co-existence. The only intervention we identified from our search was the 'Ngorongoro Hyena Project' (see https://hyena-project.com/), which is composed of an international team of behavioral ecologists interested in studying behavioral interactions between spotted hyenas within their clans and communities. There are several human-lions coexistence programs, with the Ruaha Carnivore Project (now part of Lion Landscapes) being a notable example (see https://www.lionlandscapes.org/ruaha-carnivore-project). Similarly, in the initial Web of Science sample, there was a considerable

discrepancy between the numbers of Tanzania-focused studies: spotted hyenas (n=50) and lions (n=286). Of the records confirmed as focusing on spotted hyenas in Tanzania based on the abstract (n=42), more than half also focus on either lions (n=20) or leopards (n=3), i.e., two charismatic globally loved others. Out of the six studies focusing on human-wildlife conflict in particular, there is just one which only focuses on spotted hyenas without also focusing on lions, reinforcing the idea that even in human-wildlife conflict situations, charismatic species such as elephants, lions, tigers and wolves command more attention than less charismatic species (Nyhus, 2016). The single most prominent theme in the spotted-hyena sample is disease, emphasizing e.g., pathogens in group-living beings or host-parasite interactions (n=16) – most of these studies, unlike for the human-wildlife conflict theme, focus on spotted hyenas alone. We suggest that it is the difference in the spectacle of nature between lions (as flagship, charismatic species) and spotted hyenas (greedy, dirty, disgusting species) that explain the lack of macro and meso- research interest and funding in addressing the human-spotted hyena conflicts.

5. Living with (un)loved others: UK (JK)

Vignette 4: Contrasting gazes of grey and red squirrels in policy and academic documents

> 21st January 2021 is Red Squirrel Awareness Day and, as Patron of the Red Squirrel Survival Trust, my thoughts turn naturally to all those throughout the United Kingdom who volunteer their skills and their time to *fight for the survival of the red squirrel* … I need hardly say that it is most encouraging when … I read of the Accord's advancing research into *practical grey squirrel control.* (His Royal Highness the Prince of Wales, 2021, p. 1, emphasis added)

> There's more than one way to kill a squirrel. In the United Kingdom (UK), people bring about the deaths of thousands of grey squirrels ... every year … with guns, traps, … and water. (Crowley, Hinchliffe & McDonald, 2018, p. 120)

These quotes exemplify that sometimes, Rose & van Dooren's (2011) unloved others are not that dissimilar from the loved ones that command interest and investment at a meso- or macro scale. Sometimes, all it takes is a slight variation in genetics, to turn loved others – a red squirrel, national emblem of fauna and nature writ-large in the UK – into unloved others: a grey squirrel, generally represented as a destructive invader of red squirrels' habitat, killer of trees and all-around nuisance. They also highlight the contrast between a species being deemed worthy of conservation or of (lethal) control. Red squirrel defense, a national mission for some UK conservationists, includes a £1.2m (US$1.63m) grant from the Heritage Lottery Fund to protect the "much-loved, endangered red squirrel" (Heritage Fund, 2015, p. 1), and conversely involves thousands of grey squirrels being killed every year, though it would be asymmetrical to ignore the suffering grey squirrels cause to red squirrels as well as to trees (Crowley *et al.*, 2018).

As this vignette will show, drawing on literary sources, news, and ecology and social science (Barua, 2014; Coates, 2023; Toncheva & Fletcher, 2022; Wauters *et al.*, 2023), historically, gazes on grey squirrels in the UK have mostly disliked them or targeted them for death. Firstly, an emphasis on reds' indigeneity and greys' foreignness reaches back e.g., to Middleton (1931)'s self-declared 'unprejudiced' reviews, which repeated rumors about grey squirrels eating red litters and emphasized greys' American provenance (Coates, 2015). This is equally reflected in *The Times* (center-right)

newspaper corpus, where war-like language is used to represent grey squirrels as North American immigrants and destructive invaders (McClaughlin, 2018). Some have argued these perceptions have spilled over into scientific discourse referring to grey squirrels with loaded terms such as 'alien' or 'invasive' (Joseph, 2013; McClaughlin, 2018). While reds themselves had been considered 'pests' and destructive to young trees in the 19th century in both popular and governmental publications, the reputation of the smaller, gentler red squirrel as a national emblem of the English countryside was rehabilitated by the 1950s, e.g. through Beatrix Potter's Squirrel Nutkin, a character in a children's book (Coates, 2015, 2023; Kean, 2000, 2001). This disregards that even before grey squirrels were introduced, red squirrels had to be reintroduced from mainland European stock (Holmes, 2015; Ritchie, 1920) given their own fluctuating population in response to particularly weather and human influence (Coates, 2015). Equally, reds' erstwhile classification as hunting-worthy pests is forgotten (Harvie-Brown, 1881; Holmes, 2015; MacDonald, 1954). According to public surveys, red squirrels are favored over greys, heavily so in areas targeted by the Red Squirrels United coalition, though there are neutral or positive dissenting voices (Dunn *et al.*, 2018). Kean concludes that it is less animal behavior and more political, cultural or social concerns that drive an animal's popularity or vilification (2001).

Continuing in contemporary public-facing gazes found in NGO or government publications, considerable emphasis is on reds being native, good, squirrels, and greys being destructive invaders (Department for Environment, Food and Rural Affairs, 2014; Forest Research, n.d.; Red Squirrel Survival Trust, n.d.; Wildlife Trusts, n.d.). Grey squirrels' aggressive interactions with red squirrels have equally been highlighted in ethology (Wauters & Gurnell, 1999). Firstly, red squirrels' "fight for survival" (His Royal Highness the Prince of Wales, 2021, p. 1) is connected by the websites of different organizations with an invitation to donate (British Red Squirrel, n.d.; Red Squirrel Survival Trust, n.d.; Royal Society for the Protection of Birds, n.d.; Wildlife Trusts, n.d.), or shop for red-squirrel-themed paraphernalia (Red Squirrel Survival Trust, n.d.). This is arguably a commodified gaze, but the absence of red squirrels from most UK residents' daily lives may reinforce a nature-human separation, and increase the distance from humans inherent in spectacles.

Secondly, there is a strong emphasis on the damage that grey squirrels cause to red squirrels, wild birds, plants and especially trees (Forest Research, n.d.; Mayle *et al.*, 2007; Royal Society for the Protection of Birds, n.d.), including the economic damage to commercial forestry operations (Baroness Byford, 2020; Department for Environment, Food and Rural Affairs, 2014; Lord Gardiner, 2020). This economic damage arises from bark-stripping by grey squirrels in specific months, which may be rooted in calcium deficiencies (Nichols *et al.*, 2016). The importance of avoiding this damage has promoted grey squirrel management, particularly by lethal means (Dunn *et al.*, 2018) or contraception (Barr *et al.*, 2002), without using more-than-human lenses to identify alternative approaches. Mirroring the policy sample, in our academic sample, conservation was only discussed with reference to red squirrels (n=9) or red squirrels as a function of grey squirrel expansion (n=22). Conversely, invasive species (n=42) and pest management (n=34) was always linked to grey squirrels, often involving lethal means, but also contraception since the late 1990s (n=6), though some scholars argue these perceptions are shifting (Coates, 2023).

It is important to acknowledge the role of academic, government and civil-society organizations in shaping the conditions of human wildlife interactions and these dominant gazes, their logic and a lack of attention to certain factors. Firstly, they rarely pay attention to grey squirrels' viewpoints and well-being. They do not adopt the more-than-human perspectives found in innovative approaches (Barua, 2014; Kirksey & Helmreich, 2010; Sharma & Gohain, 2024) or see how grey squirrels gaze back, e.g., in terms of how squirrels respond to different aspects of urbanization (Bonnington *et al.*, 2014), habitats (Jagiello *et al.*, 2019) and the presence of and distance to humans

(Jayne *et al.*, 2015). Secondly, they give no consideration to grey squirrels' potential benefits in maintaining biodiversity and forestry (Harris *et al.*, 2006). Thirdly, rarely is there an acknowledgement that humans, not the greys, have been responsible for introducing and translocating grey squirrels to other estates for release (Signorile, Lurz, *et al.*, 2016), with one exception (Royal Society for the Protection of Birds, n.d.). Human-driven timber choice and planting equally play a role in facilitating the spread of grey squirrels (Harris *et al.*, 2006), as demonstrated by the abiding presence of red squirrels in Scotland's conifer-dominated wood-scapes. Overall, there is a prioritization of certain dominant human spectacles while ignoring human influences in terms of a political ecology of responsibility.

Vignette 5: The many faces of Twitter squirrels

A sample of Twitter pictures demonstrated diverse human gazes, ranging from conflict via spectacle, sharing of space and life with squirrels, anthropomorphizing them, and also some arts-based expressions. Firstly, there is a type of gaze that shows antagonistic relations with grey squirrels causing damage, destroying plants or bird feeders, including nominally squirrel-proof ones (n=3) or eating birdfeed (n=2). Some 35 of the pictures showed an anti-squirrel sentiment, against 309 pro-squirrel. One example was a UK Twitter user declaring themselves to be at war with a grey squirrel, with other replying users recounting their own experiences of grey squirrels nesting uninvited in attic spaces. One UK user even kills greys for 'pest control', resonating with Crowley, Hinchliffe and McDonald's categorical mode of killing (2018) driven by a fundamental objection to grey squirrels' existence. However, the native/invasive debate prevalent in the policy and academic vignette was not prominent in the picture sample. Another dimension of this conflictual focus highlights squirrel relations with domesticated pets (n=70). Dogs (n=35) are often portrayed as being out to chase or hunt squirrels on walks (n=18) or being on 'squirrel duty' to guard their home (n=17). Cats were equally seen as common antagonists of squirrels, though relations were more variegated: nine cats were hunting or chasing squirrels, while ten were watching them, and a squirrel and cat had become friends in one instance. Even within this more conflictual gaze, there is considerable variety and some appreciation of squirrels as sparring partners for pets. Conversely, some of this variety among human gazes is rooted in squirrels' own behavioral plasticity and agency, with squirrels seeking habitat or food sometimes intersecting with humans and domesticated pets. From the squirrels' vantage point, they pursue survival, yet these fundamental instincts leave them on a collision course with humans given human-centric decision-making on urban design, buildings, limited green space, habitat, and human behavior (Bonnington *et al.*, 2014; Dagny *et al.*, 2021), which is problematic from a political ecology of responsibility viewpoint.

Secondly, commodification online. Some explicitly commodified spectacles concerned squirrels were located outside the UK, including red squirrels and more recently grey squirrels. Accounts occasionally highlight exotics living in tropical rainforests (n=6), yet without invitations to donate to conservation or eradication causes. A change in the UK law in 2019 has required some grey squirrel supporters to commodify their connection to the animals because injured or rescued grey squirrels can no longer be released back into the wild (EU, 2019; UK Government, 2019). Some grey squirrel rescues now sell paraphernalia to finance their operation (Hitchin Squirrel Rescue, 2022). Ironically, this brings grey squirrels more in line with red squirrels, who conservation organizations link to donation requests (cf. vignette 4).

Thirdly, some gazes in the sample explicitly acknowledge the presence of squirrels (n=132), including grey squirrels in UK urban landscapes such as parks or gardens (n=11). Humans recognize their existence as a daily office window visitor, or as a companion on journeys through parks or green spaces, appreciating that, as one Twitter user expressed aptly, grey squirrels are generally the only

wild mammals in urbanized environments that are seen regularly in the UK. This framing as a 'daily office window visitor' or 'companion' also implies a sense of reciprocal gazes with these squirrels, i.e., the squirrels are choosing to revisit particular spaces and humans, though we will never know whether the squirrels share this sentiment or they are merely seeking habitat and food.

Another prominent set of human-squirrel connections involved Twitter users using squirrels to express sentiments (n=33). One example is being distracted, building on the Pixar film 'Up!', in which a talking dog is distracted halfway through a speech by an off-screen squirrel (n=11). Another sentiment involved an expression of 'I am fine', playing on a squirrel's – from a human perspective – frustrated face (n=5). Other instances concern ascribing surprise (n=3), disappointment (n=1), or humans wishing they could eat continuously like squirrels, or a human likening their day to a squirrel eating fries from a rubbish bin. This gaze also includes schools using squirrels as names for groups of children.

Lastly, this element of drawing inspiration from squirrels and establishing emotional connections with them in different ways is further explored in the large number of artistic representations inspired by them – 198 pictures, the highest single number of any theme coded, ranging from cartoons, baked goods, paintings and wood sculptures, football crests, and squirrels being present in video games. Some users (n=4) shared screenshots of Valhalla, a recent incarnation of the popular Assassin's Creed video game series engaging in a 'flyting', or rhyming competition, with the Norse squirrel god Ratatösk. Interestingly, the creators depict Ratatösk as a grey squirrel (Game 8, 2021) rather than the red or black squirrels more at home in contemporary Scandinavia. Drawing inspiration from all types of squirrels rather than distinguishing between reds and greys is a recurring theme in these artistic manifestations, since many do not make evident whether they are based on grey or red squirrels or neither, but celebrate them in the abstract: the unloved/loved distinction thus disappears in this gaze, with all squirrels seen as inspirational. Overall, the Twitter picture sample demonstrated that there are many different gazes with which humans relate to squirrels, and many different ways in which squirrels look back. Squirrels' own lives and ways of gazing back were perceived very differently, from outright hostility via intricate connections with domesticated pets, to possibly reciprocal connections through window visitors, and artistic inspiration. In terms of a political ecology of responsibility, humans rarely took account of their own role in shaping squirrel habitat and food opportunities.

Vignette 6: Gazing at, and being gazed at, by grey squirrels

How do you begin to understand grey squirrels' gazes, bearing in mind that humans struggle with appreciating non-human languages (Ingold, 2004; Latour, 2004)? My answer was to spend a lot of time with them in a space they share with humans – in a manner of more-than-human ethnography, to 'live' with, and experience the same patterns as them (Ejsing, 2023; Madden, 2014) to narrate life in all forms and its social relations through a type of disciplined patience (Hartigan, 2017). Over 30 days, for one hour a day, I observed their comings and goings at a feeding point in an urban green space in northern England. I sought out a constant period of time just after first light, a period of high activity (Gurnell *et al.*, 2001). I identified 15 different squirrels, through fur shades, scars, markings, sex, different body shapes, sizes and estimated ages (juveniles born the same year vs. adults born earlier, Bonnington *et al.*, 2014). I observed them interacting with each other, and with the feeding station supplied by humans. Individuals feed grey squirrels in parks and green spaces regularly, a practice recently outlawed and punished with fines in some London parks, some of which reduce their grey squirrel populations by culling (Newham Recorder, 2019). Observation only began after I had devised ways of differentiating between all 15 individual squirrels. The selection of the site occurred

with Haraway's (2010) emphasis on 'cum panis'[6] in mind, i.e., thinking about who eats and is eaten. Higher grey squirrel densities are found in places with green space and availability of food (Bonnington *et al.*, 2014; Jagiello *et al.*, 2019). I observed 734 grey squirrel visits, who were also looking out for predators while foraging (Jayne *et al.*, 2015). The study demonstrated that individual squirrel behavior was heterogeneous and diverse in terms of where food was sourced, and also where they buried food for the winter months.

Thirty days of squirrel observation also yielded many instances when different squirrels took issue with each other over food or, quite simply, each other's existence. Of the 734 visits, 202 involved instances of chasing other squirrels. This was not always related to chasing each other off the feeding station; sometimes, it occurred due to squirrels getting too close to each other at, approaching or leaving the station. A breakdown of who was chasing whom vs. frequency of visits showed that male squirrels, overrepresented in the sample (10 male to 5 female individuals), visited more frequently than females and chased others more often: in turn, they were chased less frequently than females. Similarly, in a nearly equal sample of juvenile (i.e., born that year and thus smaller) to adult squirrels (7 adults to 8 juveniles), the adults visited more frequently and were far more active chasers of, particularly, the juvenile squirrels. The range extended from one squirrel doing a lot of chasing (63), but not much being chased (1), to another squirrel doing no chasing, but being chased 34 times, underlining the diversity in squirrels' gazes at each other. This diversity of behaviors mirrored a study of red squirrels' variegated responses to human behaviors in a Polish park (Dagny *et al.*, 2021).

They also looked at me. Squirrels' presence at the feeding station suggests an understanding that at least some humans felt positively towards them. This also led to the bolder squirrels – generally the males and older ones – coming closer, especially towards the end of our 30 days together, to ascertain whether I might have some extra food in my pockets that I could be persuaded to part with. They locked eyes with me, sometimes stood up on their hind legs, tilted their heads, put a paw on their chest, always waiting for sunflower hearts or nuts to appear from my pockets. This was all the more acute if the feeding station happened to be empty. This also meant that a few individuals grew more interested in me over time and eventually took food from my hands, but very rarely (n=3). While I was invading their space on a regular basis, this 'gazing back' and interaction suggested that they consented to me being there (Granelli, 2023), even though standard human research ethics and integrity processes are not normally designed to protect individual more-than-human interests.

I also realized that this intense exchange of gazes – through the policy documents, the Twitter pictures, but particularly through observation – had left an impression on me. I had come to think of some squirrels at the very least as companions (Haraway, 2007): having walked with them for a month, I realized I was not apathetic to their fate, likely similar to the Twitter picture takers commenting on squirrel companions on their walks or at their office windows. While acknowledging the damage they do to red squirrels and plants all over the UK, I grew more interested in ways of mitigating that damage and safeguarding non-lethal control and management options. Because, in keeping with the political ecology of responsibility (Komi & Nygren, 2023), I had come to see, through their and different humans' eyes, that, while they themselves caused damage, it was also human choices which facilitated the damage: through the four grey squirrels humans had transported to Victorian England as cute additions to an estate in Hensley, Cheshire (Middleton, 1931, also in the north of England), to more recent choices around what trees were planted or landscapes were curated.

Arguably, lethal management choices ignore these structural responsibilities, particularly by humans, and prioritize one type of gaze: the antagonistic, negative view of a generally unloved 'other' who deserved to be ignored, or worse, killed. While UK residents had once levied the same allegations

[6] "With bread."

now made against grey squirrels against red squirrels – damaging forestry and planting, killing baby birds, being general pests – we have forgotten our objections to the reds as the greys have manifested themselves as convenient antagonists: because they are originally North American, because they are 'invasive', because they cause damage to the red squirrels and the British landscape. The different, human and more-than-human gazes I had adopted and considered showed, however, that outside of policy and most academic circles, there is a much greater diversity of views of these loved and unloved others, meriting at least an acknowledgement nuancing the loved-unloved distinction. I also came to understand that, in navigating urban spaces designed not for them and often through a hostile human gaze, grey squirrels gaze back through a prism which seeks survival, particularly habitat and food (Bonnington *et al.*, 2014). While foraging for food and consistently paying attention to risks such as predators (Jayne *et al.*, 2015), some were not above charming me – or what I perceived to be charming – in search of more food, often in competition with each other or with other creatures, in the face of humans generally neglecting to take account of their interests or actively contravening them.

6. Discussion: Gazes, nuancing the loved-unloved distinction, and a political ecology of responsibility for all nature

Diversifying data sources for more-than-human gazes

Building on a deliberately experimental, interdisciplinary mix of methodological and empirical vignettes, we do not wish to offer definitive answers, but space for further discussion and research. To safeguard a more-than-human element to the analysis (Haraway, 2007; van Dooren, 2015; van Dooren & Rose, 2016), we introduced the idea of 'gazes' between and among humans and squirrels, lions, and spotted hyenas. We have shown how humans look at animals in ways that mediate and are mediated by complex relations, but animals look back. The notion of gazes, and the concomitant collection of diverse data, helped not only nuance the 'non'-human category (Lorimer, 2007), but crucially highlighted that lions, spotted hyenas and squirrels, akin to tigers in Margulies and Bersaglio's (2018) study, are heterogeneous and fluid, as are humans' relations with them. Ethological research indicates that diversity in spotted hyenas is structured through female-dominated linear rank relationships (Green & Holekamp, 2019) and with lions, through intra-population differentiated gazes back at humans (Jansson *et al.*, 2024). Through a nuanced, novel observation of grey squirrels' behavior, we confirmed that grey squirrels differ in what they can and choose to do (Nussbaum, 2018), identifying variegated behaviors from chasing to feeding and burying routines. Equally, gazes in the Twitter picture sample challenged a fairly monolithic representation in policy documents which does not meet grey squirrels' gaze, but portrays them as one singular entity worthy of control. What is more, the data showed that humans connected with grey squirrels in diverse ways; squirrels, without red-grey distinction, were an important inspiration for artistic expression.

Some methods helped to 'see' these animals, and crucially all animals rather than only a focus on the 'loved' variety. We captured them looking back at humans, and one of the researchers in particular. While the Twitter picture sample helped contextualize squirrel behaviors (cf. Jagiello *et al.*, 2019), observation helped most to 'live with' and approximate an awareness of animal gazes. However, the methods used did limit the gazes identified to those that are anthropogenic and within the human researcher's understanding, highlighting one key shortcoming of many multi-species ethnographies (Kirksey & Helmreich, 2010; Madden, 2014; Toncheva & Fletcher, 2022). The analysis was enriched by using ecological and ethological data alongside social science data, and especially the combination of visual and ethnographic approaches. Ways to further diversify and

triangulate data sources would be extending the observation of squirrels to systems akin to those used by Kirksey *et al.* (2018) to tag wild cockatoos, log their movements and establish connections with human Facebook friends, or by radio-collaring grey and red squirrels (Dagny *et al.*, 2021).

The fluidity of gazes on (un)loved others

Regarding the role of gazes and spectacles in more-than-humans' and humans' relations, we found a mixed picture. While the policy landscape for grey and red squirrels historically and currently suggested predominant perceptions of greys as unloved, disliked, destructive invaders to be eliminated as an invasive species, the Twitter picture sample suggested that human users', and indeed grey squirrels', world-making does not always follow these representations. Twitter users shared far more experiences of connecting with squirrels than explicit anti-grey sentiment. Crucially, these understandings are also fluid, as red squirrels used to be represented and treated as pests before being reinvented as emblems of national fauna in the UK in the 1950s. Now, in policy and academic work, the conflict between red and grey squirrels, including some emotive language regarding the greys, itself may have become a commodified spectacle.

Conversely, for spotted hyenas, the picture was largely of an ignored species, with far more academic research and conservation programs carried out regarding charismatic megafauna like lions. For lions and spotted hyenas, micro- and meso-level attitudes of fear and rejection are not reflective of these macro-level perceptions as loved and ignored species respectively, raising again the question of whose world-making dominates. Locally, fear is prominent regarding both species, and both are associated with witchcraft. For example, Packer *et al.* (2024) report on how 'spirit' lions lead to 40% of deaths associated with lion attacks on humans in the southern parts of Tanzania. Frembgen (1998) equally documents how people in Tanzania believed that witches ride on the back of spotted hyaenas as their means of transport, and undergo metamorphosis. Despite these revelations, hyenas are depicted as being responsible for witchcraft, leading to people's ailments and misfortune including deaths, as compared to lions. In sum, while lions' and hyenas' representations in macro-level, global policy and academic spaces are shaped by dominant spectacles, among populations living with these animals the picture is again more diverse. This highlights the situated, transient and sometimes arbitrary nature of loved-unloved sentiments, and the abiding relevance of colonial spectacles of nature emphasizing mastery and separation.

In both cases, the conflicts involving these species have become spectacles of nature, with conservation organizations portrayed as best-placed to solve them (Igoe, 2010). As Duffy *et al.* (2019) point out, there is an important political-economic dimension to conflictive human-wildlife relations in terms of who benefits. In the squirrel case, emotive language (partly borrowing from war) paints red and grey squirrels as locked in a conflict in which humans have to take the reds' side. While this may be intended to promote interest in and donations for conservation, it also does so at the expense of the grey unloved others. In terms of a political ecology of responsibility, this reductive picture disregards human responsibility for introducing greys, as shown in genetic data (Signorile, Reuman, *et al.*, 2016), and shaping wood-scapes which serve the greys as better habitats, meaning that grey squirrels' partly destructive world-making is intricately linked to human world-making choices. It also ignores the need for 'native' reds to be reintroduced from the European mainland before the greys appeared, and reds' erstwhile status as pests prior to their 'rebrand.' Conversely, while human-wildlife conflict involving loved lions is of significant global interest, the livestock depredation caused by spotted hyenas is not deemed a conservation concern. This paints a stark picture in terms of whose views and lives (do not) matter in these dominant spectacles of nature. Lions and loved others matter because of the risk of retaliatory and preventive killings after livestock depredation or attacks (Kissui, 2008; Kissui *et al.*, 2019). Those who live with lions only matter when they are to be stopped from retaliatory killings. The depredation from hyenas, and spotted hyenas themselves, do not matter.

Conservation thinking thus does not start from local residents' experience of livestock depredation, but from the perceived value of the predating species (Gunnthorsdottir, 2001).

As we have shown, macro-meso policy and academic literatures on unloved grey squirrels heavily emphasize the need for (generally lethal) 'pest management', which contrasts with some individuals' (micro) reciprocal gazes. However, this is not the case for spotted hyenas, who are merely ignored globally, and with whom conviviality has been reported from Ethiopia (Yirga *et al.*, 2014). This suggests that, on the 'loved/unloved' spectrum, Rose and van Dooren's (2011) more nuanced description of 'targeted for care', 'disliked', 'ignored', and 'targeted for death' is useful in highlighting diverse beings' biopolitical and biocultural status among different individuals and groups in the conservation and societal landscapes. Equally, considering political economic realities and asymmetries of funding (Kiwango & Mabele, 2022), it is important to recognize whose existence, or whose elimination, attracts funding, donations, and tourism at the micro, meso and macro scales (cf. Figure 1). A more nuanced distinction may also be helpful in establishing what alliances may be forged to promote ignored or disliked species in the interest of everyday environmentalism and Tsing's 'third nature', i.e., nature that can thrive under capitalism (2015).

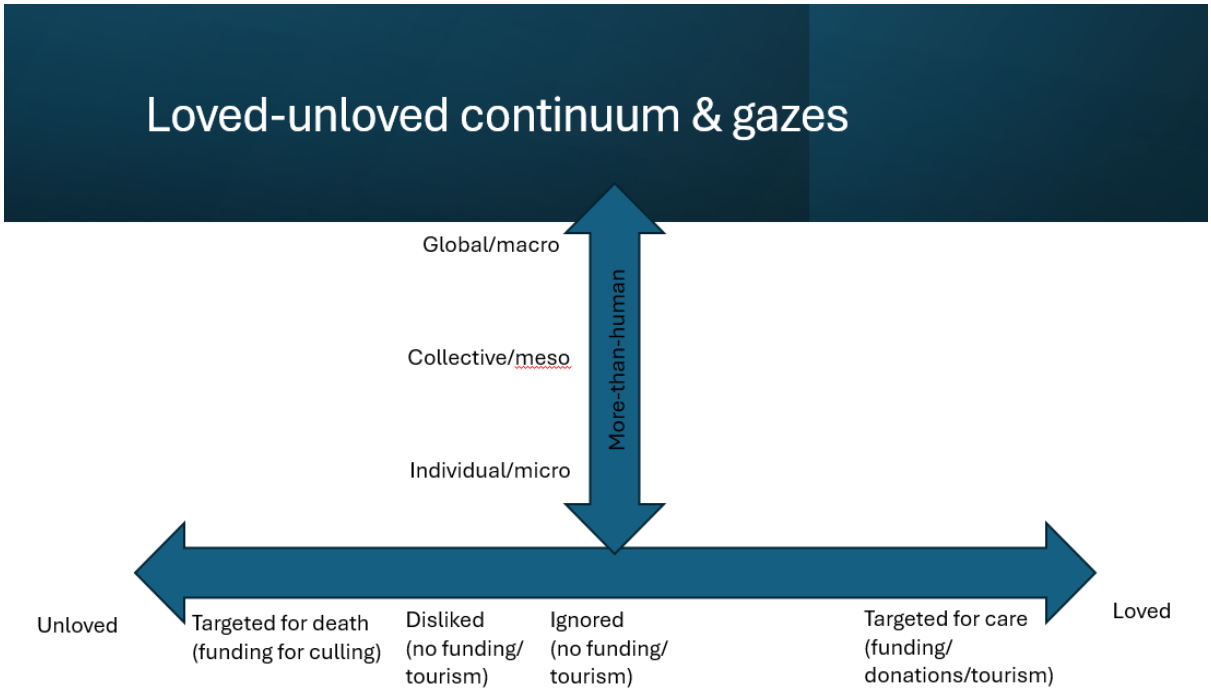

Figure 1: The fluidity of the loved/unloved continuum and gazes, from targeted for death via disliked and ignored to targeted for care, and across global/macro, collective/meso and individual/micro as well as more-than-human gazes. Source: Authors.

The political ecology of responsibility

In terms of considering the wider human-driven political ecology of responsibility which structures human-more-than-human relations (Komi & Nygren, 2023), pragmatism must not distract from a wider need for genuine transformation (Massarella *et al.*, 2021). The conservation programs that exist to address human-wildlife conflict in many ways reinforce western-rooted human-nature

separation, and the human-nature distance inherent in both the separation itself and the spectacles affiliated with it. Separation was visible regarding the red squirrels who do not populate much of the UK and thus generally exist more in memory or imagination than reality, and also the lions on whose protection the protected areas which cover almost half of Tanzania are premised in part (Kiwango & Mabele, 2022). Learning from philosophies such as Ubuntu in southern Africa, an ethic of care which does not make arbitrary loved-unloved distinctions (Mabele *et al.*, 2022) could help promote genuine transformation, appreciating diverse species rather than only charismatic (mega)fauna. However, further research would be required to see how gazes shaped by an ethic of care could be implemented regarding awkward beings with whom some measure of separation or distance may be necessary to safeguard human and more-than-human lives and livelihoods. This would require acknowledging the power asymmetries inherent in who is responsible for shaping the political and economic terms of human-wildlife interactions (i.e. humans, but also which humans; Komi & Nygren, 2023), and the role of gazes and spectacles in shaping these structures and conditions.

Consequently, there is also a need to situate our findings within wider political-economic asymmetries inherent in conservation (Kiwango & Mabele, 2022), recognizing that we examined two quite different contexts. In Tanzania, tourism continues to be a significant source of revenue for conservation and the government more generally, which is heavily premised on spectacles of loved others such as lions – and the need to preserve them by addressing conflicts with humans. As we have shown, the spotted hyenas are a different story – both at the macro/global level, where they are at best ignored and at worst disliked (e.g. in the 'Lion King' films), and at the meso/local level, where they are disliked both because of the imbued meanings of witchcraft and disgust, and for causing the heaviest losses of livestock. While Tanzanian policy on addressing human-wildlife conflicts does not allow compensation for livestock loss either from lions or from hyenas, lions' relevance for conservation means programs and funding are in place to incentivize keeping them alive. This occurs while ethological research clearly indicates that the spotted hyenas' behavioral plasticity gives them higher survival chances in human-dominated landscapes than any other large African carnivore (Boydston *et al.*, 2003; Green & Holekamp, 2019; Holekamp & Dloniak, 2010). We invite further research on how it would be possible to implement ideas of a conservation basic income (Büscher & Fletcher, 2020; de Lange *et al.*, 2023) and community-based conservation insurance (Hussain, 2020; Kiwango & Mabele, 2022) e.g., for unloved others such as spotted hyenas in Tanzania in ways that would generate extra revenue for locally-based conservation. It could also apply to grey-squirrel sanctuaries.

Dominant spectacles of human-wildlife or wildlife-wildlife conflict have knock-on effects for conservation, research and funding priorities, recalling Igoe's (2010) claim that conservation organizations use spectacle to present themselves as capable of solving problems, while hiding political and economic contexts from view. In the Tanzania case, we found no conservation program exclusively focusing on reducing livestock depredation and thus human-wildlife conflict regarding spotted hyenas. The academic sample found only one study focusing on human-wildlife conflict with spotted hyenas (Mbise, 2024), with five others focusing on lions and spotted hyenas in terms of livestock depredation. Despite the hyenas causing livestock depredation more frequently than lions, though on smaller livestock (Kissui, 2008; Mbise, 2024), academic research and conservation programs more frequently focused on charismatic lions. These insights are in line with the notion of 'flagship species' (Verissimo *et al.*, 2011), where particular gazes and spectacles around certain species are promoted in order to generate funding, while framings for less popular species are subdued (Jepson & Barua, 2015). For red and grey squirrels, conservation was only a priority for the reds, with academic and policy work highlighting the damage caused by greys and ignoring the same from reds. Greys' status as destructive North American invaders was used to justify the prioritization of (lethal)

management of these 'pests.' These spectacles generally failed to incorporate the animals' more-than-human viewpoints and/or even more innovative approaches. These fairly narrow foci matter, as increased information about a species has potential to shift conservation priorities to less popular species (Curtin & Papworth, 2018).

What nature?

The above-described dynamics reinforce the status quo of conservation, including significant economic and power asymmetries (Brandon, 2021; Margulies & Bersaglio, 2018). Funding priorities are produced by and reproduce disturbing human-more-than-human relations, suggesting that 'nature' in Tanzania can ignore spotted hyenas as long as human-wildlife conflict between lions and residents are addressed by relevant conservation organizations. They also suggest research should be in keeping with existing, western notions of separation and mastery (Mabele *et al.*, 2022). Equally, they paint as desirable a picture of UK natures which have eliminated grey squirrels in favor of the British (but actually Continental) red squirrel, which would also eliminate both grey squirrels' lives and individuals' meaningful connections with them. These spectacles are driven by and perpetuate meso-level or global-level gazes rooted in clear distinctions of loved vs. unloved others, rather than the more nuanced micro-level individual gazes we identified for grey and red squirrels.

Seeing ignored or disliked others as not (part of) nature needs to be challenged. There is a link here to Chapman's (2007) reflections on Hannah Arendt's distinction between world, i.e., the human built world, and Earth, i.e., the natural world, and the degree to which environmentalists make recourse to these different ways of seeing the same environment. In terms of this distinction, grey squirrels are represented by dominant conservation narratives as being part of the 'world', but not part of UK 'Earth', by emphasizing their North American origins. Similarly, lions can be portrayed as Earth, while hyenas' status is unclear, but certainly non-essential to 'Earth.'

De Silva & Srinivasan (2019)'s political ecology analysis of human-elephant relations, building on Cronon (1996), asks those in less 'wild' lands to bring wilderness and the values associated with it "closer to home." What does it mean that, in the UK, individual gardeners and commercial foresters are unwilling to accept damage to their plants and livelihoods inflicted by grey squirrels, while there is an expectation that those who live with large predators such as lions accept potentially lethal burdens in the name of conservation? We also invite further work on the degree to which questions around colonial hierarchies and violence (Alexiou *et al.*, 2024; Granelli, 2023) and decolonization and justice play a role here (De Silva & Srinivasan, 2019; Margulies & Bersaglio, 2018; Rose, 2004). The idea of gazes and reciprocal gazes, i.e., beings looking back at us, and giving due consideration to such more-than-human viewpoints, could open a conversation to problematize damage-focused understandings of grey squirrels. Instead, we could begin by building mutual understandings of more-than-human lives and connections beyond spectacularizing particular species and commodifying them.

7. Conclusion

Using government and civil-society documents and websites, literary and academic publications, a Twitter picture sample and a period of ethnographic 'living with', we explored the cases of spotted hyenas and lions in Tanzania, and grey and red squirrels in the UK. We built a conceptual lens of gazes to highlight animals' vulnerabilities and histories (De Silva & Srinivasan, 2019) beyond the anthropocentric focus of spectacles, asking what conservation looks like for species in different places on the loved-unloved spectrum (Rose & van Dooren, 2011). We highlighted the importance of nuancing this continuum to recognize different gazes and realities applied to those

disliked or targeted for death, and ignored and targeted for care. We also drew on a political ecology of responsibility to highlight power imbalances and structural responsibilities by humans for shaping human-wildlife interactions (Komi & Nygren, 2023), and the role of gazes and spectacles in structuring them and wider understandings of nature.

Building on a deliberately experimental, interdisciplinary mix of methodological and empirical vignettes, we explored the notion of gazes through a collection of diverse data to highlight that lions, spotted hyenas and squirrels, akin to the tigers in Margulies and Bersaglio's (2018) study, are heterogeneous, as are humans' relations with them. Grey squirrels, in academic and policy work, are mostly deemed as deserving of (lethal) management, ignoring histories of human introduction and translocation as well as erstwhile consideration of red squirrels as pests. The Twitter picture sample and ethnographic observations also highlighted that nuanced personal encounters with grey squirrels could prompt micro-level human connection and reciprocal gazes in contravention of macro-level spectacles. Equally, global-level perceptions of glorified lions as worthy of funding, donations and tourism clashed with micro- and meso-level gazes of fear, rejection or retaliation. In both cases, the human-wildlife or wildlife-wildlife conflicts involving our species have become spectacles of nature, with conservation organizations being portrayed as best-placed to solve them (Igoe, 2010).

In terms of considering the wider human-driven political ecology of responsibility which structures human-more-than-human relations (Komi & Nygren, 2023) and the gazes and spectacles which shape them, there is a need to situate our findings within wider political-economic asymmetries inherent in conservation (Kiwango & Mabele, 2022). In Tanzania, the political-economic reality means that lions and other charismatic megafauna, being targeted for funding, donations and tourism, contribute significantly to GDP, despite perpetuating colonial notions of human-wildlife separation. This means that the commodified imaginaries and spectacles on which these incomes are predicated shape realities. There is another dimension to this: De Silva and Srinivasan (2019), in their more-than-human political ecology analysis of human-elephant relations, rightly ask why those in less 'wild' lands expect those living in more wild lands to tolerate predation and destruction, while failing to adopt those same values closer to home. In the UK and other contexts which generally donate to nature conservation far away, this would raise the question of whether prioritizing all nature – not just what is deemed 'wild' or 'native' – could help (re)build more reciprocal gazes and transformative connections with more-than-humans, to the benefit of both humans and those ignored, disliked or targeted for death.

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