Herd(er)-Lion Entanglements in Kenya's Maasailand

Exploring the effects of conservation initiatives on pastoralist-lion dynamics

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Declaration

I, Gabriella Santini confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Abstract

The Maasai have a long-standing tradition of hunting lions with spears, serving both as a rite of passage for young men and boys and as a method to protect their primary livelihood: cattle. Maasai believe lion-hunting, known as *olamayio*, is linked to the process of social learning by lions of the danger associated with humans, keeping them away from livestock. However, since the 1977 ban on wildlife hunting in Kenya and the subsequent increase in conservation surveillance, this practice has been in decline.

This thesis examines the effects of such wildlife conservation initiatives on the social and ecological functions of Maasai lion-hunting practices. Specifically, it explores how the decline of lion-hunting has affected both Maasai ways of life and lion behaviour. Drawing on 16 months of fieldwork conducted in two contrasting sites—the Maasai Mara, where lion hunting has ceased, and Amboseli, where spearing was still practiced until recently—this research employs anthropological and ethological methods to investigate human-animal dynamics in shared landscapes. The study reveals how conservation policies disrupt local human-animal relationships, destabilising long-standing practices that balance cultural traditions with predator management. By adopting a phenomenological framework, this thesis introduces Maasai more-than-human socialities, exploring how they make kin with their livestock, develop intimate, sensorial knowledge of their rangeland environment, and dwell with lions in shared ecosystems. It also explores how lions have adapted their behaviour to changes in human activity.

Ultimately, this research aims to chart pathways toward holistic conservation approaches that view humans as integral components of ecosystems rather than separate from them. It responds to calls from anthropologists and conservationists to meaningfully engage local communities *and* wildlife in developing sustainable interventions that are sensitive to both local practices and ecological realities. By integrating Maasai local ecological knowledge with the perspectives of lions, this transdisciplinary study contributes to a broader understanding of how people and animals coexist and coadapt within complex socio-ecological systems. This research develops a truly interdisciplinary epistemological and methodological approach for *thinking with* both humans and nonhumans. By taking local ecological knowledge and animal perspectives seriously, it provides a foundation upon which future ecological researchers across disciplines can build.

Impact Statement

This thesis offers a holistic, transdisciplinary account of Maasai–lion relations, grounded in a unique synthesis of ethnographic immersion and experimental ethology. In doing so, it offers novel insights into the reciprocal dynamics of human–predator coexistence and the active roles played by both lions and cattle in shaping pastoralist livelihoods and conservation landscapes. Maasai communities inhabit landscapes shaped by complex histories of colonialism and conservation interventions, shifting economies, and ongoing political contestation; their daily negotiations with lions cannot be understood apart from these broader contexts. This thesis seeks to demonstrate the strategies Maasai and lions use to navigate changing environments and adaptively (re)learn to relate to one another, to make sense of one another, and to survive and thrive with one another. In bringing these threads together, the thesis constitutes a significant contribution not only to environmental anthropology but also to conservation science, animal studies, and the broader study of human–predator coexistence.

Methodologically, this research bridges longstanding disciplinary divides by integrating direct studies of lion cognition and behaviour alongside ethnographic engagement with Maasai communities. This integrative approach produces a multidimensional perspective on human–animal relations; one that both respects Maasai knowledge systems and attends seriously to the practices, personalities, and adaptive responses of lions themselves. By centering both human and nonhuman actors as mutually constitutive agents, this work advances the call within anthropology and conservation science to focus on nonhumans. It provides a practical model for future multispecies research and engagement.

Empirically, the thesis documents the lived realities of young Maasai men, the emerging role of herding contracts, and shifting identities in an increasingly globalised context. It demonstrates how Maasai ecological knowledge—rooted in generations of practical engagement with land, livestock, and wildlife—operates both alongside conservation science. The thesis offers new insights into lion behavioural ecology, particularly their responses to Maasai presence. By attending to lions and cattle as lively participants in Maasai worlding, the research opens possibilities for more inclusive, responsive conservation strategies that recognise Indigenous expertise and animal agency. Theoretically, this work refines the concept of coexistence to recognise animal agency, inviting reflection on the role of knowledge cultivated by Indigenous communities and wildlife in developing more inclusive and ethical conservation. inviting reflection on how knowledge cultivated by Indigenous communities and wildlife itself can inform more inclusive and ethical conservation.

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accompany you on journeys to fetch firewood and water, offering a profound glimpse into the rhythms and challenges of everyday life. To the herders who patiently let me follow you on your work, guiding me through the landscape and the complexities of pastoral life. And to the lions, whose presence was a fascinating and sometimes challenging part of this research, reminding me of the wild and unpredictable spirit that shapes this land.

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Abbreviations

ANP — Amboseli National Park

LEK — Local-ecological knowledge

MMNR — Maasai Mara National Reserve

PA — Protected Area

KWS — Kenya Wildlife Service

WWF — World Wildlife Fund for Nature

Glossary

Maasai words and English translation

Abarani — skilled herder, highly knowledgeable about livestock

Aimalmal — bad herding practice

Aiserr — Maasai war cry

Apush — Aggressive

Emanyatta or *manyatta* (sing.) *Imanyat* (plur.) — warrior village; encampment where Morans and some of their mothers go to live during their years as warriors. It is where Morans learn certain skills including lion hunting. It is also where ceremonies like Enkipata and Eunoto are held.

Emurata — circumcision ceremony

Eng'ai — God

Enkaji — house, can also mean one's clan

Enkang (sing.) *Inkang' itie* (plur.) — settlement or homestead often grouping several households, forming one unit enclosed within a fence, typically encircled by thorny bushes, with livestock kept in the center at night for protection from predators

Enkanyit — respect or obedience, especially towards elders; it shapes hierarchies across age-sets and in clans.

Enkibooroto — the practice of keeping cattle close together when grazing

Enkipaata — initiation ceremony for uncircumcised boys

Enkishoo (sing.) *Enkitang* (plur.) — cow

Enk'oki — spiritual sanction or curse

Epi — brave

Entare — typically referring to sheep and goats

Irmotenten — cattle raiders from other non-Maasai communities

Moranism/Moranhood — Anglicisation of Maa term by interlocutors who spoke English to signify the period of time spent as a moran and conducting the affairs of a moran, used interchangeably

Olayioni (sing.) *Ilayiok* (plur.) — uncircumcised boy

Olosho (sing.) *Iloshon* (plur.) — Maasai section, based on geography

Ormoruo (sing.) *Ilmoruak* (plur.) — elder

Ormurani (sing.) *Ilmurran* (plur.) — young man of the warrior age-set, 'moran' is the Anglicised form of the Maa term, also often used by Maa-speakers themselves

Olamayio — ceremonial lion hunt practiced by ilmoran

Olchokut (sing.) *Ilchokut* (plur.) — herder

Oloiboni (sing.) *Iloibonok* (plur.) — Maasai spiritual leader, prophet, diviner

Olopeny — herd owner
Olowuaru (sing.) *Ilowuarak* (plur.) — lion
Orkiyioi — retaliatory lion hunt
Orkonoi (sing) *Irkono* (plur.) — hyena, can also be spelled *Orng'ojine* (sing.) *Ilng'ojiniak* (plur.)
Olpul — meat feast involving the slaughtering of cattle, normally outside in the bush or under a tree. Reserved for men.
Ormeek — originally used to refer to non-Maasai Africans but by the 1930s became a way to disparage 'modern' Maasai men. Now mostly used to characterised a person who does not speak Maa; used to insult Maasai men who do not know their mother tongue.
Sidai — good

Kiswahili words and English translation

Baraza — public meeting, council or assembly
Boma — household or residence
Dawa — medicine
Harambee — literally meaning "all pull together," for community self-help events such as fundraising for school fees or collecting household items for a newlywed couple. This is an important Kenyan tradition and is the official motto of Kenya, appearing on its coat of arms
Mzungu (sing.) *Wazungu* (plur.) — white, European person; sometimes used for any foreigner (not African)
Shamba — garden, field or piece of land
Shuka — iconic Maasai garment; a durable, thick blanket-like cloth, typically in vibrant red colour
Shanga — beaded ornament

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Credits statements:

- Photographs and illustrations are from the author, unless stated otherwise.

- Maa and Kiswahili terms were translated with the help of Jane and Dennis, my research assistants.

Introduction: A Multispecies Storytelling

My multispecies storytelling is about recuperation in complex histories that are as full of dying as living, as full of endings, even genocides, as beginnings. In the face of unrelenting historically specific surplus suffering in companion species knottings, I am not interested in reconciliation or restoration, but I am deeply committed to the more modest possibilities of partial recuperation and getting on together. Call that staying with the trouble.

— Donna Haraway (2016)

The impetus for this thesis arose after watching the BBC's *Dynasties* episode featuring a pride of lions from the Maasai Mara. It is a remarkable segment capturing the beauty of East African ecology and its majestic lions. For much of the episode, as in many wildlife documentaries, it appears as if the wildlife inhabit a landscape free of humans. The camera expertly frames the rangeland and lions with no human presence—until the final five minutes of the episode, when a Maasai pastoralist appears, only to be blamed for poisoning the beloved Marsh Pride. In this highly emotional sequence, the BBC filming crew is portrayed on the verge of tears. One of them tells the viewers, "It's just entirely wrong… isn't it? Lions are so endangered. They are disappearing so quickly and then, this happens to them, because of pressure on the land...full of people." While the episode briefly features a non-Maasai conservationist —who works in a different ecosystem from the Mara— to discuss the importance of coexistence, it concludes on a rather alarmist note. The narrative suggests that conflict between humans and lions is intensifying across East Africa, warning that before long, lions in the wild could disappear entirely, that is, unless conservationists and the people living alongside lions can "work together."

As an anthropology student, I found this narrative unsatisfying, so I began my own research. Why was the Marsh Pride poisoned? Surely, the reality is more complex than portrayed on the BBC. I wanted to gain a clearer understanding of the motivations behind this practice, how and why pastoralists transitioned from spear hunting to poisoning, and how it might be curbed. I found little ethnographic research on poisoning incidents, mostly news articles lacking detail or conservation biology-focused studies emphasising poisoning's impact on ecosystems. This gap set me on a path to understand Maasai lion killings, which eventually evolved into a project proposal.

I first set out to Kenya in 2023 to investigate human-lion interactions, narrowing in on hunting activities. I spent 16 months in Maasailand with the aim of understanding how conservation efforts, especially the ban on hunting, have shaped Maasai-lion relatings. Despite research on human-wildlife conflict and mitigation strategies growing (Marchini et al. 2019), few studies adopt a truly holistic approach that considers both sides of the interaction: the people *and* the predators. As Pooley et al. (2017: 514) note, "Even within the research on relationships between humans and predators, predators and people tend to be studied separately and with different ontologies, epistemologies, and methodologies."

Increasingly, researchers are recognising the limitations of treating humans and nonhuman animals as separate entities, prompting a shift towards integrative and interdisciplinary approaches that transcend traditional dualisms in our conceptualisation of the human–animal relationship. Alongside this, there is growing interest in multispecies coexistence, which highlights the agency, behaviour, and lived experiences of nonhuman animals within conservation landscapes (Brakes et al. 2021; Edelbutte 2022; Macdonald 2016). Simultaneously, there is a growing acknowledgement of the importance of including local ecological expertise and participation in conservation (Adams 2017; Brondízio et al. 2021; Dawson et al. 2021; Garnett et al. 2018; Ocholla et al. 2016; Rudd et al. 2021; Sheil et al. 2006). This thesis responds to—and is informed by—these openings in conservation science, taking them as opportunities to seek better ways of enabling coexistence. It joins the "people *with* nature"[1] (Reyers and Bennett 2025) and convivial conservation (Büscher and Fletcher 2019) paradigms which seek to integrate ecosystems in durable ways, balancing human needs with nonhuman ones. However, combining scientific and local knowledges and honouring diverse experiences is not without its challenges—never mind the added practical challenges of documenting elusive creatures and illegal events— striking a balance requires avoiding both anthropocentrism and species-centrism (Chua et al. 2020)

I endeavoured to take Maasai ecological knowledge and lion agency *seriously*. By adopting a transdisciplinary[2] approach, this research fosters collaborative knowledge production between scientific, Indigenous, and more-than-human perspectives. It draws on environmental

[1] Building on the progress made by Mace's (2014) "people and nature" framing, Reyers and Bennet propose a framing which "recognizes that the boundaries we use to separate people from nature […] are artificial, and therefore arbitrary" (2025, 2).

[2] I use the term transdisciplinary rather than interdisciplinary because, while the research integrates multiple academic disciplines, it goes beyond by also co-producing knowledge with partners outside of academia.

humanities, including environmental anthropology, political ecology, and multispecies studies, and incorporates conservation biology and animal sciences, such as ethology and the emerging field of Conservation Behaviour—"conservation interventions that better account for how animals perceive, understand, and navigate their world, while often actively reshaping those ways of being" (Van Dooren 2023, 2). I integrate these various disciplines and forms of knowledge to contribute to, expand, and complexify ongoing discussions in conservation science and practice.

This thesis is *not* another piece of research that focuses on negative impacts of human-predators interactions or that seeks technical solutions that do not resolve the underlying issues (Fletcher and Toncheva 2021; Pooley et al. 2017); instead, it offers an analysis of what drives the Maasai to kill lions, and what makes lions attack cattle. I engage with each species' unique communication modalities to look—to the best of my ability—at the meanings produced through multispecies encounters. Each chapter unfolds a distinct facet of the lives of people and their domesticated animals who share space with lions, while also engaging with the challenges lions face by inhabiting areas where human presence is growing. In doing so, it contributes a truly multispecies perspective to the human-wildlife conflict literature, and to human-lion relationships specifically. What emerges is a text that demonstrates and appreciates the complexity of Maasai–cattle–lion sociality, situated within its historical and political-economic context. Thinking through these entanglements, this research seeks to foster more sustainable relationships between humans and wildlife, foregrounding mutual benefits and adaptive management as pathways for "getting on together," to echo Haraway's vernacular.

I draw inspiration from 'tentacular thinkers'[3] such as Tim Ingold, Donna Haraway, Nurit Bird-David, and Vinciane Despret, and build upon the work of previous anthropologists working alongside Maasai in Kenya and Tanzania, including Paul Spencer, Dorothy Hodgson, and Mara Goldman. I weave together this scholarly theoretical and ethnographic work to offer a fractal and partial picture of the complex ways that Maasai, cattle, and lions become in consequential relationship with each other. Through storytelling and conversation, this thesis reveals how "humans and animals constitute themselves reciprocally with their particular identities and

[3] This phrase is drawn from Haraway's (2016) idea of "tentacular thinking," which uses the metaphor of tentacles to describe complex, interconnected relationships. It is a way of thinking that acknowledges how humans and nonhumans are deeply intertwined—sharing responsibilities, experiences, and knowledge—in a messy, multi-dimensional, and relational world. Tentacular thinkers are those who adopt this approach to understanding and engaging with the world, moving beyond anthropocentric and linear perspectives.

adaptations'' (Ingold 1996, 131). It shares stories of lions scheming to steal Maasai cattle, cleverly adapting and refining their techniques; of people who proudly showed me their hunting injuries, or their hunting gear; of the aftermath of lions' bloody feasts and the subsequent gatherings of people working out how to deal with the attacks. It uncovers how the Maasai conceptualise lions as neighbours with distinct pride territories, social characteristics, and individual quirks. Lions, for their part, demonstrate different behaviours and personalities — some are shy, others are playful or silly. This thesis explores how humans and lions alike create niches to thrive in the unforgiving savannah, engaging in a continuous process of adaptation and improvisation. Contrary to the narrative presented in the BBC, this thesis documents the numerous instances of collaboration among Maasai and conservationists, highlighting the daily burdens and responsibilities of conserving Africa's big game. It presents a different story; one attentive to the nuances, complexities, and contradictions. In doing so, it challenges and reconfigures prevailing depictions of Maasai-lion relations, not just in documentaries or popular media but also within the conservation literature where conflict is at the forefront. Embracing Haraway's language of "getting on together," it examines how pastoralists, cattle, and lions learn to "stay with the trouble" of living and dying well together in a rapidly changing ecosystem. Following Haraway, this way of thinking is more conducive to building more liveable futures than approaches that rely on human exceptionalism, fragmented knowledge, or hierarchical relationships that separate humans from the rest of the living world.

Research Aims and Objectives

The overall aim of this research is to understand the extent to which conservation efforts destabilise local human-animal dynamics, particularly those between the Maasai, their cattle, and lions, in order to chart a pathway toward more holistic conservation approaches that recognise people as integral parts of ecosystems rather than separate from them. This study critically engages with how conservation policies, such as hunting bans, affect traditional Maasai practices and human-lion relationships, situating itself within broader debates about conservation's social and cultural impacts. The research pursues this aim through four specific objectives: (1) investigating current and historical Maasai approaches to managing lion predation; (2) deepening understanding

of herd(er)[4]-lion relations within the savannah ecosystem, focusing on perceptions of and relations with lions, and reciprocal influences between people, cattle, and lions; (3) providing clearer understanding of the prevalence of human-lion conflict and lion killing, including the various motivations for retaliatory or preventative killings; and (4) exploring how new understandings of Maasai-lion dynamics can inform ongoing and future wildlife conservation initiatives and sustainable pastoral land governance.

This research is anchored by four key questions. First, it asks how the ban on hunting has been integrated into Maasai lifeworld[5]. The study then turns to what motivates Maasai to continue hunting lions despite the formal prohibition. Further, it considers how the practice of lion hunting (or its or absence) might affect lion behaviour. Finally, it examines whether the hunting ban has reshaped everyday human-lion interactions. Together, these questions seek not only to understand normative compliance or resistance but to animate a livelier, more entangled perspective on conservation and multispecies encounters without falling into easy binaries.

Research Originality and Importance

This research builds upon the foundational work of two leading scholars on Maasai lion hunting practices, Mara Goldman and Leela Hazzah, who have made significant contributions to our understanding of lion killing in Maasailand. I seek to expand on their work by providing an updated account of Maasai lion killing, recognising that much has changed in conservation science and on-the-ground realities since their fieldwork was carried out more than two decades ago. I also introduce a new dimension: understanding killing from the lions' perspective —specifically, how they respond to shifts in the ways Maasai interact with them.

Indeed, the originality of this project is grounded in its attention to the lions' perspective. It insists—playfully, provocatively, but also seriously—that humans are not the sole bearers of knowledge, inviting us to consider: what if we learned *with* animals, not just *about* them? How

[4] By 'herd(er)' I signal the inseparability of between my Maasai interlocutors and their livestock, treating people and animals as a relational unit rather than separate entities.

[5] I borrow the term lifeworld from the work of Husserl (*lebenswelt*, 1970) via Ingold (2000, 14), and define it as "a dynamic, shifting, and intersubjectively constituted existential reality that results from the ways that we are geared into the world by means of our particular situatedness as existential, practical, and historical beings" (Desjarlais and Throop 2011, 91-92).

can we learn with animals? This research builds on the work of previous interdisciplinary thinkers who have engaged with humans and nonhuman beings as research partners (Crossley 2024; Govindrajan 2018; Hooper 2023; Krieg 2024; Lescureux 2006; Tsing 2015; Van Dooren 2019, to name but a few). Yet, still feeling unsure about how to conduct research that genuinely learns from and with animals —moving beyond simply looking[6] at them or analysing human meaning-making— I embarked on a journey to explore a pathway for engaging with animals from their perspectives, while simultaneously bringing this knowledge into dialogue with human perspectives. I hope this can inspire social scientists to explore what might initially feel like the unfamiliar territory of the so-called 'natural' sciences. Perhaps this thesis might even convince some that the academic boundaries between the 'social' and the 'natural' are far more blurred, perhaps even unproductive. In doing so, this research responds to a call within anthropology to move the discipline beyond the human (Ingold 2013; Kirksey and Helmreich 2010; Kohn 2013; Tsing 2013).

This research, by bringing in the lion perspective, also contributes to the fields of conservation science and ecology. There is currently limited, up-to-date research on lion behaviour and their responses to human activity (such as predation risk), despite lions' status as charismatic flagship species and the growing likelihood of conflicts with humans (Oriol-Cotterill et al. 2015b). This study offers new insights into lion behavioural ecology that aim to inform and enhance lion conservation interventions in Kenya, East Africa, and beyond. Building on existing scholarship, I demonstrate that animals can be active participants in their own conservation, making the case for collaborative approaches with local wildlife to shape conservation and wildlife management interventions (Boonman-Berson et al. 2016; Cardoso et al. 2020; Edelblutte et al. 2022; Jepson et al. 2011). This research aspires to invite lion conservationists to adopt and expand this collaborative perspective.

Most importantly, this research seeks to support Maasai pastoralists —who bear the greatest responsibility of sharing space with lions— in their ongoing stewardship of the land and wildlife. It does so by exploring the Maasai's extensive knowledge of lion management and collaborates

[6] Ingold (2022) writes, "For to observe, it is not enough merely to look at things. We have to join with them, and to follow." (2022, 23). He suggests that observation should go beyond detached, objective looking to involve a deep relational engagement with what is observed—joining with and following the subject rather than viewing it from a distance. This relational form of observation allows the observed beings to guide the observer's attention and fosters mutual responsiveness.

with them to imagine alternative ways of conserving lions. First, by engaging with Maasai ecological knowledge and practices seriously, the thesis advocates for their greater inclusion and application in conservation thinking and practice, reflecting growing recognition of the intrinsic value of Indigenous and local knowledge as a vital step toward justice and decolonising conservation (Martin 2017). Second, the findings can inform practical strategies that reduce livestock depredation, which in turn can support Maasai wellbeing and foster greater tolerance of lions, predators, and wildlife more broadly. Third, this ethnography helps ensure that the Maasai receive due recognition for living with lions by highlighting the great lengths they have gone to in adapting how they engage with lions and their broader environment to align with conservation goals.

Conservation has historically been dominated by a paradigm rooted in a Western understanding of sustainability, premised on the idea that wildlife is best protected by separating it from humans (Brightman and Lewis 2017). Although conservation science and practice have made significant strides toward a "people and nature" paradigm, images and tropes of a pristine nature, devoid of human presence, continue to occupy popular imagination (Mace 2014). This persistent narrative underscores the urgent need for scholarship that advances and normalises a people-with-nature paradigm. Accordingly, this research is both influenced by and seeks to advance the "people with nature" paradigm. This way of thinking fundamentally shaped the design, conduct, and writing of this research. Through its methodology, epistemology, and narrative, the research demonstrates how a decolonial approach can be mobilised, by integrating Maasai ecological knowledge with a more-than-human perspective, to challenge Western dichotomic nature-culture ways of thinking and doing conservation.

The project overall supports the view that conservation challenges can only be effectively addressed by acknowledging and embracing "the co-evolving relationship of people with nature, with each shaping and being shaped by the other" (Reyers and Bennett 2025, 3). It highlights how conservation interventions that treat people and wildlife as separate entities, without considering the dynamic interactions, may inadvertently generate new conservation challenges. Hence, this thesis advocates for an epistemological and methodological broadening of research on human-wildlife conflict and coexistence studies and provides a framework for integrating interdisciplinary approaches from anthropology and ecology to improve our understanding of people-animal dynamics.

In short, this thesis contributes a novel transdisciplinary approach for understanding and practicing conservation that deeply integrates local ecological knowledge, animal agency, and relational human-animal dynamics. By bridging anthropology and ecology, it challenges existing conservation paradigms based on "nature for itself" or "nature despite people" thinking (Mace 2014) (as well as outdated academic divides) and charts a path toward sustainable multispecies coexistence. Finally, I hope this thesis inspires social scientists to explore creative, interdisciplinary and transdisciplinary ways to decenter the human subject, as well as natural scientists to think of nonhuman beings as social actors.

Thesis Structure

This thesis is organised into five parts, comprising a total of eight chapters. Each part represents a knot of entanglement: intertwined threads of life and becoming. These range from the relations of Maasai pastoralists and their cattle to the intrepid, ongoing collaborations of herders and cows as they move through landscapes shared with lions. Each knot is a story of multispecies co-becoming, where lives are woven together in entangled webs of care, conflict, and co-creation. Interactions between animals and people are threaded throughout the chapters, highlighting the more-than-human sociality and forms of relationality across species boundaries. The thesis ultimately strikes a hopeful chord by demonstrating how connection can be produced between humans and nonhumans, even within relations marked by violence and domination.

Part I, *Journeying To Kenya's Maasailand*, sets the tone and background. Chapter 1 begins with the historical context of Maasailand and introduces the Maasai. It then provides a background on conservation practices and politics in Kenya, tracing its colonial roots to its neoliberal present. Insights into the evolution of Kenya's conservation landscape lay the groundwork for a discussion on my theoretical framework, grounded in political ecology and environmental anthropology. Political ecology opens up a discussion around conflict and coexistence in conservation science, while environmental anthropology justifies my more-than-human approach and focus on local ecological knowledge. Chapter 2 outlines my research methodology and field sites.

Part II, *On Cows*, examines the bond between Maasai and their livestock. A thesis on lion hunting cannot begin without a conversation on Maasai cattle, which often lie at the very center of this entanglement. Chapter 3 discusses more-than-human kinship, illuminating knots of connection

— woven with love and care, yet laced with violence— that web together Maasai and their cows, sheep and goats.

Part III, *On Living With Lions*, explores how the Maasai and their cattle have shared space with lions, and how their relationships have been reconfigured over time. Chapter 4 looks at the Maasai practice of *olamayio* [lion hunting by Maasai *ilmurran*[7], or warriors] and its transformation given shifting social, economic and environmental realities in Kenya. I discuss implications for Maasai masculinity and identity, drawing on earlier ethnographies of Maasai warriorhood (Spencer 1988; Hodgson 1999). Chapter 5 probes the motivations behind continued lion hunting, focusing on the intentions behind hunting rather than the causes.

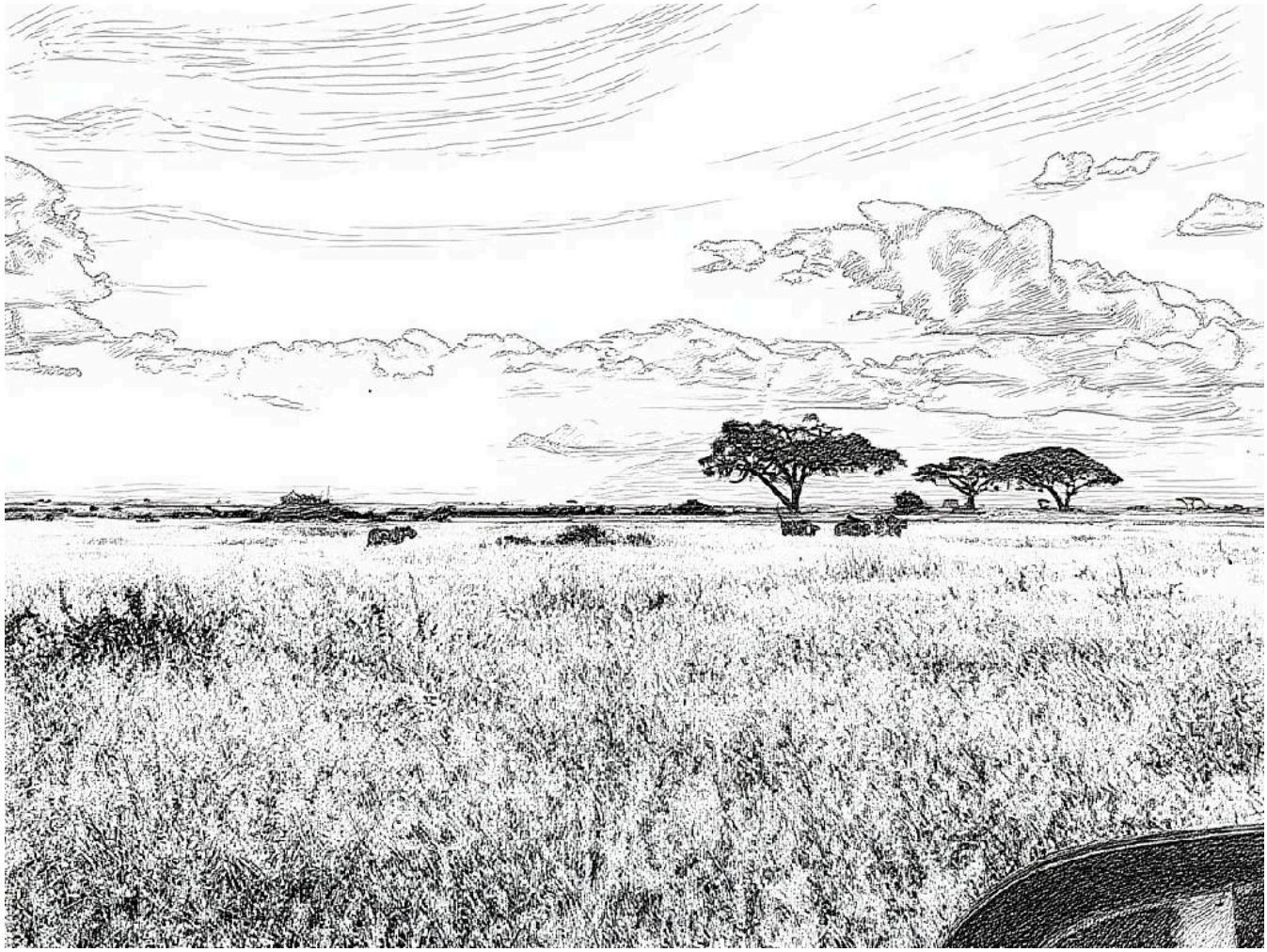
Part IV, *On Herding*, addresses the relationship between herders and cattle at work. Chapter 6 explores the dynamic between herders and livestock as they work together in the task of staying safe from lions and sustaining Maasai society. Drawing on scholarship on more-than-human communication (Kohn 2013), I explore cross-species flows of signification in herding practices, considering how herders and herds engage their senses. Chapter 7 adopts a political economic lens to analyse pressures on this herder-herd labour and how these pressures influence incidents of livestock depredation.

The final part, **Part V**, *On Lions*, introduces the lion perspective. Chapter 8 presents findings from ethological studies, demonstrating how lions respond to Maasai presence.

[7] Throughout this thesis, I refer to Maasai warriors as *ilmurran* (plural) or 'morans,' an Anglicised form of the original Maa term commonly used today in Kenya. In the singular, I use 'moran,' also an Anglicisation of the Maa word *ormurani*, as employed by my interlocutors.

PART I

JOURNEYING TO KENYA'S MAASAILAND



Chapter 1: Colonial Past, Neoliberal Present, and Herd(er)-Lion Conflict

The languages of physics and systems science still carry authority in areas they have little business in. […] The behavior of human beings from different places, cultural backgrounds, histories, and societies cannot be studied like the behavior of particles or electrons to which universal laws apply. The same may be said for other animals.

— Simon Pooley (2025)

Any renewed inquiry into Maasai pastoralists' relationship with lions —and wildlife more broadly— must begin by examining the origins of conservation as both a concept and ideology, alongside Kenya's colonial past and its trajectory since independence. To ground this inquiry, I introduce the Maasai by drawing on ethnographic literature and examine the historical forces that have shaped how they live and interact with wildlife. Building on this, I explore how Kenya's increasing reliance on natural resources to stimulate economic growth influences pastoralist-lion dynamics. This analysis is framed through a political ecology lens, which reveals how historical power relations and economic pressures converge and continually re-shape the entangled lives of humans and other animals. I then engage with the ongoing discussions around human-wildlife conflict and coexistence as explored in the conservation and political ecology literatures, clarifying my own analytical position within these conservations. The chapter concludes by considering how environmental anthropology, with its engagement with local ecological knowledge (LEK) and multispecies approaches, offers methodological and theoretical pathways for researching human-wildlife interactions.

Who are the Maasai?

"Everyone 'knows' the Maasai," writes Spear in *Being Maasai* (1993, 1). Images of intrepid warriors and men herding cattle have shaped popular imagination since the nineteenth century and continue to circulate today (Hodgson 1999). As Hodgson (1999) points out, Maasai identity has often been filtered through a lens of masculinity. Early explorers and colonists portrayed Maasai men as bloodthirsty warriors—stealing livestock, raiding farms, and living outside the concerns of the modern *European* man (*Ibid*.). These early narratives "reinforced the

mythic images of (male) Maasai as noble savages and icons of wildest Africa" (Hodgson 1999, 125). Yet, despite this male-centric imagery, gender along with age, play a central role in the Maasai social system. While this thesis focuses primarily on the male experience—the age-set system, lion hunting, and herding—I also seek to incorporate women's perspectives and roles because, as Spencer (1988) notes, the Maasai social system is grounded in men's relationship to women, and women play an integral role in maintaining this system.

The Maasai are a semi-nomadic people residing in Kenya and Tanzania, historically reliant on livestock production as their primary livelihood. The Maasai migrated south from the Nile Basin in the fifteenth century, moving with their herds in search of fertile land and water, and eventually settling in the grasslands of Kenya's Rift Valley. The creation of the Kenya-Tanzania international border was established after the Maasai had settled in these regions. Contrary to portrayals of the Maasai as a self-contained and exclusively pastoral ethnic group, it is now widely recognised that they have long-standing economic, social, and linguistic ties with neighbouring communities, such as the Kamba, Kalenjin, and Kikuyu communities, making the notion of their complete separateness both misleading and outdated (Berntsen 1979; Galaty 1981; Homewood and Rodgers 1991; Spear and Waller 1993; Spencer 1973). Before the colonial period, boundaries between communities in present-day Kenya were fluid; ethnic groups moved and intermarried in response to resource availability, disease, and conflict (Hornsby 2013).

Maasai social organisation is based on approximately 16 to 22 sections (*iloshon*), each with a "unified political and administrative structure" (Grandin 1991, 22) and distinct social and political identities (Evangelou 1984). Sections are primarily defined by geography. There are also multiple clans, which are patrilineal groups tracing descent from common ancestors. The exact number of clans is debated (Coats 2000), and Homewood and Rodgers (1991, 45) stress, "it is probably misleading to attempt a rigid classification." This underscores that the Maasai are not a homogenous group: there are variations between clans and regions, and hence different anthropologists have produced slightly different accounts of the Maasai lifeworld (Coast 2001). For the purpose of this thesis, the term "Maasai" refers specifically to the communities with which I worked in the Mara (Siria and Purko) and Amboseli (Ilkisongo) ecosystems.

Traditionally, and still in some areas today (at least partially), Maasai live under a collective land management system, with livestock grazing on shared pastures. Each section or sub-group claims a particular territory, held communally to ensure access to essential pastoral

resources such as pasture, water, and salt (Spencer 1988). Human settlements are organised to accommodate people and cattle into a set of *enkang.* An *enkang* refers to a cluster of households (*enkaji* singular; *inkajijik* plurial) arranged in a circle around a central cattle enclosure (kraals) that protect livestock from predators and theft. The Maasai, being polygamous, organise their households so that each wife occupies a different house within the compound, with the most junior wife positioned closest to the *enkang* entrance (Spencer 1988).

The Maasai traditionally relied on their livestock for daily subsistence which provided them with milk, meat, and blood. Over the past four decades, many have adopted agriculture as a way to diversify their economies, reduce risk, and adapt to changing social and environmental realities (McCabe et al. 2010). Despite these changes, recent research confirms that Maasai livelihoods still depend heavily on livestock for economic subsistence (Kereto et al. 2022). Beyond their economic importance, cattle are intimately tied to Maasai personhood: "cattle are the representation of the 'good life'" and for Maasai, "a person without animals is a person without words, i.e., devoid of the capacity for human communication" (Talle 1990, 76). All cattle on Earth are regarded as belonging to the Maasai, understood as a gift from the *Eng'ai* (God) at the beginning of time, and reflecting a shared, deeply embedded connection to cattle. Herd ownership, particularly herd size, alludes to social hierarchies (Talle 1990). Families now tend to have smaller herds on average and the focus is increasingly becoming on the quality of livestock, especially among younger age-sets—such as special breeds of castrated bulls and merino wool sheep—though herd size remains an important marker of social status (Woodhouse and McCabe 2018). As my assistant told me: "If you want to know how rich someone is, just count the number of castrated bulls they have in their herd." That's because castrated bulls have a lesser practical use value, as they cannot reproduce and do not provide milk; instead, they primarily serve as a repository of wealth in the market economy, more easily saleable for cash. Families that can afford to keep them instead of selling them to pay for bills demonstrate greater economic stability.

Division of labour and access to productive resources are mediated by age and gender (Coast 2001; Smith 2014; Talle 1988). Men and women have distinct but complementary roles, with household success depending on each person fulfilling their responsibilities. Milk production is a woman's domain; they bear the responsibility to milk the cows and manage offtake and allocation (Talle 1990; Smith 2014). Women also care for young and sick animals, manage trade (especially of milk products), and mediations with *Eng'ai* on behalf of people and livestock

(Hodgson 1999). As "heads of houses" women are responsible for domestic affairs such as housebuilding and cooking (Talle 1987; Smith 2014), though modernisation of housing requires men's financial support, thereby changing the association of women to the home (Coats 2000). Men are responsible for managing the production of meat, making land use decisions, and earning the primary income to support the household. Men have been more involved than women in livelihood diversification and tend to have greater access to the most lucrative activities (Smith 2014). Age also structures resource access: elder men hold primary ownership and control over livestock and land, exercising paramount authority as family patriarchs (Coats 2001). Junior men are expected to show *enkanyit,* or obedience and respect to senior men, and women similarly defer to men (Coast 2001; Talle 1988). While women's power within the age-set system is limited, respect can be gained through life stages and spousal association (Smith 2014). Despite economic shifts allowing ilmurran and women to participate in income-generating activities, the authority of patriarchs remains significant (Smith 2014; Wangui 2008).

Maasai life is punctuated with important rites of passage which distinguish stages by sexual, dietary, social and temporal categories. These rituals are primarily centered around masculine life transitions, including *Enkipaata* (initiation into moranhood), *Emurata* (circumcision), and *Eunoto* (transition of Ilmurran to junior elders) —rites of passage which are discussed further in Chapter 4. Although these rites of passages remain central to Maasai identity, social organisation and practices have continuously adapted to accommodate shifting social, political, and economic circumstances (Galaty 1993). This thesis engages with and reflects these ongoing transformations within the Maasai lifeworld.

Although the Maasai represented less than 2% of Kenya's population at independence, they controlled most of the Rift Valley grasslands before European settlement (Hornsby 2013). Thirty years before the British arrived, the Maasai and their livestock were decimated by drought, brutal wars, and outbreaks of rinderpest (cattle plague) and smallpox (Hodgson 1995; Hornsby 2013; Waller 1988). These events depopulated the central Rift Valley and caused the Maasai to lose their military dominance over the region. This lightly populated and fertile valley became an appealing destination for white settlers, causing the Maasai to quickly lose the entire central Kenyan Rift Valley. In 1885, colonial governments partitioned the Maasai people between British Kenya and German Tanganyika, imposing spatial restrictions and a colonial understanding of nationhood and state structure. The British colonial administration secured the Kenyan Rift Valley for the settler

economy. From 1895, the year that the declaration of the East Africa Protectorate officially marked the beginning of British rule in Kenya, the colonial government began to craft policies for the creation of African reserves; land which was restricted from European settlement. Communities were eventually bounded in 24 administrative districts[8] which were established on the basis of ethnic differences settlers saw between communities. The Maasai were relocated north to Laikipia in 1904, and then south (today Kajiado and Narok counties) between 1911 through 1913, as settler farms expanded. The fertile central Rift Valley was named the "White Highlands" and between 1902 and 1915, 20% of Kenya's best agricultural land was declared Crown property and reserved for white settlers (Hornsby 2013).

Since then, Maasai livelihoods and pastoral way of life have transformed rapidly. The political, ecological, and social transformations initiated since the colonial era continue to shape Maasai life today, seen in the loss and fragmentation of their traditional lands and increasing sedentarisation (Galvin 2009). However, it is important to recognise that power dynamics affecting the Maasai are neither static nor wholly constraining. Drawing on Hodgson's research (2011), the Maasai have deployed their identity as an Indigenous group to gain rights and leverage political recognition domestically and internationally. Through conservation, tourism, and land claims, some Maasai communities have accessed new forms of power and influence. Yet, these gains coexist with ongoing challenges such as land grabs, commodification of natural resources, and shifting social hierarchies within Maasai society itself. Wider geopolitical shifts—including increased foreign investment and neocolonial interests—continue to shape the economic and political landscape in which the Maasai live. Finally, this is the context in which present-day Kenyan conservation is situated. These historical developments have shaped how Maasai and wildlife come to interact and understand one another and their surrounding environment.

[8] These districts were akin to Indigenous reserves in other British colonies. Reserves represented a tool for the engineering of African society (Overtone 1989). Their objectives were to facilitate social control and promote sedentary agricultural practices (*Ibid*.). These reserves restricted African peoples' movements; they prohibited cross-reserve settlement and land-buying by Africans. Spatial segregation in colonial Kenya was a cost-effective tool to control the African population and push them into the labour market (*Ibid*.).

A Global Responsibility: from Colonialism to Neoliberalism

Conservation in the Colonies

Wildlife conservation in East Africa does not exist in a vacuum; it is rooted in a long colonial history and Western ways of thinking about nature that date back to antiquity. As Adams (2004) posits, ideas about the wild are culturally constructed and far from universal. Dominant Western intellectual traditions, introduced during British colonial rule, profoundly shaped the development of the conservation movement in Kenya. As I discuss here, conservation efforts in Kenya emerged during the colonial era, and this historical legacy continues to reflect in contemporary conservation practices and policies.

Western science is deeply entangled with colonialism, having long served as a tool for colonial conquest (Harding 2011; Seth 2009). The civilising mission promoted the idea that science was a gift that Western imperial powers bestowed on their colonies, thereby justifying British colonies overseas. As a result, scientific discourse is embedded within a system of power which establishes a hierarchy of knowledge (Seth 2009). Western science often goes unquestioned as the universal form of knowledge, more refined and rigorous, supressing local knowledge systems and practice (Briggs and Sharp 2004). Any deviation by local peoples from this supposed universal truth is what would have instigated their need for conservation in the first place (Escobar 1995). This worldview is deeply patriarchal and gendered, mapping a dualism between male and female onto the culture/nature binary, with women often deemed closer to nature and thus marginalised within both colonial and scientific paradigms (Plumwood 1993).

The conservation movement first took shape in the West with the rise of European Romanticism in the late 18th century (Adams 2004), an artistic and intellectual movement that adapted these anthropocentric ideas and the hierarchical worldview of the *scala naturae* (Gould 1985). This movement saw seemingly wild, rugged places —once feared for their lawlessness and barrenness— as sanctuaries from the ills of modern, capitalist industries. Wilderness came to be seen as a refuge from civilisation, a theme explored in William Cronon's influential essay, "The Trouble with Wilderness; or, Getting Back to the Wrong Nature" (1995). Cronon describes wilderness as "the last remaining place where civilization […] has not fully infected the earth," making it something to be treasured and preserved from the destructive impact of human activity (Cronon 1995, 7). These Western environmental ideas underpinned the conservation model often

referred to as "fortress conservation" (Brockington 2002), which valorises pristine, intact landscapes often without people. The underlying assumption was that humans inherently have negative impacts on the environment (Vadjunec and Schmink 2012). Conservation was thus grounded in this "nature for itself" philosophy (Mace 2014, 1558), which facilitated colonial dispossession by portraying landscapes inhabited by Indigenous peoples as 'empty' wilderness, thereby legitimising their removal in the name of preservation[9].

In the late 19th century, as settlers in America moved westwards to conquer more land—thereby 'closing the frontier'—concerns grew over the effects of the expansion on America's wilderness and the pioneering spirit of 'the wild West.' Adams argues that wilderness "became an important element in emergent national identities" in settler colonies (2004, 104). Preserving the wild became crucial to maintaining the American character. The first national park, Yellowstone, was established in 1872. National parks became a source of national pride; while the new world did not have the architectural glory or history of the old world, it had expansive, magnificent landscapes. These newly protected landscapes were seen as empty and un-settled; "pristine and un-affected," defined in legal terms as *Terra nulius* (Adams 2004, 106; 103). Indigenous communities inhabiting these seemingly un-settled places were ignored, displaced, and constricted to reserves for the creation of 'wild' sanctuaries (Cronon 1995; Reimerson 2013; Domínguez and Luoma 2020). This American idea of wilderness and national parks was exported to Europe and its colonies. In Africa, Europeans adopted the American protectionist[10] approach yet combined this model with the more European tradition of aristocratic hunting[11]. From the 1880s, European aristocrats self-described as true sportsmen[12] —and later (1920-30s) the American industrial and commercial bourgeoisie— began visiting Kenya for big-game hunting adventures (Steinhart 1989;

[10] Not to be confused with American protectionism, the economic policy of restricting imports to protect domestic industry. The protectionist tradition in nature conservation refers to an approach that seeks to protect nature from human interference, based on the belief that nature is best when preserved in its pristine state.

[11] Aristocratic hunting is a tradition of game hunting by the upper class, with designated reserves set aside for royal and elite hunting (Adams 2004). Since the Middle Ages in northern and western Europe, hunting privileges in parts of Europe were restricted to the King and select members of the nobility (Steinhart 2006). Commoners were forbidden from hunting on these royal lands and faced punishment if caught poaching (Mileson 2009). The figure of the 'poacher,' often a landless poor rural dweller, emerged from this context (Adams 2004). The British exported and imposed these class- and race-based land management and conservation frameworks wherever they colonised, embedding a system deeply intertwined with both class hierarchy and racial oppression.

[12]These were hunters—men of wealth and status—who regarded large-scale game hunting as an imperial inheritance and a realm where their skill and knowledge surpassed those who hunted for subsistence (Steinhart 1989). Their identity was shaped by the belief that hunting was a privileged 'calling,' reserved for the elite.

MacKenzie 1988). By 1905, a different, less prestigious type of hunting also emerged: white settlers exterminating wildlife to make way for their private farms and ranches (Steinhart 1989). Because of a sharp decrease in Maasai population before British arrival, sportsmen and settlers were conveniently able to imagine a 'wild,' unpeopled landscape and were "convinced that they were the natural rulers of Kenya […] and that Africans were their feudal subjects" (Hornsby 2013, 26). Colonists opposed subsistence hunting by locals. Their view was that sustenance hunting by Africans was "haphazard, inefficient, wasteful and cruel" and as a distraction from "gainful employment in cash crop production or wage labour" (Adam 2004, 31). Trophy hunting by 'true' sportsmen, however, was not seen as depleting wildlife populations; rather, it was the excessive killing of animals by irresponsible hunters —African or white settler (especially Boers)— which was problematic (*Ibid*.). Unlike the precise, clean kill of the European's sporting rifles, traditional African hunting methods (i.e. traps, spears, bows and arrows) were condemned by European hunters for its cruelty and barbary (Adams 2002).

In Kenya, colonial officials, who often came from aristocratic or bourgeois family backgrounds and were themselves elite sportsmen and preservationists, debated whether settlers should be allowed to hunt game deliberately (MacKenzie 1988). The Society for the Preservation of the Wild Fauna of the Empire (SPWFE) was founded in 1903 by a group of British aristocrats in African colonies to lobby the British colonial government towards the greater protection of natural resources (Prendergast and Adams 2003). The society played a major part in controlling hunting in Kenya (Adams 2004; MacKenzie 1988). Some members of the society argued that settlers —who were not seen as sharing the same values as traditional sportsmen—were shooting wildlife excessively and had to be restricted by legislation. However, settlers' growing frustration caused by wildlife damaging their plantations, coupled with the loss of potential profits from game products, resulted in the removal of hunting restrictions[13] in 1905, to the regret of early conservationists of the SPWFE (Adams 2002). The law allowed settlers to kill game on their own land, as well as to kill the so-called royal game that was damaging their property. Consequently, settlers hunted wildlife to make space for privately-owned farmlands (Steinhart 1989). They believed that they could transform the undeveloped land into a productive asset (Knowles and

[13] The Kenyan Game Ordinance of 1900 outlawed hunting without a license. Opposition to strict game laws intensified following a 1905 court case in Nairobi involving Lord Delamere, who shot zebras entering his property in violation of the law (Huxley 1935). Although he lost the case, the resulting publicity and settler support led to amendments favouring farmers, allowing them to protect their livestock and crops (*Ibid*.).

Collett 1989). The wilderness became an important feature of settlers' emerging national identities; it allowed for the imagination of a settler identity, set apart from Europe.

During the early colonial period, the newly established Game Department (est. 1907) began to provide 'game control' services to settlers. On those control operations, hunters employed by the department would kill "hundreds of animals, especially elephant and rhino, […] to prevent (or to avenge) the destruction of crops and fences on settler farms" (Steinhart 1989, 253). Game control also allowed landowners to kill wildlife found on their land with impunity and without a game licence. Hunting tourism, combined with the violent extermination of wildlife for agriculture and settlements, led to unprecedented biodiversity loss which incited a growing concern over preservation (Steinhart 1989).

The conservation movement in Kenya gained momentum within white settler circles in the 1930s, as a response to the stark depletion of game animals following decades of hunting by foreign tourists and settlers (Steinhart 1989). The lack of policies on big-game hunting and the promotion of game control from the colony's inception put pressure on East Africa's wildlife. As a result, colonial conservation efforts focused on putting an end to hunting. Conservationists began the exercise of creating a list of species that should be protected. The 1933 London Conference on the Preservation of the Fauna and Flora of Africa urged signatories to the convention to establish a list of species that should be protected from hunting, killing or capture within their territories (Economic Advisory Council 1933). Efforts were focused on the "'indiscriminate slaughter' by 'natives'" rather than being focused on settler hunters (Adams 2004, 110). The intent behind these regulations was purportedly "to protect the natives against the results of their own reckless exploitation of their natural resources" (Earl of Onslow 1941 in Adams 2004, 110). African subsistence hunters were consequently transformed into "poachers" (Adams 2004; MacKenzie 1988; Steinhart 1989; 2006). Some sporting conservationists even blamed the decline of African wildlife on "the native hunter," who, they argued, hunted outside the "civilized code of sport hunting" (Adams 2004, 108). From this colonial perspective, African hunters were criticised for lacking concern for species, trophies, or animal sex, and for hunting out of necessity rather than for recreation—a view that reinforced colonial justifications for imposing restrictive hunting laws (*Ibid*.).

In 1946, Kenya's National Park system was established with the gazettement of the National Parks Ordinance[14], and Nairobi National Park became the first, created in 1946. Governance of the park was placed entirely in the hands of an independent Board of Trustees, which operated free from legislative interference and was insulated from settler opinion who remained hostile to wildlife (Steinhart 1989). This new system was founded on the belief that wildlife would be best protected within specially designated areas free from human interference. Local communities were not involved in the process of wildlife preservation nor in the creation of the National Park system. Some African men, often former so-called 'poachers' with bush experience, were recruited as park rangers or subordinate staff to act as informers and policemen against other African poachers (*Ibid*.). This new concern for wildlife conservation criminalised African subsistence hunters, and the priority "was to eliminate hunting by Africans" (Adams and McShane 1992, 46), reinforcing the colonial notion that Africans are poor stewards of their environment (Mbaria and Ogada 2016).

Consequently, in addition to being victims of territorial displacement, the Maasai's livelihood, pastoralism, was perceived as a threat to both the environment and social cohesion. The Maasai were portrayed by the colonial administration as "wasteful and primitive" (Overtone 1989, 168), considered ill-equipped for cultivation, inefficient, and defiant to authority (Knowles and Collett 1989). In 1912, Henry Conway Belfield, Governor of the East Africa Protectorate, stated that it was "far better for the natives themselves and for the country as a whole that [pastoralists] should remain agriculturalists rather than engage in 'pernicious pastoral proclivities'" (Overtone 1989). The belief among settlers that pastoral practices led to land degradation and productivity loss was central to land management policy in colonial eastern Africa (Boles et al. 2019, 419).

Concerns about Maasai land use grew as livestock numbers increased following reductions in disease and diminished inter-ethnic conflicts (Hornsby 2013). This growth in livestock numbers became seen as a threat to the 'wild' Africa imagined by European conservationists. Issues with soil erosion and degradation arose, which were attributed to overstocking and overgrazing[15].

[14] The Game Department at the time was considered institutionally ill-equipped to lead the new wave of conservationism due to limited budget and its traditional focus on game control and licensed hunting, conflicting with the growing sentimental and preservationist approaches (Steinhart 1989). By the late 1930s, leadership of the conservation movement shifted to advocates like Mervyn Cowie and the National Parks movement. The outbreak of World War II in 1939 postponed the launch of the National Park program that Cowie had been promoting. It was only after the war ended in 1945 that conditions allowed for the formal establishment of Kenya's National Park system (*Ibid*.).

[15] See Herskovits' (1926) cattle complex theory.

However, the cause lay as much in limits on stock movement since the creation of reserves, as well as a lack of understanding of non-equilibrium dynamics where stock numbers can vary through time in semi-arid environments (Behnke and Scoones 1993; Homewood and Rodgers 1988). In response, land rehabilitation programs in the 1930s sought to reduce livestock numbers through forced destocking. The expropriation of pastoral lands for exclusive wildlife conservation was justified by the argument that pastoralists overstock, overgraze, and damage rangelands, whereas wildlife were seen as living in harmony with their environment (Homewood and Rodgers 1988). Although the hypothesis of a stable equilibrium in open arid and semi-arid rangelands is no longer widely accepted by ecologists, its legacy endures in the permanent expropriation of pastoralists from these rangelands. As Büscher (2016, 115) notes, despite decades of critical scholarship, "fortress thinking persists in the governance of protected areas." Mainstream conservation continues to struggle with balancing the delivery of a public good with the need to respond to the interests of the local people who have historically been the stewards of these environments.

Conservation Post-Independence

At independence in December 1963, Kenya already possessed an extensive system of national parks, reserves and hunting blocks, and was emerging as a major safari destination attracting overseas tourists and sport hunters (Somerville 2019). In the following decades, sport hunting in Kenya came under increasing international scrutiny and was eventually banned in 1977. International conservation organisations and the entertainment industry played a key role in focusing attention on Africa's charismatic megafauna in this period, particularly figures such as Joy and George Adamson. Through books and films like *Born Free* and *Living Free*, they offered highly romanticised accounts of raising the lioness Elsa before releasing her back into the wild, thereby inserting an emotional aspect to human-lion relations (*Ibid*.). This extraordinary story helped focus international attention on lions, arguably generating support from conservation and animal rights groups to underpin the 1977 ban on game hunting (*Ibid*.).

Since Kenya's independence, as is the case globally too, conservation has been focused on development, seeking "win-win" solutions for both people and wildlife (Homewood et al. 2012). Neoliberal efforts in the 1980s to privatise communal lands into individual holdings[16]—"a solution

[16] For instance, the Group Ranch Scheme (GRS), introduced in Kenya's Maasailand from the late 1960s to mid-1970s, represented a transition from customary communal land tenure to a more formalised system of collective

to poverty and environmental degradation"—has thrust pastoralists into the capitalist market and made them more dependent on the monetised economy (Fratkin 2001, 6). Under the conservation-as-development model (West 2006), revenues generated from wildlife tourism would offset the impacts of conservation restrictions by giving financial benefits to local community members. Many Maasai in Kenya who have become landowners through this privatisation now have shares in conservancies and receive income from conservation and tourism activities. Yet, despite these efforts, benefits do not always trickle down to Maasai households evenly (Bedelian 2014; Galvin et al. 2018; Lesorogol 2022) while the loss of mobility and access to resources are not addressed (Homewood et al. 2012).

Over the last 20 years, conservation has mutated from its colonial form to emerge as a site of speculative capital accumulation, increasingly involving the financialisation of nature (Büscher and Fletcher 2015). As Brightman and Lewis (2017) observe, contemporary ecological initiatives frequently transform life processes into tradable assets through mechanisms such as payments for ecosystem services (PES), biodiversity banking, and wildlife tourism revenues. Conservation goals are now often framed in terms of measurements of biodiversity, with tools such as natural capital accounting used to render nature's contributions to people legible within market-based systems (Fletcher and Toncheva 2021; Massarella et al. 2021). This trend is reflected in the growing collaboration between major international conservation agencies, such as the World Wide Fund for Nature and The Nature Conservancy, and global financial institutions and corporations, including the World Bank and private sector actors (Büscher and Fletcher 2015; Robinson 2012; Zimmerer et al. 2004).

Technical solutions involving "measurable and verifiable indicators," in line with economic growth and rationalised by science, assume that ecological problems can be fixed as though nature were an external 'thing' that we can value, control, and market (Brightman and Lewis 2017). However, these solutions suffer from limitations: they can be costly, lack accountability, require external expertise, and frequently fail to achieve their goals (Haya et al. 2023; Swift 2024). Conservation's colonial legacy, and its entanglement within the neoliberal machine, has shaped the conservation model that dominates today—what Brockington et al. (2008)

ownership (Kimani and Pickard 1998). This system served as a middle ground between traditional pastoral tenure and private ownership (Galaty 1994). Pressure to subdivide group ranches increased in the 1980s, as they became seen as a failure (*Ibid*.) and international agencies such as USAID and the World Bank actively promoted market-oriented commercial ranching and land privatisation (Fratkin 2001; Harvey 2005; Maathai 2009).

call “mainstream conservation.” Mainstream conservation is characterised by collaborations between urban elites, corporations, private enterprises, and states which have emerged and formed into institutions overtime. Consequently, this ‘top-down’ conservation model tends to reflect the views and interests of international elites, not those of rural communities upon whom the burden of the global environmental crisis falls. Cash payments and financial benefits, often too little to contribute to their livelihoods in significant ways, are made to compensate their efforts.

Like Brockington et al. (2008, 9), I must specify that I concern myself with mainstream conservation, not because it captures the full diversity of actors in conservation, but because it “dominates the field of conservation in terms of ideology, practice and resources brought to bear in conservation interventions.” There are, of course, many different approaches to conservation (see Büscher and Fletcher 2020 Chapter 1 for a discussion on different conservation models), but I highlight this neoliberal approach because it has been especially influential in Kenya and wider East Africa (Büscher 2011), shaping Maasai livelihoods and perceptions of lions (as discussed in Chapter 4). This model has been exported, in various mutations, to other parts of the continent, yielding highly uneven social and ecological outcomes (Brockington et al. 2008; Büscher 2011).

Finally, the legacy of colonial administration in Kenya continues to reverberate today, as post-independence governments have maintained Western conservation policies. Despite shifts in the framing and objectives of conservation, the “nature for itself” paradigm (Mace 2014) continues to inform conservation practices — particularly through the establishment and maintenance of PAs and blanket bans on hunting (Büscher 2016). These policies continue to deprive local communities from essential resources and ecosystem services (Mbaria and Ogada 2016; Domínguez and Luoma 2020). Yet, although colonial legacies still influence the conservation landscape, independent Kenya is increasingly forging new approaches that blend multiple value systems. The current landscape reflects a more complex interplay of historical influences, emerging local values, and global pressures. Most recently, this landscape has shifted towards neoliberal approaches, such as PES schemes, ecotourism, and other income generation strategies, which have become popular strategies for biodiversity conservation (Büscher 2011).

Having outlined the historical development of conservation ideology and policy in Kenya, I now turn to the theoretical frameworks that guide my analysis of Maasai-lion relations: political ecology and environmental anthropology. By drawing on these approaches, my framework aims

to contribute to decolonising conservation thinking and practice by moving beyond Western-centric and anthropocentric perspectives in conservation research.

Political Ecology: Framing Conflict

Political ecology, which emerged in the 1970s —with the term often attributed to Wolf (1972) and later established by Blaikie (1985)— is not a single theory but a field of research and community of scholars drawing upon on Marxist, post-colonial, and peasant studies to examine people-environment relationships (Adams 2015; Benjaminsen and Svarstad 2021; Robbins 2020). Political ecology considers relations of power, examining the political systems and processes that configure who has access to natural resources, the ways in which they are utilised, and the resulting impacts (Robbins 2020; Stott and Sullivan 2000). It provides a critical lens for exploring how historical, economic, and political processes shape human-animal relations and conservation priorities in Maasailand. Guided by this perspective, I investigate human-wildlife conflict while being attuned to the global forces and various forms of power (i.e. colonialism, capitalism, conservation movements) that underpin this seemingly local issue. My research interrogates how intersecting power relations affect access to land and resources, *who* influences lion conservation decision-making, and *who* ultimately benefits from these processes.

As illustrated by the blame placed on the Maasai for overstocking, overgrazing, and more recently, farming (McCabe et al. 2010), local communities are often held responsible for environmental degradation (Homewood and Rodgers 1988). Political ecology shifts this narrative by emphasising that changes in the environment and the state of ecosystems are shaped by political decisions and processes. This lens offers a means to investigate local environmental issues within a larger web of national and global influences, revealing underlying drivers that often extend far beyond the local and make connections to broader patterns of marginalisation (Benjaminsen and Svarstad 2021). Political ecologists, therefore, analyse how political and economic forces operating at multiple scales shape local decisions and outcomes. For example, Homewood et al. (2001) compared wildlife declines in Kenya and Tanzania, and found that Kenya has experienced more dramatic losses despite similar human and livestock populations. They attribute this difference to Kenya's deeper integration into global markets, increased land privatisation, and growing international demand for domestically grown cereals—all of which have driven intensive agriculture and habitat loss. Global markets, not Kenyan farmers, set crop prices. As profit margins

for crops like coffee and tea decrease, farmers are pressured to convert *more* land to agriculture, further accelerating habitat loss (Homewood et al. 2001). The agriculture sector now represents 22.4% of Kenya's GDP and supports the livelihood of more than 80% of the population (FOA 2022). While local communities may initially appear culpable for habitat loss and wildlife decline, Kenya's environmental transformation is, in fact, "more connected to the daily lives and routines of urban people in the developed world" (Robbins 2020, 8). As Kenya becomes increasingly tied to global markets, its people grow more dependent on the environment for their livelihoods. As Robbins explains, political ecology is grounded on the premise that "any tug on the strands of the global web of human–environment linkages reverberate throughout the system as a whole" (Robbins 2020, 10).

Political ecology is useful for looking at conservation problems because it operates under the premise that "costs and benefits associated with environmental change are for the most part distributed among actors unequally … [which inevitably] reinforces or reduces existing social and economic inequalities" (Bryant and Bailey 1997, 28-29). It draws attention to conflicts between local or Indigenous communities and external actors who appropriate land and natural resources for profit (Benjaminsen and Svarstad 2021). As such, political ecologists examine problems rooted in colonial power dynamics and advocate for "better, less coercive, less exploitative, and more sustainable ways of doing things" (Robbins 2020, 17). Research guided by this framework uncovers who benefits and who loses from environmental changes, highlights unequal power relations, and ultimately seeks more just and sustainable alternatives for human-environment interactions.

An essential component of my research is to examine the economic and political forces shaping Maasai-lion relations. For instance, I explore local land tenure systems —particularly the recent shift to privatised land holdings, which has prompted landowners to seek new ways to profit from their land (Santini 2025)—as well as commodity markets, labour structures, and the "axes of money, influence and control" (Robbins 2020, 10). I seek to uncover the various conservation actors involved and investigate what each stand to gain from their engagement in the region. I critically assess who gets to benefit from conservation interventions and who is disadvantaged. I scrutinise the assumptions held by conservationists and NGO staff regarding lion hunting. Additionally, I track the benefits (or lack thereof) my local host communities receive from wildlife conservation. Central to my inquiry is the question: *what drives conflict between people and*

wildlife? What leads herders to kill lions? Recent research highlights the importance of understanding human-animal conflict within its historical context and underpinning politics of their place of study (Pooley et al. 2017; Pooley et al. 2021). Rather than viewing these incidents as isolated, my analysis situates them within the broader socio-ecological and political-economic contexts that shape human-wildlife interactions.

To summarise, I approach herd(er)-lion conflict through a political ecology lens because it illuminates how global political and economic forces shape local environmental conditions and can generate conflict. In Chapter 3, I examine how integration into the market economy has transformed Maasai-cow relations, turning what many Maasai consider kin into assets. Chapter 4 explores how shifting socio-political dynamics in Kenya have altered Maasai rites of passage and as a result, their relationship with the environment. In Chapter 5, I analyse the multiple motivations behind continued lion hunting, demonstrating how these practices are influenced by conservation interventions and local politics, both of which are deeply entangled with broader political economic forces. And in Chapter 7, I analyse changes within labour relations in Maasai pastoralism. By situating Maasai-environment relations within these wider social, economic, and political processes, my analysis moves beyond simplistic framings of lion-killing as irrational or criminal, and instead asks: *what underlying conditions drive these actions?*

Political ecology provides a valuable way of attending to environmental issues, precisely because it welcomes interdisciplinary engagement across the social and natural sciences. It bridges divides by combining "natural science studies with knowledge obtained through qualitative methods to identify what indigenous or local knowledge says about the same environmental processes" (Benjaminsen and Svarstad 2021, 7). In Chapter 2, I show how combining anthropological fieldwork on Maasai perspectives, lifeways, and ecological knowledge in the Mara and Amboseli with ecological science on lion behaviour enables a fuller grasp of the dynamics at play. Despite criticisms of political ecology for insufficient integration with ecological science (Bassett and Zimmer 2004; Walker 2005), my research works to keep ecological and social dimensions in dialogue throughout. Political ecology has also faced criticism for its limited applicability to real-world policy issues (Walker 2006). In response, I strive to ground my analysis in practical pathways and collaborative solutions, particularly in Chapters 7 and 8, where I explore locally meaningful strategies for reducing livestock predation.

Environmental Anthropology, or an Anthropology Beyond the Human

I also draw on environmental anthropology to investigate how Maasai and lions interact with and perceive each other and their shared environment. Environmental anthropology is broadly defined as the study of the complex, dynamic relationships between humans and their environments, across time and space, contributing a better understanding of how humans have diversely occupied, interacted with, damaged, and sustained environments over time (Dove and Carpenter 2008; Kopnina and Shoreman-Ouimet 2017). Like political ecologists, environmental anthropologists—many of whom are political ecologists—focus their research on environmental change and challenges related to environmental justice (Kopnina and Shoreman-Ouimet 2017). However, environmental anthropology places particular emphasis on situated, embodied forms of knowledge, and attends closely to interspecies relationships and entanglements through multispecies perspectives.

Environmental anthropology's object of analysis, according to Milton (1993, 1996, 2002), encompasses the study of human–environment relations, of various cultural environmental knowledges and practices, and of environmentalism itself as a practice. My research engages with the first two: the complex interactions between humans and their environments, including human-animal relations, and Maasai local ecological knowledge (LEK). The result is an approach that blends Indigenous and local ecological knowledge and more-than-human agency together with Western scientific perspectives, aiming to integrate both Maasai and lion lifeworlds[17] within the analysis of conflict. By doing so, it challenges entrenched dichotomies between scientific and traditional knowledge systems, as well as the nature-culture divide. I now turn to how I study more-than-human relations, followed by a discussion of how I engage with Maasai LEK.

Human-Animal Relations

I do not limit my research to human agents—this research also explores lions' lifeworld. I draw inspiration from anthropology's long-standing interest in animals. As far back as the 19th century, American anthropologist Lewis Henry Morgan (1868) studied the ingenious knowledge beavers transmit to each other. Morgan claimed that beavers' dam-building knowledge is the result

[17]A world of sensuous, bodily and practical experience; of relative and perspectival truths. Lifeworld is a concept Ingold borrows from Uexküll's *Umwelt*. According to Uexküll, each species has its own *Umwelt*, or surrounding-world, in which it lives subjectively.

of communication between sentient beings across generations, while deploring the fact that these intelligent animals are deprived rights. Similarly, in the mid-1970s, Ingold (1974; 1980) studied the Sami of north-eastern Finland's relation with reindeer and concluded his observations by extending social reasoning to reindeer. According to him, reindeer are sentient beings that respond to human actions. Other ethnographers, such as Evans-Pritchard, Lévi-Strauss, Radcliffe-Brown, and Leach, studied the role of animals in various socio-cultural activities throughout the later half of the 20th-century.

Much of the more recent anthropological work with more-than-human subjects emerged from the so-called "species turn"—studies of animals, plants, fungi, and microbes—is motivated by ecological concerns (Kirksey and Helmreich 2010) and a commitment to write in the anthropocene (Rose 2009). By engaging anthropologically with animals and nonhuman beings, scholars challenge the logic of human exceptionalism and illuminate the agency, cleverness, and adaptability of other species. Kohn (2013), for instance, investigates cross-species communication in the Amazon, proposing a new theory of semiosis that recognises animals' use of indexical and iconic signs, rather than exclusively symbolic ones. He argues for an anthropology that extends beyond symbol-using beings and codified knowledge. Haraway (2008) explores the mutual adaptation between humans and their animal companions, framing animals as agents "to live with." As Kirksey and Helmreich (2010) observe, "living with" nonhuman others takes many forms: as companion species (Haraway 2003), as "unloved others" (Rose and van Dooren, in press), in states of mutual "detachment" (Candea 2010), or through curiosity (Paxson 2010; Braitman 2010)

While anthropologists who study encounters between humans and nonhumans often refer to their practice as multispecies ethnography (Kirksey and Helmreich 2010), some scholars advocate for alternative labels. Ingold (2013) proposes an "anthropology-beyond-humanity," while Kohn (2013) speaks of an "anthropology beyond-the-human." Another term, anthrozoology, focuses specifically on how humans think about and engage with nonhuman or more-than-human animals (Hurn 2010). In contrast, the terms proposed by Ingold and Kohn encompass all forms of life, not just animals. According to Ingold (2013), multispecies ethnography still takes the human as its central point of reference by primarily examining cultural ways of thinking about animals. Furthermore, he critiques the concept of 'species' itself—as a catalogue of biodiversity grouped by difference and similarity—for abstractly disconnecting beings from their environments and from the community of other beings with which their lives are entangled. In other words, the notion

of 'species' conscribes beings to social interactions with conspecifics, rather than beings of different kinds living with each other in a "generative process of social life" (Ingold 2013, 20). Instead, Ingold argues for an *anthropology beyond the human* that moves away from the species concept, recentres nonhuman agency, and understands nonhumans as "sentient beings engaged in the tasks of carrying on their own lives" (Ingold 2013, 5). For these reasons, I will use the term "anthropology beyond the human," or more-than-human (drawing from Abram 1996), going forward.

An approach *beyond the human* is valuable for human-wildlife conflict research because it helps focus on mutual relationships and recognises agency in nonhuman species. Pooley et al. (2017, 514) observe that predators and humans are often studied separately, using "different ontologies, epistemologies, and methodologies." They highlight that both human culture (how people conceptualise the animal itself and their relation to it) and animal behaviour must be equally studied together, along with the ways people and wildlife have adapted to each other over time. Ingold (2000) observes a similar dichotomy emerge in the anthropological study of human-animal relations, where anthropologists often focus on the cultural meanings humans ascribe to animals, neglecting the animals' own behaviours and roles in these relationships. In other words, anthropologists have long concerned themselves with the layer of meaning that the people they study superimpose on an independent, objective reality "out there" which only Western science can study rationally. Instead, I attempt to study human-animal interactions by using theoretical and methodical frameworks that place all of research subjects on a level playing field as best as possible.

To get the full picture of human-wildlife conflict, it is essential to study how animal behaviour has adapted to human societies (Pooley et al. 2017). Previous research on Maasai-lion dynamics (Goldman et al. 2010; Goldman et al. 2013) is invaluable in understanding Maasai-lion relations, but it is not concerned with lion behaviour; lions appear as passive beings in the background of Maasai social life. To avoid this shortcoming—one that Ingold critiques as reinforcing Western science's legitimacy and dominance—I concern myself with both human and animal sensibilities and perception of the environment. I draw on ecological thinking which considers chains of relations between organisms in an environment to explore *social* relations, not just biological ones, between beings (Gibson 1979; Ingold 2000; Brunois 2005). Brunois 2005 argues that it is only by looking at the relations between actants that we can learn about them and

their world. So, I treat humans, cattle, lions, and other beings that form part of the Maasai lifeworld not as mutually exclusive entities, but as constituting parts of a developmental system that is one totality. As such, I do not limit my analysis to the ways Maasai make meaning of lions. I investigate the strategies Maasai, cattle, and lions alike have employed to "live with" each other—or to "become with" each other in contact zones[18] (Haraway 2008).

A fundamental element of more-than-human anthropological work is recognising animals as agents with social behaviours, able to make their own decisions about how to thrive in a given environment. Ethologist Dominique Lestel (2001) maintains that animals are subjects with cultures, meaning that they can learn and transmit new, innovative behaviours socially. Social learning can be defined as "any learning process that is facilitated by the observation of, or interaction with, another animal or its products" and it "involves the transmission of information from one animal (model) to another (observer), which results in the observer learning the behaviour" (Brakes et al. 2021, 2). When socially learned behaviours are transmitted through groups, they may give rise to a culture (*Ibid*.), or more-than-human sociality (Tsing 2013).

Indeed, scientific research has demonstrated nonhuman species' ability for social learning and rapid behaviour adaptability (Brakes et al. 2021; Whitehead et al. 2021). Other research has shown that some species can transmit culture, or learned behaviours, to their offspring (Berger 2008). Moreover, recent work on animal personalities suggests that bold and aggressive personality traits are not innate but acquired through life history events (Cabrera et al. 2021). This growing body of research in animal cognition and behavioural ecology can be harnessed to enhance behaviours that promote species survival, a field known as Conservation Behaviour (Berger-Tal et al. 2011; Van Dooren 2023). Such insights can help improve the effectiveness of conservation efforts (Boonman-Berson et al. 2016; Brakes et al. 2021; Edelblutte et al. 2022; Jepson et al. 2021; Macdonald 2016; Pooley et al. 2017; Toncheva and Fletcher 2022). Despite this opportunity, learning and social behaviours remain rarely considered in wildlife conservation and management (Brakes et al. 2021), underscoring the need to consider the social and behavioural ecology of lions, particularly as it can reduce livestock predation and inform conservation strategies. This can be done, for instance, by focusing on the ways through which animals have adapted to human societies (Pooley

[18] Haraway (2008) builds on Pratt's (1991) concept of "contact zones," adding a more-than-human dimension. Pratt defines contact zones as paces where "cultures, meet, clash and grapple with each other, often in contexts of highly asymmetrical relations of power" (8).

et al. 2017), or by paying attention to the evolving decisions animals make to ensure their survival in a world experiencing rapid environmental change (Edelblutte et al. 2022). The complimentary fields of ethno-ethology (the study of how human cultures interact with and understand animal behaviour) and etho-ethnology (the study of how animal behaviours influence human cultures) can offer a valuable conceptual toolkit for exploring how animal social learning can inform conservation (Herzfeld and Lestel 2005; Brunois 2006; Lestel et al. 2006). Both embrace ontological relativism[19] to understand the living world as an interactive, relational system linking humans and nonhumans within "hybrid communities" (Lestel 2014).

Finally, anthropology beyond the human aligns well with political ecology because it recognises nonhumans as both shaped by and shaping political process. Margulies and Karanth (2018, 155) note that research on human-animal conflict needs to "more explicitly consider the role of animals in broader political processes" including geographies of contestation (e.g. conservation spaces). Others push for conservation science to apprehend wildlife as conservation actors able to influence conservation actions and land-use planning decisions (Boonman-Berson et al. 2016; Cardoso et al. 2020; Edelblutte et al. 2022; Jepson et al. 2011;) This research responds to these calls by proposing a theoretical framework that addresses both the historical context and underpinning politics, as well as the synergies between human and nonhuman actors. Grounded in a relational approach, I attend to how animals and people are both engaged in these political economic processes —how they make sense of and navigate them, shaping one another and their shared environment in the process.

Indigenous and local ecological knowledge

This transdisciplinary approach to studying wildlife conservation and human-animal conflict is novel because it takes Indigenous ontology and nonhuman agency seriously to understand how they mutually shape each other. Drawing from the Mi'kmaw "Two-Eyed Seeing" framework (Bartlett et al. 2012; Reid et al. 2021) and scholarship that adapts Western research methods to Indigenous ways of knowing (Simonds and Christopher 2013; Smith 1999; Walters et al. 2009), I embrace the contributions of Maasai ontology and epistemology alongside Western

[19] This refers to the recognition and respect for multiple ways of being and knowing, regarded as equally real and valid.

ways of knowing (Bartlett et al., 2012). Two-Eyed Seeing promotes the coexistence and mutual respect of disparate paradigms. There are multiple ways of seeing and understanding lions—each offering distinct yet potentially complementary insights into lion behaviour. By integrating Indigenous knowledge and methods, this research aims to contribute to the decolonisation of ecological research and foster more inclusive, context-sensitive conservation practice (Smith 1999).

Traditional ecological knowledge (TEK) refers to bodies of knowledge that transcends generations (Berkes et al. 2000) and are developed through a lifetime of observations and hands-on experience with the world (Olsson and Folke 2001). Local ecological knowledge (LEK) encompasses all context-specific knowledge, practices, and beliefs related to ecological relationships that develop through direct, place-based interaction with the environment (Ingold 2000; Charnley et al. 2007). LEK includes not only knowledge passed down across generations but also that gained through more recent personal experience (Sheppard et al. 2024). In this thesis, I use the term LEK because I do not see knowledge as static in the past but always evolving and adapting to new realities. LEK is fundamentally experiential and context-specific, consisting of the skills, sensitivities, and orientations cultivated through conducting one's life in a particular environment. Throughout the thesis, I draw on concepts like *intuition* (Ingold 2000) and *relational epistemology*[20] (Bird-David 1999) to conceptualise this type of knowledge emerging through attentive, embodied relationship between beings and their environment.

This experiential knowledge offers important insights into ecosystem functions and environmental change that may be inaccessible to, or complement with, Western scientific approaches. Despite its value, Indigenous knowledge has often been dismissed as 'unscientific' due to Western science epistemological biases. However, integrating diverse knowledge systems is not only valuable for bridging the divide between Indigenous and Western knowledge systems, but is also essential for moving beyond the nature-culture dichotomy because it does away with the notion that there is a single, objective "truth out there" distinct from culture, oft seen as a lens through which humans interpret the world (Ingold 2000). Instead, as Ingold (2000) argues, reality

[20] In her study of the Nayaka hunters-gatherers, Bird-David (1999) finds that they learn environmental knowledge by being attentive to what things in their environment do *in relation to themselves* rather than what they are.

is co-produced through the interactions of organisms. As such, a true understanding of human-animal dynamics requires engaging with diverse worldviews on their own terms (*Ibid*.).

Despite ongoing discussions about the contributions of Indigenous peoples' and local communities to conservation (Jonas et al. 2014), and the recognised value of integrating their ecological knowledge into inclusive conservation strategies (Adams 2017; Ocholla et al. 2016) and international biodiversity frameworks (Jonas et al. 2014; Tengö et al. 2014), these knowledge systems are often still regarded as complementary rather than as viable alternatives (Massarella et al. 2021). Frequently, Indigenous knowledge is sidelined when it contradicts scientific goals and methodologies (Nadasdy 2003). Such knowledge tends to be accepted only if it does not interfere and challenge "the limits of what is reasonable and conceivable" within modern ontology oft-grounded in the nature-culture divide (Blaser 2009). Efforts to integrate Indigenous knowledge into conservation agendas can therefore lead to ontological conflict, as different understandings of animals are enacted, leading to "misunderstanding about how to achieve the sustainability of the animal population" (Blaser 2009, 10). In the case of the Maasai, Goldman (2020, 6) observes that they have "rarely [been] recognized by conservation professionals, tourists, or scientists as knowledgeable actors regarding the land they live on and the wildlife they often share it with," largely because Maasai contribution would challenge scientific paradigms upon which conservationists rely.

This project avoids perpetuating this fallacy and supports the ongoing efforts to find alternative, socially just conservation by taking Maasai ways of knowing and being with wildlife seriously. By recognising that multiple ways of relating and engaging with nonhumans and the environment exist—and that these are shaped by power dynamics—my theoretical approach aims to dismantle barriers between LEK and Western science, as well as between nature and culture. By bridging Maasai knowledge of lions with biological conservation, this research has the potential to foster new partnerships (Garnett et al. 2018), promote innovative synergies between knowledge systems (Tengö et al. 2014), and support knowledge co-production between academic and non-academic actors (Norström et al. 2020). If, as explored in Chapters 4 and 5, Maasai lion-hunting is locally understood as a means to mitigate lion predation and address 'problem individuals,' it is worth engaging with these observations and explore complementarities between Maasai LEK and scientific knowledge—an approach I further in Chapter 8. Rather than imposing rigid models of sustainability that often generate new types of conflict (between people or with

animals), an approach rooted in environmental anthropology, which embraces transdisciplinary and attentiveness to relationality (instead of erecting walls and dichotomies), supports more inclusive and context-sensitive conservation thinking and doing.

Defining Human-Wildlife Conflict

One consequence of Western approaches to knowing and doing conservation has been the tendency to frame human-animal encounters as conflictual. In mainstream conservation, human-wildlife conflict is generally understood as "instances in which human and nonhuman interests overlap and clash" (Fletcher and Toncheva 2021, 1). However, some researchers argue that this conceptualisation of human-predator encounters is too negative, as it focuses on the impacts rather than the underlying drivers of conflict (Fletcher and Toncheva 2021; Margulies and Karanth 2018; Pooley et al. 2017).

Conflict-oriented research often centers on the impacts of wildlife on people and people's attitudes towards wildlife, rather than situating these interactions within broader social, political, and historical contexts. The initial focus on human-wildlife conflict in conservation stemmed from concerns about retaliation killings, with the assumption that reducing conflict would improve local attitudes and support for conservation. As a result, many studies conclude by proposing technical solutions, such as the construction of protective fences, which fail to address the root causes of human-wildlife conflict, disregard LEK, and ignore the complexity of human-animal dynamics (Redpath et al. 2015). As Dickman (2010) shows, antagonism toward wildlife often persists after damage has been reduced, indicating that conflicts are often driven by underlying social factors and that coexistence cannot be achieved through technical conflict-reduction measures alone.

Framing human-predator encounters as conflictual also neglects the role of actors situated within agencies of power, such as the state and conservation organisations, in shaping these dynamics (Fletcher and Toncheva 2021; Margulies and Karanth 2018; Pooley et al. 2017). Margulies and Karanth (2018, 155) note that focusing on conflict can obscure "whom or what may actually be at the center of conflicts," as wildlife often get caught in conflicts between human actors. Framing human-predator encounters as 'conflict'—sometimes the same encounters that were once seen as 'normal' or 'as facts of life' in certain social or environmental contexts— turns them into unacceptable problems requiring intervention, typically by the state or conservationists (Pooley et al. 2017).

Instead, these researchers advocate for a more productive conceptual framework, one that considers the broader economic, social, political, and environmental forces that drive human-wildlife conflict, and thus adopts a political ecological perspective. This approach recognises conflict as just one subset of the broader spectrum of possible human-wildlife relations, alongside coexistence, coadaptation, mutual avoidance, and mutual flourishing (Pooley et al. 2017). Based on these considerations, I understand human-wildlife conflict as a *particular form of relation* between humans and nonhumans that emerges within a specific social and political context, rather than an inevitable or universal outcome. Conflict might be assumed by conservation actors to exist where it does not, or be exacerbated by pressures such as capitalist development and the widespread application of a Western scientific understanding of nature. I remain attentive throughout this thesis to the underlying forces driving conflict between people, cattle, and lions, using a political ecology lens to examine how processes in Maasailand—such as land loss, resource depletion, rapid economic change, and exclusionary wildlife management—have created new drivers of human-wildlife conflict by intensifying competition for resources and reshaping the conditions of coexistence.

While the literature on human-wildlife conflict is more often situated in conservation science, it stands to benefit from being analysed from a political ecology and environmental anthropology lens. As mentioned above, approaching conflict through political ecology moves away from a narrative that blames local communities and reveals underlying causes of conflict. Environmental anthropology, by attending to more-than-human agency and LEK, can also provide a more holistic understanding of the drivers of depredation attacks and lion killing by examining how humans, livestock, and lions mutually interpret and respond to one another.

Chapter 2: Methodology and Field Sites

…efforts to decolonize conservation […] demand fuller and more open-ended recognition of non-Western epistemologies, ontologies and agencies.
— Liana Chua et al. (2020)

The previous chapter outlined my theoretical framework, which aims to decolonise conservation thinking and practice by examining the underlying politics of conservation conflict and engaging with LEK alongside more-than-human agency. But how can this be achieved in practice? Chua et al. (2020) argue that decolonising conservation requires engagement with non-Western ways of thinking and doing—and I extend this to include nonhuman ways of thinking and doing. This research seeks to do precisely that by taking both Maasai LEK and lion agency seriously. Through transdisciplinary engagement, it facilitates collaborative knowledge production across scientific, Indigenous, and more-than-human perspectives. In this chapter, I lay out my methodological approach, which integrates methods from anthropology and ecological sciences. I also introduce my two field sites, the Maasai Mara and Amboseli ecosystems, and explain the rationale for their selection.

Methodology

When thinking about a methodology for this project on herd(er)-lion relations, it was crucial to find an approach that would meaningfully consider both the human and the animal perspectives. While most anthropological research looking at human-animal interactions tend to privilege the human perspectives of animals (Hurn 2010), this study seeks to extend the analysis by also considering how animals perceive and respond to humans. As Ingold (2000) observes, anthropologists tend to focus on how people's direct encounters with animals are shaped and given meaning within cultural frameworks, rather than attending to the behaviours or perspectives of animals themselves. For example, Ingold discusses Cree hunters in Northern Canada, who interpret a caribou's pause in the presence of hunters as a deliberate act of offering itself. A biologist, Ingold writes, would explain this behaviour as a survival strategy; caribou assess potential threats in their surroundings before deciding on their next move. An anthropologist, on the other hand, is not to

refute the biological explanation, but to illuminate how such encounters are understood and embedded within Cree cosmology. Thus, the biologist adopts an etic perspective, seeking to explain animal behaviour from an external, scientific standpoint, while the anthropologist employs an emic perspective, exploring the meanings attributed to these interactions within specific cultural contexts. The two are compatible, according to Ingold, as one "claims to study organic nature 'as it really is', [while] the [other] studies the diverse ways in which the constituents of the natural world figure in the imagined, or so-called 'cognised' worlds of cultural subjects" (Ingold 2000, 14). However, Ingold is not satisfied with this dualism.

Ingold critiques the tendency among anthropologists to approach animality through perceptual relativism, or the idea that an objective reality exists "out there," but is accessible only through culturally mediated representations, resulting in multiple "constructions" of the external reality. He argues that this perspective positions the anthropologist as a "viewer of views," akin to a gallery visitor observing painted scenes rather than engaging with reality itself. The danger in this, Ingold contends, is twofold: first, it reinforces the notion that natural science is the sole legitimate means for studying the 'real,' 'objective' world, and second, it reduces Indigenous ecological knowledge to a mere cultural perception of nature rather than recognising it as a serious knowledge system on par with scientific knowledge. This dual separation reinforces the idea that only modern, Western science can truly understand animals, while Indigenous knowledges are seen as limited by belief or folklore.

Instead, Ingold proposes an approach that reverses this process of separation between nature and culture, Western science and Indigenous knowledge. He encourages thinking of knowledge as inseparable from ongoing, engaged relationships with a living world rather than detached, objectified categories. In this view, form and process are inseparable, and every organism is an active participant in the unfolding of life. This approach views reality as *co-produced* between organisms—including the researchers themselves— through their engagement with the world. Scientific knowledge, while often seen as objective, also depends on observation, which cannot occur without the observer actively participating and coupling their attention to the movements and activities in the world. Instead of placing animism and other non-Western epistemologies and ontologies as opposite to science, Ingold hopes to restore science to its roots in human, lived experience and engagement with the world. Since all knowledge (scientific and Indigenous) grows from active, ongoing engagement with the environment, researchers should

stop pretending they can observe the world from a detached, superior vantage point. Ingold's goal is to replace the old, rigid division between nature and culture with a new focus on the *synergy* between organisms and their environments. In other words, to attend to the dynamic and ongoing process of an organism's life in its environment, viewing organism and their environment as "one indivisible totality" (Ingold 2000, 19).

This perspective encourages a shift away from the notion that culture is a mechanism which superimposes meaning over an autonomous nature "out there" and replace it with an approach that focuses on *what emerges* from the life process itself—how living beings are shaped by their worlds and by their interactions with others. Similarly, Oyama's (1985) developmental systems theory (DST) offers a holistic framework for understanding the development of traits in organisms, emphasising that traits emerge from the dynamic interplay of various biological and environmental factors within a developmental system. This challenges traditional approaches centred either on genetic or on environmental predeterminism[21]—though it is important to acknowledge recent advancements in biological sciences, such as epigenetics and biome research (Carey 2011; Dupras et al. 2014; Mucina 2018). A dynamic and relational understanding of life has implications for studying animals because it challenges how we generate knowledge about animal lives. Recognition that animals have their own forms of learning, agency, and sociality, which can be studied as seriously as human culture.

Similarly, other scholars in human-animal studies have challenged how research on/with animals is conducted. Early on, biologist von Uexküll (1956) criticised ethology for being too mechanistic; for not considering the animal as an active agent capable of interpretations. He argued that animals do not simply react to stimuli but interpret *meaningful signs* that guide their behaviour. In this view, animals are considered subjects who actively make sense of their environment. He pioneered biosemiotics, a non-mechanistic approach to animal cognition. Despite this progress in the field of ethology, Despret (2013) laments how scientists' bodies engaged in observing animals are rarely acknowledged. She critiques the way researcher's presence is construed: they aspire to have a presence without a body (a "disembodied body"), to be passive and detached. Ethologists

[21] Genetic predeterminism holds that traits are primarily shaped by an individual's genetic makeup, whereas environmental predeterminism attributes development and behavior chiefly to external factors such as upbringing, culture, social conditions, and physical surroundings. While the former emphasises inherited biological causes and the latter external influences, emerging fields like epigenetic are now recognising the complex interaction between genes and environment, revealing how environmental factors can affect gene expression.

are trained to be neutral and invisible, or to use Haraway's terms, to be "like a rock" (2008, 24), to avoid influencing animals' response. By pretending the observer has no body, scientists avoid the possibility of real interaction or reciprocity with animals, yet the body, Despret argues, is actually what makes real encounters and mutual perception possible. Despret (2013) proposes an alternative mode of research: "embodied empathy," or a creative mode of attunement that enables scientists to feel/see/think what the other experiences, creating possibilities for (embodied) communication between the scientist and the animals. Others have called this a "passionate immersion" into the lives of nonhumans (Tsing 2011; Van Dooren et al. 2016). This can involve, for instance, sharing the same diet, feeling similar affects, and acting in ways that are meaningful to the animals studied. Lestel (2007) similarly emphasises that animals should be seen as partners rather than objects in research. He emphasises the importance for researchers to share space and time with the animals they observe, of *doing nothing* together, similarly to an anthropologist hanging out with their research participants—Lestel (2014) advocates for an ethnography of animal worlds.

Both Lestel (2007) and Despret (2013) draw examples from primatologist Shirley Strum, who did baboon research in Kenya. Strum tried to understand baboons from their perspective, letting them show her what was important to them (i.e. most meaningful behaviours). In her book *Almost Human* (1987), Strum recalls a time where she urinated in front of the baboons. They were surprised by the noise since they had probably never seen a human do such a thing. Despret argues that, by engaging her body, she "enter[ed] into relationships with the animals in a new mode – their surprise testifies to that – as a living person like them," creating what Despret coins "embodied proximity" (2013, 66). Lestel views it as the researcher building a friendship with the animals they study. Linking this back to Ingold's arguments, the focus here is again to do away with nature/culture and animal/human oppositions (and human exceptionalism), and replace it with *correspondence*; with relations.

In my own work, I sought to balance and bring into dialogue both human and animal perspectives, aiming to avoid reproducing the shortcomings identified by Ingold, Despret, and Lestel. Fieldwork began with ethnographic research[22] to explore Maasai understandings and

[22] I communicate my research methodology by referring to the 'ethnographic' and the 'ethologic' components for clarity. It is essential to highlight that the boundary between the two 'components' were much fuzzier in reality. As I discuss in Chapter 8, I never stopped doing anthropology while doing behavioural research on lions (or audio

experiences of lions, and subsequently drew on ethological approaches to consider the lions' perspectives of people and livestock. Crucially, I let the ecological knowledge shared by my Maasai interlocutors guide the direction and design of the ethological component. While this might appear anthropocentric, Maasai knowledge of lions is relational and embodied—much like the "embodied empathy" and partnership with animals advocated by Despret and Lestel. For the Maasai, knowing lions involves direct, bodily engagement and mutual perception, where knowledge emerges from real encounters rather than abstract detachment. This may inevitably center the human perspective, which is why I also seek to incorporate the lion's perspective through ethological surveys, which I discuss later in this chapter. Moreover, while I acknowledge the strengths of scientific methods in studying the physical world, my questions and fieldwork were informed by Maasai knowledge to align with calls within anthropology to develop methodologies that actively engage local communities in setting research agendas and priorities (Sillitoe 1998). Since I was also seeking transdisciplinary collaboration, I placed Maasai and scientific knowledges in dialogue, enabling each to inform and enrich the other.

To do this, I aimed to understand Maasai observations of and experiences with lions, their attitudes towards lion conservation, and their knowledge on lion behaviour. As Ingold writes: "those who are 'with' animals in their day-to-day lives, most notably hunters and herdsmen, can offer us some of the best possible indications of how we might proceed" (2000, 76). Maasai have lived alongside wildlife for hundreds of years[23], and many take pride in the fact that the remaining wildlife in Kenya today resides on their customary lands. Their long experience of living with wildlife has equipped them with extensive knowledge regarding wildlife behaviours and movements. Moreover, animals and people in Maasailand have learned effective ways to live with one another, developing techniques to live well within the ecosystem —what ecologists call niche construction. Learning how to 'live with' is a process of "enskilment," or the "fine-tuning of perception and action" through one's engagement with the world (Ingold 2000, 37). Other scholars refer to this process as LEK. The ethnographic component of this project aimed to learn from the Maasai's process of enskilment, or more simply, their LEK. I sought to learn from Maasai's close

playbacks), and learned a lot about lion behaviour when conducting ethnographic fieldwork within Maasai communities.

[23] Maasai have been present in what is now known as Maasailand, in southern Kenya and northern Tanzania, since they migrated from the Nile Valley between the 14th and 16th centuries, reaching their current region by the 17th or 18th century.

attention of lion movements, behaviours, and practices. I attempted to find the ways through which Maasai and lions relate to one another by uncovering the techniques they employ to avoid conflict and promote coexistence. I was also attuned to how Maasai interlocutors perceive lions; for instance, by noting how lions are discussed in conversations and the specific words used to qualify them.

To gather this knowledge, I conducted ten months of ethnographic fieldwork from January 2023 to October 2023 in two different ecosystems: the Maasai Mara in Narok county and Amboseli in Kajiado county. In the Maasai Mara, I was hosted in former group ranches known as Oloirien, Kimintet, and Koyaki[24]. In Amboseli, I was hosted in Ololorashi-Ogulului Group Ranch (OOGR). I was introduced to host families by Kenyan and international scholars who had previously worked in these areas. During a scoping trip in September 2022, I met with host families to discuss my research project and finalise suitable living arrangements. I also took the opportunity to introduce myself to community members in public spaces and to village leaders, seeking their permission to conduct research within their communities. Additionally, this trip allowed me to recruit a Maasai research assistant. The scoping trip was instrumental in establishing key collaborations and gaining a foundational understanding of local dynamics. It also served to officially confirm my field sites and to identify areas where lion hunting is most prevalent, as well as locations where the practice has been successfully abolished.

During the entirety of my fieldwork, I lived with host families in their homes, which enabled me to observe and participate in daily household activities. This also allowed me to quickly learn basic Maa language skills by engaging in every-day conversations. My host families, like many Maasai households, had domestic help from Tanzania who spoke only Kiswahili. This provided me with valuable opportunities to practice the language. Prior to fieldwork, I had taken Kiswahili language classes at SOAS to acquire basic conversational skills, and furthered my learning with more intensive language classes in Nairobi during my scoping trip in 2022.

Time was split between the two ecosystems. All host group ranches border important protected areas (PA) with significant lion populations. These two field sites were selected based on the research of Ontiri et al. (2019) which demonstrates that, due to differences in climate,

[24] The Maasai Mara is a vast ecosystem with several group ranches bordering the Maasai Mara National Reserve (MMNR), unlike the Amboseli National Park which is surrounded by only one group ranch. Since political structures (and thus relationship with conservation actors) differs across group ranches, it felt necessary to spend time in these different group ranches bordering the MMNR.

wealth, and access to compensation schemes, these two areas have diverging patterns of lion killing (more detail about field site selection in the following section). Moreover, conducting ethnographic research in two field sites provided the added benefit of enabling me to make comparisons and distinguish what appears to be 'Maasai' (or at least, what is typical of Siria Maasai, Purko Maasai, and Kisongo Maasai) and what is location/section specific.

I officially began fieldwork after confirming my field sites, obtaining ethical clearance, and recruiting two research assistants: a woman from the Maasai Mara, Jane, and a man from Amboseli, Dennis. Since Maasai society is defined by gender roles and responsibilities, with men and women occupying different social spaces, I felt it was necessary to have assistants of both genders. This enabled me to learn from their gendered perspectives and to navigate spaces in a culturally sensitive manner. I spent the first five months in the Maasai Mara and the final five months in Amboseli. In each field site, participant observation of daily life was conducted, with special attention given to how the Maasai inhabit their environment and live with other species. Participant observation was an informal means of developing rapport, learning and collecting information about daily life, community structure, attitudes towards conservation efforts, and interactions with lions. I participated in daily activities and helped with various livelihood practices. Since activities are often gendered, I partook in both women's and men's activities to get a well-rounded understanding of Maasai lifeworld. For instance, I helped women fetch water and firewood, build mud houses, and carry out household chores such as cooking, cleaning, and working in the *shamba*. I helped men look for lost cattle, attended *orpul* (slaughtering of cattle and feast, akin to a BBQ), and joined herders when grazing livestock. I went to church service on Sundays and attended market days where local livestock owners sell their cattle in nearby villages—these public events presented a good opportunity to meet various members of the community and become a friendly, familiar face. I also attended special events, including marriages, *harambees*, and *barazas*. Most importantly, my long-term presence within Maasai communities enabled me to learn about lion predation incidents and to gain a better understanding of when and how these occur, as well as how people respond to these attacks.

Before beginning interviews, I spent several weeks settling in my host communities, introducing myself to people, building trust, and identifying key informants. The process of building genuine, meaningful relationships shaped how data was generated, rather than following a rigid, pre-established research agenda. I conducted informal interviews during participant

observation, which helped define my research questions. Early on, my assistants and I walked from house to house to meet a varied group of people. Due to recent land subdivision, people have moved their households to their private parcels; this has led the traditional *enkang* settlement system to end and people to scatter across the landscape. We found that the best way to meet people, especially women, was to walk across the landscape and meet with them along the way or find them in/outside their homes. This was also an effective way for me to understand the geography of my field sites, similar to a transect walk. Often, during our walks, community members invited us to visit their household for chai or a meal. We accepted invitations with enthusiasm. It was a great opportunity to build trust and set up a date in the future for an interview. During these visits, I let hosts guide the conversation; it allowed for themes to emerge organically, which I then explored further with the interlocutor. It helped me understand conversation topics that are of interest to community members and to gain insight into each community members' personality.

After having built a rapport with community members, I began conducting interviews. Building on Whatmore and Hinchliffe (2010) and Fry (2024), the aim was to explore "vernacular ethologies," or localised ways of knowing animal life. My objective was to gain insight into the multiple ways in which Maasai feel about, know, and interact with lions. I was particularly interested in whether people—elders especially due to their longer experience interacting with lions—had observed changes in lion behaviour and to what they attributed those changes. Prior to beginning interviews, I sat down with my two research assistants to discuss interview themes and questions. Together, we translated the questions into Maa, ensuring they conveyed key ideas correctly. Interview questions focused on themes of human-wildlife conflict, conservation, and land and resource use (see Appendix 1 and 2). The aim was to gather qualitative data on people's experiences of lion behaviour through time and space, their perspectives on conservation, their changing livelihoods and governance of their social-ecological system. I used a semi-structured interview format: I prepared a general framework of questions but maintained the flexibility to explore topics in greater depth based on participants' responses. This approach allowed interviews to flow more like conversations, as I did not adhere to a specific order, tried to create ease of communication, and sought to capture nuance through relevant follow-up questions. My research questions evolved over time, as I gained more knowledge about lion hunting and context-specific detail, opening up new avenues of inquiry.

The sampling strategy combined purposive and non-purposive approaches. Initially, participants were recruited through snowball sampling—for example, individuals who: invited us into their homes, were introduced by other interlocutors, or were referred to us because of their history of lion hunting or involvement in conservation. Early interviews were conducted with community members who welcomed us to their boma, which helped initiate the process; often, one interview led to another as we became more integrated into community life. However, to avoid sampling bias commonly associated with snowball sampling, after about a month of casual meetings, we transitioned to non-purposive sampling by approaching every third house in settlement clusters at each site (skipping households we had already interviewed). To ensure gender balance, we alternated between male and female respondents when possible, adjusting our selection to maintain equal gender representation when faced with multiple potential participants. In the Mara, we conducted a total of 121 semi-formal interviews with local community members, key informants, herders, and conservation practitioners (both local and international). In Amboseli, we collected a total of 84 interviews with the same type of participants. In addition, I carried out eight interviews with conservationists working for NGOs, conservancies and government agencies in Maasailand, recruited through purposive sampling based on their institutional roles and snowball referrals from earlier interlocutors[25]. These conversations focused on their perspectives on lion conservation, human–lion conflict, and the governance of Maasai landscapes. To protect my interlocutors' privacy, their names in this thesis have been anonymised using pseudonyms, with the exception of my research assistants who have consented to be named. I reference participants' general age-grade, gender, and location, along with their interview label[26].

Before beginning each interview, my assistants and I introduced ourselves, discussed consent, and engaged in informal chatting to establish trust and put participants at ease. I found that breaking the ice by asking questions about familial relations and clan affiliation was particularly effective. When Maasai meet each other, they typically share information on kin, clan, and age-set; hence, it felt natural to begin with these topics. In return, I was often asked about my own clan and family ties, and I explained that I do not belong to a clan, as this is not practiced

[25]I initially struggled to get hold of conservationists, both because of their heavy workloads and limited availability and, at times, a degree of wariness toward engaging with early-career researchers. After multiple unanswered emails, my assistant Dennis suggested that we approach them "the Kenyan way," by visiting their camps and offices in person, which ultimately proved far more effective.

[26] 'CI' refers to Community Informant, 'CP' refers to Conservation Practitioner, and 'FG' refers to Focus Group.

where I come from in Canada. This often elicited surprise or curiosity from participants. Many were also surprised to learn that I only have one sibling and no children of my own, which is unusual from the Maasai perspective, where large families are highly valued. Beyond formality, learning about kin and clan relations helped me immerse myself in Maasai social life. Understanding kin relations enabled me to trace connections between community members and provided insights into social dynamics, including class stratification, political affiliation, and the distribution of social and economic resources.

To begin interviews, participants were often asked to recall the most recent incident whereby a predator attacked the family's herd, and how they felt and responded during and after the incident. If the most recent incident recalled was not instigated by a lion (e.g. a hyena), I asked a follow up question about the most recent lion predation incident on their herd. This allowed me to get a sense of predation rates in both field sites and to gain knowledge on when and where attacks occur. Questions about predation would often open up a conversation about lion behaviour (i.e. the techniques lions use for hunting livestock both inside and outside the *boma*; their responses to predation prevention measures; and the perceived reasons for preying on livestock). Participants were also asked to discuss conservation actors' response (or lack thereof) to lion predation incidents (i.e. how organisations and institutions respond to attacks and prevent future ones from occurring). I gained valuable insights into the politics of compensation schemes and people's attitudes towards conservation actors—those responsible for responding to human-wildlife conflict incidents. During these conversations, I was attuned to the ways people talked about lions; the words they chose to refer to them and to express feelings about them.

I aimed to determine whether the Maasai observed changes in lion behaviour over time and across space, but I avoided asking direct questions to prevent eliciting biased responses. Instead, I wanted people to mention any perceived changes in lion behaviour on their own accord if they felt it was important. As such, to incite more genuine answers, I asked participants whether they had noticed any changes in their environment since they were of Moran age (women tend to associate with the age of their husbands). Participants proceeded to mention environmental changes that were most significant to them. Participants raised a multitude of topics, including changes in rainfall patterns, increased droughts, changes in grass density, fluctuations in wildlife numbers, increased land fragmentation, and changes in animal behaviour and numbers. When participants mentioned having noticed changes in lion behaviour, I would ask them to elaborate. I asked them

to what they attribute this change. I assessed whether reported changes were linked to specific conservation interventions, including the ban on hunting, compensation schemes, and increased predator monitoring. I also asked them to define benefits and costs they feel are attributed to conservation policies, and how they might be improved.

During the interview process, my aim was to reach saturation in understanding a particular theme (Bryman 2016, 305), which occurs when consensus around one or more perspectives emerges, allowing you to make sense of the information, and when collecting additional data produces little new information or understanding. Since interviews provided a deep understanding of Maasai's relationship with lions and their perception of lion behaviour, this knowledge was used to inform the ethological component of the project. The ethological component enabled me to identify patterns between Maasai observations and experiences of lions and their behavioural ecology.

I used audio playback experiments to assess how lions respond to different human cues, providing a window into how lions might perceive the Maasai communities whose land they share. Playback experiments are used to study animal communication and behaviour by playing recorded sounds or signals to animals and observing their responses. These experiments provide a means of directly testing the behavioural responses of animals (Durant 2000) and have been employed in wildlife studies to better understand how animals respond to the sounds of humans (McComb et al. 2014). More broadly, playbacks help deepen our understanding of animal cognition and perception, including social relationships and leadership within groups (McComb et al. 2001), ecological knowledge acquisition (McComb et al. 2011), and experiences of trauma (Shannon et al. 2013). Although audio playback is one of several behavioural research methods (e.g., GPS tracking or dummy models), it was particularly suited for testing lion responses to human presence scenarios relevant to cattle grazing and Maasai lion hunting. Moreover, playbacks offer a safe experimental method to study how lions perceive humans, given the risks involved in direct human-lion encounters.

This was an effort to create a dialogue between Maasai knowledge of lions and lions' behaviour. The insights shared by my Maasai interlocutors on lion behaviour informed the sounds chosen for the playback study. As I will discuss in Chapter 4 and 5, the fact that people mentioned that lions have become less shy and less easily disturbed informed our decision to test the sounds of cattle being herded, to see how lions respond to everyday human-livestock presence. We were

also told that lions have become bolder with increasing time since they were last hunted, so we decided to also test sounds of warriors on a lion hunt. Since *olamayio* had been predominantly abolished in the northern region of the Mara ecosystem for some time, but was recently practiced in the Amboseli ecosystem, we would be able to see whether there is a correlation between hunting and response to hunting sounds. A crested francolin bird call was selected as a control sound, as it is a widespread and familiar loud sound heard across the study area, that should be perceived as neutral to the lions. All data was then compared between the two field sites.

I returned to the field in June 2024—this time wearing the hat of an ethologist—to begin audio playback experiments with Dennis, one of my two research assistants. There was quite a bit of preparation involved, including gathering the necessary equipment (i.e. shotgun microphone, speaker, and camcorder) and organising the logistics (i.e. recording and editing sounds, hiring the right vehicle, creating ethograms, acquiring ethical clearance from the Zoological Society of London and the permission from Kenya' Wildlife Research Training Institute).

A total of eight sets of lion playbacks of two experimental sounds (one of cowbells + herders' voices and a second one of Maasai *olamayio* hunting calls known as *Aiserr* in Maa) and eight sets of control sound (crested francolin territorial calls) were conducted in the two ecosystems over a five-month period between June 2024 and January 2025. The ultimate objective of these playbacks was to test whether avoidance of human sounds in lions is associated with past experience of hunting by humans. This would then allow me to predict that lions who avoid humans more are less likely to come into contact with people, decreasing the risk of livestock depredation.

During these experiments, I recalled the ethologists who have shaped my thinking: Despret, Lestel, Strum. I wondered how I might approach my studies of lions with "embodied empathy," or develop a "friendship" with lions, as Lestel suggests. It is, of course, not so simple to involve one's own body in lion research as it might be with primates or domestic cats. The playbacks, for everyone's safety, were conducted from within the protective shell of a vehicle. Yet, I do not pretend that our presence—our vehicle, Dennis and myself—was neutral, or invisible, or "like a rock." The lions rarely failed to acknowledge us: sometimes they watched us with a measured curiosity, sometimes with what could only be described as resistance, a refusal to be watched. We never failed to be curious about how they were doing, feeling, and thinking, and how they felt about our presence. And th e relationship was never one-sided. Dennis and I were transformed by

this experience, quite physically! While we did not adopt the diet of the lion, we shared their daily rhythms and their environment—rising at four or five in the morning, waiting through the heat of the day, staying until the last light faded and the lions moved again. In these long hours, a correspondence emerged: not a merging, but a mutual becoming, in which our research became less an act of observation and more a practice of relation. On rainy days and during the drought, we found ourselves drawn into their discomfort, sensing—if only in part—their endurance and vulnerability.

Figure 1 Dennis and I recording sounds of cattle grazing for audio playback experiments.

As I will discuss in Chapter 8, finding lions in the wild was more challenging than initially expected. I sought the help of experts: herders, rangers, and game drivers. With time, my assistant and I built a network of 'lion watchers' who would call us upon sighting lions. Finding them was not the only issue. The unpredictable weather, including torrential rains that turned roads into

impassable mud pits (see Figure X) and made lions practically invisible in the tall grass, proved to be a significant challenge. This meant added time, fuel and energy spent on looking for lions on which to conduct playback experiments.

Figure 2 Vehicle stuck in the mud in the Maasai Mara, exemplifying our struggles conducting playbacks.

Nevertheless, the process of conducting the ethological surveys was in itself a unique anthropological experience; I gained valuable insights into how people engage with lions and the knowledge they possess about them. Luckily, my assistant, Dennis, was able to help on both the ethnological and ethological components of the research. This allowed for continuity between methodologies. We learned together about lion behaviour and were able to have engaging conversations about how what we were discovering during playback experiments might relate to what our interlocutors had shared with us over the preceding months.

Finally, implementing the chosen methodological framework proved challenging. Embarking on this transdisciplinary project meant compressing what felt like two distinct doctoral projects into the constraints of a single PhD thesis's funding and timeline. The project was costly

and time-consuming due to the integration of two methodologies from traditionally distinct disciplines and the need to conduct fieldwork in two different locations. Coordinating ethnographic fieldwork followed by months of ethological surveys, with only my research assistant and myself, presented a formidable challenge. Additionally, explaining this approach to funders and conservationists was difficult, often resulting in insufficient support. However, the encouragement and interest from my Maasai interlocutors provided the essential momentum to persevere, which was ultimately the most crucial support I could receive.

Field Sites

This research took place in two ecosystems within Kenya's Maasailand: the Maasai Mara and Amboseli. Both areas are the home of the Maasai pastoralists. As discussed in the previous chapter, Maasai pastoralists were relocated south of the White Highlands during the colonial era, which is why these regions are predominantly Maasai today. These locations were selected due to recent accounts of lion hunting and/or poisoning near Amboseli National Park (Dolrenry 2013; Goldman et al. 2013; Muriuki et al. 2017; Ontiri et al. 2019). Meanwhile, fewer instances of lion killing are reported in the Mara ecosystem (Ontiri et al. 2019). This difference in the relationship with lions facilitated a comparative analysis of lions' behaviour in the two ecosystems. This regional variation in human–lion relation facilitated a comparative analysis of lions' behaviour in the two ecosystems.

In the Mara ecosystem, I conducted research in former Koyaki (Purko section[27]), Kimintet and Oloirien (Siria section) group ranches, all of which border the Maasai Mara National Reserve (MMNR). The MMNR is a protected area (PA) in Narok County that spans more than 1,500 km^2. The MMNR borders the Serengeti National Park and surrounding PAs in Tanzania, forming a protected area complex of more than 26,000 km^2. Together, these PAs harbour one of the largest lion populations in the world, and provide a sanctuary for other species including leopards, cheetahs, and elephants. This area also hosts the Great Migration of over two million wildebeest, zebras, and other herbivores. The Maasai Mara offers a unique opportunity to study wildlife conservation because it is intimately associated with a 'wild Africa' imaginary, making the region and its inhabitants a target for conservation interventions (Garland 2008; Goldman 2013). In fact,

[27] There are nine major Maasai sub-groups based on *iloshon*, or region, across Kenya and Tanzania: Ilkisongo, Purko, Kaptei, Siria, Matapato, Ilkankere, Ildamat, Iloodo-kilani, Ilmoitanik.

the MMNR is one of the highest-earning wildlife tourist destinations in East Africa, generating $28 million USD just in park fees in the first nine months of the 2023/2024 financial year alone (Ministry of Tourism and Wildlife 2025).

The MMNR was created in 1948 during the colonial era and managed by the British colonial government (Lamprey and Reid 2004). In 1961, its management was relegated to the then district council (now county government of Narok)[28], formerly known as the African District Council of Narok. The county council was tasked with managing the reserve on behalf of the community, meaning revenues generated from the park were redistributed to the community through group ranch committees. Later, in 1995, the management of the reserve was split between Trans-Mara District and Narok County councils[29]. The Siria Maasai of Trans-Mara District took over the management of the western part of the reserve, while the Pruko Maasai took over the eastern section—the Mara river forms a natural boundary between the two sections. Since 2001, the Mara Triangle, which was formerly managed by Trans-Mara District, has been administered by a private management company, The Mara Conservancy (MC), on behalf of Narok County. Surrounding the MMNR are 14 privately owned conservancies[30] which create a buffer zone between the national reserve and Maasai communities. My interlocutors in Trans-Mara have raised concerns about revenue theft by the county government. While the MC and county are supposed to return 19% of its revenues to local communities, people have not seen the expected benefits from the revenue-sharing agreement.

In the Amboseli ecosystem, fieldwork was conducted in former Ololorashi/Olgulului group ranch (OOGR), which surrounds Amboseli National Park (ANP). Located in Kajiado County at

[28] In 2010, Kenya adopted a new Constitution which brought significant changes to the country's governance structure. Prior, the country was divided into 8 provinces, or administrative divisions, which were further divided into districts, divisions, locations and sub-locations. The 2010 Constitution replaced this system with 47 new counties, with the objective of decentralising power, bringing governance close to the people, and promote equitable development by allowing counties to have greater decision-making power and better political representation (Kenya Ministry of Devolution n.d.).

[29] In 1995, Narok County Council was divided in two, creating Trans-Mara County Council (TMCC) out of the western part of the former county. The county's population was growing quickly and communities asked their government for public services to come closer to them. The split enabled more efficient management of the region: new infrastructure, including police, district magistrate court, ministry of education, cereal board, a district hospital, were built in its new capital, Kilgoris. This change in governance structure split the management of the MMNR between the two councils.

[30] Not to confuse conservancy with a national reserve, which is typically owned and managed by the government or local councils. Conservancies are privately owned by community members who own land within the conservancy. These are usually managed in partnership with tourism partners, with revenues supporting both local livelihoods and conservation efforts.

the base of Mount Kilimanjaro in southern Kenya, ANP is a relatively small PA, covering 390 km^2. Despite its modest size, the park brought in $10.8 million USD in gate fees in 2024 from approximately 266,000 visitors (Janet 2024). Amboseli is connected to Tsavo National Park (located 16 km to the southwest) by various conservancies, wildlife corridors, and privately owned lands. The greater Amboseli-Tsavo ecosystem stretches across 9000 km^2 and supports a diverse assemblage of African savanna mammals.

Figure 3 Map of field sites: Maasai Mara and Amboseli.

Amboseli was designated a reserve in 1906 under British colonial rule. The aim was to protect wildlife from poaching and to introduce (legal) hunting and tourism. In 1948, two years after the creation of the Kenyan national park system, Amboseli reserve was administered by Kenya National Park Trustees (who were primarily British settlers and non-African individuals) on behalf of Kajiado County Council. In 1961, the reserve was handed over to the county council,

two years before Kenya's independence. It wasn't until 1974 that Amboseli was officially declared a national park[31] by President Jomo Kenyatta, placing it under the management of the Kenya Wildlife Service (KWS). Many community members blame a former Maasai MP for Kajiado South, Stanley Oloitiptip, for 'giving' the Maasai reserve to the national government for politically motivated reasons. Others note this takeover was due to a lack of investment by the county, leading to a rundown reserve (Western 2023). Nearly 50 years later, in August 2023, President William Ruto announced that the management of ANP would be returned to the county government. The transfer was formally completed following cabinet approval in July 2025. Kajiado County now oversees day-to-day operations, while the KWS retains national oversight for wildlife protection.

To summarise, both the MMNR and ANP share similar histories as products of British colonialism and sites of political controversy both before and after Kenya's independence. It is also important to note that both the Mara and Amboseli landscapes are becoming increasingly fragmented following the most recent wave of subdivision after the passage of the Community Land Act (CLA) (see Santini 2025). As a result of group ranch subdivisions in both of my field sites, many Maasai members received individual title deeds and began settling on their newly allocated parcels of land[32]. At the time of research, community members were building permanent homes, erecting fences, and planting cash crops, while others sold their parcels to investors eager to develop the area. This shift has accelerated conversion of rangeland to agriculture around both parks, though both ecosystems still support thousands of cattle, with each PA having its own grazing policy (ranging from zero tolerance to rotational grazing). The ongoing conversion of grazing land to agriculture has further exacerbated competition over resources and has led to conflict between people and wildlife. Regulatory bodies such as the National Environment Management Authority of Kenya (NEMA) are struggling to keep pace with these rapid land-use changes. In response, conservation stakeholders have tried to establish new conservancies to offset the environmental impacts of subdivision (Santini 2025), though not all Maasai living in those areas stand to benefit from payment for ecosystem services schemes as not all received title deeds at the time of subdivision[33].

[31] Note the difference between a reserve, which is managed by local counties, and a national park, which are state-owned and managed by the KWS, a parastatal organisation under the Ministry of Tourism and Wildlife.
[32] See Galaty (1992, 1994) for comprehensive histories of group ranches and their subdivision processes in Kenya.
[33] To benefit from conservancy revenue or Payment for Ecosystem Services (PES) schemes, one had to be a registered member of the group ranch at the time of subdivision. Many Maasai community members, for various reasons—including administrative exclusions, absence, or failure to meet registration criteria—were not officially registered,

Positionality & Ethical Standards

Throughout this research, I remained aware of my positionality and the need to engage meaningfully with participants, particularly given the context of working with a community that is both heavily researched and situated within a post-colonial setting. As a white, female researcher and outsider, at times having to collaborate with conservation organisations, I was conscious of the complex power dynamics regarding my presence. Moreover, Maasai communities have been subject to extensive academic and NGO attention, often resulting in 'over-research' fatigue and a sense of obligation to participate, rooted in broader historical and structural imbalances. As outlined in Chapter 1, the Maasai have experienced political and economic marginalisation, and their pastoralist practices have long been mischaracterised as inefficient or destructive by colonial and postcolonial policymakers (Homewood et al. 2009). Conservation itself is entangled with this colonial legacy in this region, having been associated with violence, dispossession, and exclusion from ancestral lands. Entering these communities to ask questions about lion conservation risked reinforcing pejorative narratives or being associated with projects that may have negatively impacted local wellbeing.

To address these power imbalances, I committed several months in the field before beginning interviews to build trust and allowing community members to become familiar with my presence and intentions. Following the advice of my research assistant Dennis, I purchased cows and *entare* in both locations to organise *orpul* as a culturally-sensitive and locally relevant way to build rapport with community members and to become known. I also purchased rice, tea, and sugar to supplement the meals, ensuring enough food for men, women, and children to partake in the feast. My assistant and I spread word of these events weeks in advance to encourage broad participation. While I did not provide gifts to every interview participant, I contributed donations when invited to attend *harambees*, and shared food items, such as sugar, tea, fruits and sweets, with my host families and key informants. These interactions provided valuable opportunities to foster transparent dialogue about my research aims and to build trust as the project evolved.

Informed consent was treated as an ongoing, dialogic process: before any data collection, I ensured that participants understood the research aims, intended uses, and who may access their

even though they were part of the broader community. As a result, they did not receive individual parcels and are therefore excluded from direct conservancy benefits.

data, emphasising that participation is entirely voluntary and carries no repercussions. Consent was obtained through verbal agreements, ensuring that only those who provided informed consent participated in this research. Participants were clearly informed that their involvement was entirely voluntary, that there would be no negative consequences for choosing not to participate, and that they could withdraw their consent at any time.

Given the sensitive nature of topics such as lion hunting and poisoning—which are sometimes openly discussed and even celebrated within Maasai communities (Hazzah et al. 2017; Ontiri et al. 2019)—there is a risk that participants may disclose illegal activities. Such disclosures could have serious repercussions, including community ostracism or legal consequences, as the killing of threatened species is subject to severe penalties under Kenyan law. To mitigate these risks, all personally identifiable data was pseudonymised and securely stored, with field notes and code descriptors kept separately. I approached sensitive topics gradually, only raising them after trust has been established and always in general terms rather than asking about individual involvement.

This research received ethical approval from UCL's Research Ethics Committee (22713/001). For the ethological component of this research, I obtained ethical clearance from the Zoological Society of London's Ethics Committee (ZPD Ref Code IOZ178), ensuring that the study adhered to high standards of animal welfare and assessed potential risks to both the animals and researchers involved. I also received country-specific permissions, including a research permit from the Kenyan government (through the National Commission for Science, Technology and Innovation) and ethical approval from Kenya's Wildlife Research and Training Institute to conduct research on wildlife. To conduct research in Maasai communities, I obtained the consent of the Maasai community leaders, including respected elders, county government officials (i.e. Members of the County Assembly), and area chiefs (national government position).

PART II

ON COWS

Chapter 3: On Cows and (More-than-Human) Kinship

The pastoral ~~Saami~~ [Maasai], along with their ethnographer, appear to have ~~reindeer~~ [cows] on the brain, an affliction that will be familiar to anyone who has worked in a ~~reindeer~~ [cattle]-herding society.

— Tim Ingold (2013)

One warm, hazy evening, my assistant and I drove to a nearby *manyatta* to talk to a man who had witnessed a lion attack on his herd just days before. It was a prime opportunity to get fresh insights into the dynamics of lion predation—how and why they attack—but also into how people respond to such attacks.

Earlier that week, my assistant, Dennis, posted a photo on his WhatsApp story of mating lions we were observing through playback experiments. Dennis and I always enjoyed taking photos of lions after our experiments. Dennis almost always shared them on social media. Ole Pesi, the owner of the recently predated cow, left a comment on Dennis's post: "That stupid lion attacked my cow!" Intrigued, I asked Dennis, "How does he know it was one of *these* lions that attacked his cows." "He just knows, based on the grazing route his herd uses" Dennis responded matter-of-factly. This piqued my curiosity.

We gave Ole Pesi a call and organised a meeting with his herder, who was taking care of the herd when it got attacked. We wanted to get more information on the incident which had occurred just a couple of days before our visit. We arrived at Ole Pesi's boma as the cows were coming back from a day of grazing. The herder (*olchukut*), an adolescent boy from Tanzania[34], was inside the *enkang* already. Ole Pesi, the livestock owner (sing. *olopeny/* plur. *ilopeny*) was inside, too, welcoming the cows back to their home. It is common practice for the *ilopeny* to wait in their *enkang* every evening to greet cattle upon their arrival—just as they stand in the *enkang* in the morning to see their cattle off. I, too, witnessed and participated in this daily routine, ankles deep in dung.

When the herd returns home, a cacophony of sound and movement erupts. Dozens of cows —sometimes over a hundred—jostle to enter through the small opening of the enclosure. Mother

[34] I delve deeper into the herder-herd owner relation in Chapter 7 and the political economy of herding employment.

cows bellow to attract their hungry calves, who have waited all day for milk. The calves have only a few minutes to suckle before Maasai women and children begin milking the cows for the family's evening meal. Meanwhile, the *olopeny* begins his evening routine (further discussion of herd care routines appears in Chapter 6). He assesses whether the herd has had sufficient food and water while they were out grazing. As twilight descends and the air cools, I often marvelled at how the *ilopeny* can discern their animals in the gathering darkness. Based on the cows' appearance and behaviour, the *ilopeny* might direct their herders to graze in a different area the following day where they suspect the grass is taller. *Ilopeny* also inspect their cows for signs of disease and ticks to determine when they will receive their next treatment of *dawa*.

Ole Pesi showed us the cow that had been attacked. Its wounds were covered with a blue substance. I asked Dennis what it was, and he explained that it was antibiotics to help heal the injuries. The lion had leaped onto the cow, wrapping its paws around the cow's neck and biting down on it—the blue ointment coated those deep bite wounds. As we chatted with Ole Pesi and the herder, Dennis suddenly chuckled and warned: "Watch out, there's a cow behind you. It's very friendly!" It was sniffing me curiously, and Dennis, despite our months of fieldwork together and my repeated expressions of fondness for cows, still teased me about being uncomfortable around them—a common Maasai conception that *wazungu* dislike or feel uneasy around cows[35]. As a Maasai himself, Dennis has a deep affection for cows. He walked towards the friendly cow and began massaging it as we proceeded with our conversation.

Interrupting my questioning about the attack on the wounded cow, which was standing somewhere further in the *enkang*, Ole Pesi invited me to massage his friendly cow's udder. I thought it was a strange request, but I did as I was told. I tried to mimic his movements. "See, she is raising her tail," he exclaimed. "What does it mean?" I asked. "It means she likes it," he responded. "I love my cow so much. Why must a lion come and take it from me? I will do whatever it takes to protect it!" He continued, "We stay with the cows as a family. I protect them the same way I protect my family."

Addressing a question that had long intrigued me, I asked, "If cows are like family, how do you reconcile selling them? Would you sell a member of your family?" Ole Pesi responded thoughtfully, "When there's a financial need, we sell a cow to cover that need. And you try to sell an older cow or a castrated bull that has matured and it has served its purpose." He then recalled a

[35] This is often linked to the fact that some tourists complain when they see livestock in protected areas.

time when he spent nine months with his cows in Tanzania during a drought. “I did not see my kids and wives for those nine months,” a necessary commitment to sustain both his animal and human family. He continued, “We sell cows to take care of the family. We sell cows and *entare* to take care of other cows and other *entare*. If you sell cows to take care of the family, that cow has served its purpose. We have needs and we don’t have jobs, so these cows take care of our needs.” I argue in this chapter that this reciprocal entanglement of care, where humans tend to their cows, and in turn, the cows sustain and nurture their human family, is the essence of making kin.

On Making Kin, Becoming-With, and Constructing Niches

Throughout my time with the Maasai, I gained profound insights into their bond with their sheep, goats, and especially their cows[36]—a relationship so meaningful and complex that even after a year of fieldwork, I cannot claim to fully comprehend it. I found this relationship particularly difficult to fully grasp from my own ontological vantage point, as no bond compares in my realm of experience. Cows occupy a central place in the Maasai lifeworld, deeply loved and revered. In fact, one could argue that cows *are* life: the word for life (*enkishui*) is almost the same as the word for cows (*inkishu*). When I came to realise this, Dennis exclaimed, “That is how much Maasai value cows!” Yet, such intimate animal-human relations also entail (necessary) violence, control, and detachment—a contradiction making it all the more difficult for me to comprehend.

I observed instances of forceful livestock handling: herders striking cattle with sticks and occasionally binding their legs with rope to compel milking. During market days, when Maasai from diverse villages converged to trade cattle, I noticed an apparent emotional detachment and transactional attitude when selling cows. This paradox in their relationship with livestock defied simple explanation. How can I make sense of this relationship? Dennis often drew parallels between Maasai relations with cows and *wazungu*’s relationships with their dogs. Are these relationships really comparable? The thought of selling my dog or treating it harshly was

[36] Cattle hold a special place within the realm of Maasai domesticated animals. Smallstock (sheep and goats) have a more “facile commodification” (Hoag 2018), meaning they are more readily sold than cattle. They are also more readily slaughtered, therefore they are most often the primary sources of meat. The Maasai prefer their cattle to be alive and productive, rather than eaten or sold. Cattle meat is reserved for very special occasions such as circumcisions, marriages, or child births, only if the family in question can afford it (cattle slaughtering remains a luxury many cannot afford).

unimaginable to me. Perhaps they are not fully the same, but what I became sure about is that both my dog and Maasai cows are *kin*.

I came to best understand this relationship through the lens of kinship. As evidenced in the vignette above, Maasai families are entangled in reciprocal relations of care with their cattle, each sustaining the other in a complex web of economic, social, and emotional ties. People make their animals live and die, and also live and die by them—it is a form of collaboration through life. I draw inspiration from canonical scholars who have explored kinship within multispecies relations, including Deborah Bird Rose (1992; 2011) and Donna Haraway (2008; 2016). Building on ethnographic studies of human-animal kinship, such as Rebecca Cassidy's (2002) work on horse-human relationships, Loretta Cormier's (2003) research on human-monkey kinship, Harlan Weaver's (2015) exploration of human-dog bonds, and Radhika Govindrajan's (2018) work on multispecies relatedness in the Himalayas, I propose to investigate Maasai-cattle relations through the lens of kinship. This approach aims to contribute to the growing body of scholarship that extends kinship beyond human-only frameworks, emphasising the complex entanglements and co-becoming of humans and cattle within Maasai lifeworld.

Why kinship? Because I was left unsatisfied with the portrayal of cattle as mere economic assets or cultural icons, which fails to capture the complex relationship between the Maasai and their herds. Firstly, this is simply not how many of my Maasai interlocutors feel towards their cows. But more importantly, while cattle undeniably have economic value, reducing them to mere assets or commodities strips away their agency and objectifies them. Examining Maasai-cattle relations through the lens of kinship acknowledges the affective, reciprocal nature of this relationship, intertwining human lives with those of their livestock through mutual care and responsibility, for better or worse.

Cattle keeping in Africa has long been misunderstood by colonial administrators, academics, as well as conservation and development experts who, viewing these practices through a Western economic lens, deemed pastoralists' strong attachment to cattle and tendency to accumulate livestock as irrational[37]. Consequently, pastoralism was characterised as an obstacle to economic growth and development, while also being blamed for causing land degradation

[37] See Melville Herskovits' (1926) cattle complex theory, but also many other scholars that present desertification in Africa as linked to livestock population densities and pastoralists' irrationality, including Le Houerou (1977), Baker (1973), Kellogg and Schneider (1977), and Darkoh (1989).

(Brockington and Homewood 2001; Ferguson 1985; Homewood and Rodgers 1988). The misconception that "pastoralists overstock, overgraze, and damage their range" has been used to justify their displacement in favour of exclusive wildlife conservation areas, predicated on the assumption that "wildlife exist in harmony with their surroundings" (Homewood and Rodgers 1988, 111). This narrative of environmental misuse and deterioration through pastoralist activities continues to influence a variety of land-use development policies, despite growing evidence to the contrary. Research has refuted these misconceptions, demonstrating that nomadic pastoralism is, in fact, the most suitable and sustainable use of semi-arid areas (Behnke and Scoones 1993; Homewood and Rodgers 1988; Kimani and Pickard 1998). This form of land use is particularly suited to the unpredictable environments of arid and semi-arid regions, where its mobility enables efficient use of scarce, dispersed resources.

Anthropologists have since then complicated the notion of cattle as commodities for market exchange (Comaroff and Comaroff 1990; Ferguson 1985; Hoag 2018; Hutchinson 1992; Piot 1991). In "The Bovine Mystique" (1985), James Ferguson addresses herdsmen's reticence to sell cattle by proposing an alternative interpretation of livestock keeping that challenges conventional economic and utilitarian interpretations of livestock practices often adopted by development professionals[38]. He argues that livestock constitute a special category of property, distinct from and not freely interchangeable with cash. Ferguson contends that the rules governing livestock rest in a broader "cultural" order, necessitating a focus on interconnected clusters of social and economic factors when observing livestock practices. The reluctance of herdsmen to sell cattle is not due to market failures or lack of access, as economists often assume. Instead, it forms part of a complex social and economic system Ferguson terms the "bovine mystique." While Ferguson's work advances our understanding of the herdsman-cattle relationship by emphasising broader social processes and breaking away from cattle as mere economic assets, his approach still largely views livestock as objects rather than agents in the relationship. While it is true that cattle embody prestige, wealth, and social identity, I argue that the Maasai-cattle relationship runs far deeper, encompassing *sympoiesis*.

[38] Colonial governments across Africa frequently compelled pastoralist communities to integrate into the capitalist market economy through policies such as land privatisation and cattle ranching, as part of broader efforts to impose Western notions of modernisation and development. These projects often failed due to a fundamental misunderstanding of African livestock practices and inadequate theoretical frameworks guiding the research (Bassett 2009; Ferguson 1985; Galaty 1994).

In *Staying with the Trouble: Making Kin in the Chthulucene*[39] (2016, 102) Haraway develops the idea to "make kin symchthonically, sympoetically." Her term "sympoiesis" (from Greek *sún*, together, and *poíēsis*, production) means "making-with" or "creating together," and "symchthonic" (also from Greek *sún* and *chthṓn* meaning earth, ground, or soil) emphasises the rootedness and earth-boundness of our relations. This delightfully dense Harawayian figuration translates to the creative and responsible act of forming co-constitutive relationships with all beings, grounded in our shared earthly existence. Expanding on this idea of togetherness and situatedness, Haraway calls attention to our capacity and imperative to forge kinship bonds beyond traditional genealogical or ancestral ties, transcending conventional familial structures and even species boundaries. In precarious times—times of trouble—Haraway encourages us to "make kin in lines of inventive connection as a practice of learning to live and die well with each other in a thick present" (*Ibid*., 1). In these times of urgent ecological reconfiguration, learning about Maasai's multispecies kin-making practices might offer us generative pathways for cultivating a more-than-human worlding that challenges anthropocentric notions of care and kinship.

Haraway's work rests on the inseparability between thinking-with and being-with. In *When Species Meet* (2008), inspired by the work of great tentacular thinkers such as Vincianne Despret, Isabelle Stengers, and Anna Tsing, Haraway explores human-companion species relations and makes the case that to be human should be understood as a multispecies relationship. Haraway develops the concept of "becoming-with"—a process where beings mutually shape each other during encounters. She emphasises that "to be one is always to *become with* many," highlighting the multitude of symbiotic relationships within and between beings (2008, 4). In this vein, the Maasai don't just think about their cows; they think-with them and become-with them; and both are shaped by these odd kin-making practices.

Among the Maasai, mind and bodies—human and cattle—are co-constituted through a continuous exchange of care, substance, and meaning. Maasai cattle carry names that signify their entangled social lives—markers of transactions, gifts, reciprocal exchanges, and ties of friendship, marriage, or borrowed kin (Galaty 1989). These living beings become active participants and

[39] "Chthulucene" may seem like a daunting, confusing word. It is a concept that Haraway creates to challenge the concept of the Anthropocene, which she argues is too focused on humans, too grounded in Western philosophy. She draws inspiration from the *Pimoa cthulhu* spider. The tentacular and webby nature of the spider is a better metaphor and creates space for the "ongoing multispecies stories and practices of becoming-with" (55). In short, Chthulucene is part of Haraway's broader call for new ways of relating to the earth and its inhabitants in times of ecological crisis.

ongoing reminders within webs of social contracts, embodying relations that resist separation between the social and the material, the human and more-than-human. Clan identity is quite literally etched onto the cattle's hide, each mark a tactile sign of lineage and belonging. Yet this inscription runs both ways: as cattle bear the signs of their humans, so too do they inscribe their substance into the bodies of their people. The milk feeds children, stretching bone and memory. Consuming meat on special occasions weaves cattle's vitality into human muscle and bone, perpetuating cycles of nourishment that join bodies across species lines. Nothing nourishes like the cow's flesh, is what I learned from my hosts in the Mara and Amboseli. "When Maasai children return from boarding school, we give them soup," my host Ben explained. When the Maasai slaughter an animal in *Orpul*, they set aside certain parts to make a soup with medicinal roots, producing a rich, fatty substance similar to bone broth. "The soup purges the toxins from non-Maasai foods they ate in boarding school and gives them energy." The cattle's body has healing properties, too. "We will slaughter a cow for mother because she is sick," Dennis told me. A Maasai body is not simply human, but a living archive of cow; to be Maasai is to become-with cattle.

But isn't controlling and consuming kin cruel? As Govindrajan (2015; 2018) reminds us, kindred intimacies are sites of both care and violence. The Maasai's dependence on the lives and deaths of their animals reveals a complex relational ethic. Love and care are necessary conditions for maintaining healthy cows, which in turn sustain human families through milk, meat, and economic means. Love for the cow, Govindrajan (2021, 202) finds, is manifested in a willingness to labour for them: "it was precisely their willingness to engage in risky, violent labour that revealed the depth of their love for the cow, that made their love sincere and authentic" (Govindrajan 2021, 202). This thesis is all about the labour Maasai devote to their cows: from protecting them against hungry lions (Chapter 4 and 5), to developing their own embodied language for ease of collaboration (Chapter 6), and sacrificing personal comfort to lead them to nourishing pastures (Chapter 7).

Yet, love is also selfishly motivated, as humans ultimately benefit from the companionship and sustenance provided by their animals, just as cows benefit from the protection and care from their human custodians. Govindrajan's (2018) understanding of loving interspecies relations acknowledges this selfishness. She draws on Lauren Berlant's (2011) call for new theories of attachment to argue that love is always beneficial to the lover and therefore intrinsically self-

interested. Govindrajan illustrates this through the story of a woman whose favourite goat is sacrificed to a local deity. The woman explains, it cannot be a true sacrifice unless there is love for the goat. So, while love and violence may appear contradictory, the reality is more complex. The harsh treatment of livestock is less about cruelty and more a necessity of life (for the reproduction of society, animals, people..). Here (and throughout this thesis), I try to shift the narrative away from dualisms—love *vs* violence, or human *vs* animal, nature *vs* culture—by focusing instead on the intrinsic vital processes of reproduction, simultaneously social and biological, that underpin these relationships (here I echo the work of Coupaye and Pitrou 2018 on vital processes, more on this in Chapter 6). It is this very knot of connection—Maasai (social-biological) wellbeing tied to the wellbeing of their cows—that kin-making happens. Human and animal bodies are mutually transformed by affective encounters with each other, in the task of living and dying well. Maasai-cattle kin-making is a dynamic, contested process involving negotiation between love, obligation, control, survival, and sometimes suffering. This ambivalence is what "becoming-with" entails.

Both Haraway's concepts of making kin and becoming-with reject human exceptionalism and individualism. Instead, they promote life as interconnected and co-dependent, challenging traditional Western notions of beings as self-organisng and autonomous (autopoietic). By emphasising more-than-human entanglements and sympoietic relationships, Haraway invites us to reimagine our place within complex ecological and social networks. These concepts are introduced early in this thesis as they form recurring themes—or more precisely, enact an ontology, an ethic, and an epistemology—that underpin the analysis of Maasai-cattle relationships and inform broader discussions of human-animal entanglements throughout this work.

I also find Ingold's (2018) understanding of relationships between souls[40] useful for thinking about Maasai-cow relations, as it emphasises movement and ontogenesis. Critiquing Deleuze and Guattari's notion of "assemblages" for understanding how things come together to form a whole, Ingold proposes an alternative: "correspondence." If affiliation involves a process of "growing older together," where lives develop alongside and in relation to each other, then, it

[40] Maasai relationships with nonhuman beings, including the treatment of cattle as kin and the attribution of personhood to animals, align with a broad understanding of animism as the recognition of agency and subjectivity beyond the human (Ingold 2006). This perspective emphasises a relational ontology—and epistemology (Bird-David 1999)— where beings inhabit and grow through their dynamic relationships within an ever-unfolding world. However, given the extensive and complex influence of Christianity on Maasai cosmologies and practices, which introduces layered and sometimes contradictory elements to local worldviews, I have chosen not to label Maasai perspectives as strictly animist in this thesis. This avoids oversimplification and respects the syncretic nature of contemporary Maasai ontologies.

shouldn't be conceived as the connection of kin *and* kin, but rather of kin *with* kin involved in a process of becoming older together (Schutz 1962: 17 cited in Ingold 2018a). Ingold distinguishes between the conjunction "and" and the preposition "with," arguing that "and" implies an articulatory logic of addition, while "with" suggests a differential logic of correspondence. He contrasts *between-ness* (defined by *and*) from *along-ness* (defined by *with*) as two ways of understanding connection and interaction. *Between-ness* refers to back-and-forth exchanges between distinct entities, emphasising separateness. *Along-ness*, on the other hand, suggests a side-by-side relationship, where entities move together in harmony, like companions walking together or musicians playing in unison. It is about shared movement and continuity—imagery that aligns well with pastoralism.

Ingold argues that lives carry themselves *along* each other, their continuous regeneration nourished by the memory of their association. Along-ness is good for thinking about Maasai-cow relations. Maasai and their cattle are interconnected through shared movement and mutual influence, an idea I will explore further in Chapter 6. Understanding their relationships as *correspondences along* shared paths recognises their intertwined journeys, mutual responsiveness, collaboration, and "working together," to reference Vinciane Despret (2008)[41]. Through their reciprocal and dynamic exchanges, facilitated by mutual recognition and co-response, they co-constitute each other while simultaneously shaping their environment.

One cannot discuss Maasai-cattle kin-making without considering the environment they co-create and transform. To truly grasp the depth of their relationship, one must witness the landscape of Maasailand, sculpted over generations by their collaborative existence. The traditional Maasai dwelling system exemplifies this relationship: a circular arrangement of small human dwellings enclosing a central cattle corral (known in Maa as *enkang*). This structure not only shapes their daily lives but also transforms the land itself. Over time, the accumulated dung from the corral creates nutrient-rich mounds that persist for decades, enhancing soil fertility and influencing local ecology for millennia (Marshall et al. 2018). When these mounds grow too high, the Maasai dismantle the settlement and construct a new one elsewhere, initiating a cyclical

[41] Vinciane Despret (2008) explores situations where humans and animals "work together," and more specifically the everyday practices of cow and pig breeders. She argues that successful breeders attune themselves to their animals' needs and desires, creating a collaborative relationship that enables joint accomplishment in breeding. This concept of "working together" allows for a more nuanced understanding of human-animal relationships, encompassing aspects such as mutual judgment, collaboration versus exploitation, and reciprocal exchange.

process of ecological transformation driven by their symbiotic relationship with cattle. Extending beyond the household, people and cattle have shaped the rangelands that sustain them and helped protect the other species that live there (Homewood and Rodgers 1991). This co-living arrangement illustrates how pastoralists and their cattle co-construct their ecological niche, actively shaping the environment that, in turn, shapes them. Their shared history is written into the very land they inhabit, a testament to the profound interconnectedness of human, animal, and environment.

Niche construction theory examines how organisms actively make and remake their environment through their daily activities and life processes (Lewontin and Levins 1997). This concept emphasises the agency of organisms, highlighting their capacity not only to adapt to their surroundings but also to modify them, thereby catalysing new forms of adaptation (Odling-Smee et al. 2003). In the case of cattle and people, they intervene in their environment, molding it in ways that enhance their adaptive fit with the world. If we consider how "organisms physically modify their habitat, constructing structures (e.g., shelters, nests, dams) that modify how the environment impacts them," we can return to the Maasai living arrangement (Colombetti and Krueger 2015, 1157). The Maasai have engineered a space that protect their cattle from depredation attacks and raids, with humans sleeping on the periphery, encircling a central cattle corral, fortified by a sturdy fence (*esita*) crafted from thorny acacia branches. One day, this dwelling space will become fertiliser for the ground, giving life to new shoots of grass that will, in turn, nourish animals—and by extension, people. But niche construction extends beyond the physical, into the social and affective realms—that is, how organisms manipulate the material world to alter their social and affective conditions.

This reciprocal Maasai-cattle-environment relationship, whereby each shape each other, cultivates *affective* niches (Colombetti and Krueger 2015). I draw on the concept of affective niches[42]—which is inspired by evolutionary biology, social psychology, and the phenomenological tradition (Nagatsu and Salmela 2022)—by philosophers of emotions, such as Colombetti and Krueger (2015). These scholars extend the concept of niche construction from evolutionary biology to the realm of emotions and affect. Affective niche theory, put simply,

[42] This theory stems from concepts in evolutionary biology and ecology called niche construction and ecological inheritance. These ideas challenge neo-Darwinism for underestimating how organisms actively shape their environments. This environmental shaping, in turn, affects the organism's fitness and evolution (Lewontin 1983; Odling-Smee et al. 2013; see also Godfrey-Smith 2017).

proposes that our emotions are not just internal states, but are shaped and supported by our environment (material objects, social situations, and physical spaces). The theory posits that organisms create niches that alter, enhance, or expand their emotional capacities.

In the rhythms of daily life—dwelling together in a circular *enkang*, attuning to one another's needs, negotiating seasonal variations, and performing the rituals that mark life's passages—Maasai and their animals collaboratively configure their surroundings to regulate, shape, and co-create emotions. This mutual engagement is evidenced by the sophisticated strategies they developed to contend with drought and seasonal variations. The Maasai and their cows employ foraging and watering techniques attuned to wet and dry seasons, shown to benefit cattle's survival in arid landscapes (Butt 2010; Western and Finch 1986). Negotiating seasonal changes (e.g., searching further for forage in the dry season, taking advantage of closer resources in the wet season) is not simply ecological adaptation but the ongoing creation of lived niches that scaffold emotional responses—such as anxiety in drought, relief in abundance, or solidarity in shared tracking efforts. Seasonal change mutually affects their bodies, as milk yields decline for both humans and calves in the dry period (Western and Finch 1986). Families must balance their immediate and long-term needs when managing milk resources, often sacrificing consumption to ensure calves have enough milk for long-term herd growth (Spencer 1965). The Maasai's attentiveness to their cattle's health, breeding, and birthing cycles transcends utilitarian management, embodying a form of *correspondence*—a dialogic, reciprocal engagement with the animals' life processes (Ingold 2017). In turn, the cattle's recognition of their caretakers' labour and sacrifices goes beyond conditioned responses; it reflects an embodied attunement that affords them security, protection, and vitality. This affective ecology, cultivated through generations of close cohabitation and trust-building, transcends the meeting of needs, fostering a flourishing of shared positive affect, that, in turn, promotes the resilience, reproduction, and wellbeing of both herds and human communities.

This affectivity shapes the moods and behaviours of both humans and cattle, as well as their relationship with wild animals. The quality of human-cattle interactions influences the emotional responses of both parties. "If my cows are happy, I am happy. If they are hurting, I am hurting," Dennis told me one day as we were tending to his herd. Dennis, like Ole Pesi and many others, regularly engages in conversations with his cattle and strokes them, fostering positive relations and regulating his own mood. Cows, in turn, learn to associate humans with positive or

negative experiences, affecting their behaviour and stress levels. Research has shown that cattle can discriminate between individual humans based on past interactions (Mounaix et al. n.d.; Munksgaard et al. 1997). Positive interactions foster trust, which can "generate feelings of confidence, power, and security" (Colombetti and Krueger 2015, 1163). When Dennis visits his cows in the *enkang*, housed in a different village, they become excited by his scent and voice, mooing and approaching to greet him. In contrast, unfamiliar with me, they initially retreated and resisted physical contact. It took some time for his cows to trust me.

In *Narrating Nature* (2020), Mara Goldman recounts a compelling story of a lost calf, later found by its original owner years after its disappearance. The calf, discovered and nurtured by another herder, had grown into a healthy bull, siring numerous offspring. Upon encountering his long-lost animal, now a mature bull, the initial owner immediately recognised it. The new herder, however, denied the bull's origins. Convinced of the bull's identity, the initial owner brought this dispute before a council of elders. After careful deliberation, the elders ruled in favour of the original owner, as he accurately recalled a distinctive scar the calf had acquired due to a birth defect. This crucial detail proved his intimate knowledge of the animal. Consequently, the man was compelled to return not only the bull but also all of its progeny to the rightful owner. Goldman tells this story "to illustrate how well Maasai know their cattle" and that cattle are "domestic not because they are controlled and managed, as in the Western sense, but because they have an intimate relationship with people" (146). She notes that the man "knew his calf personally and was emotionally affected by the sight and sound of 'one of his own'" underscoring the embodied, affective bond Maasai have with their cattle (*Ibid.*).

While this fable might seem farfetched, I witnessed similar scenarios unfold during my fieldwork in Maasailand. Dennis had lost a goat when we were carrying out research in the Mara. Upon our return to his home in Amboseli, he identified his long-lost goat in a boma in a nearby town, months after it had gone missing. I was surprised to see that Dennis could recognise his goat after such a long time—it had grown older and bigger. He then shared a similar anecdote to Goldman's, recounting how Maasai often reunite with their cattle years after they have gone missing, and how, under Maasai rule, the owner is entitled to all of the lost animal's offspring. I inquired, "How can you remember what your cattle look like?" as I often found it difficult to tell them apart in a large herd. He simply stated, "Maasai just know" which cattle are their kin, "the same way Maasai know how many cattle they have without having to count them." This experience

exemplifies Goldman's assertion that Maasai *know* their cattle personally and are affected emotionally by them. This incident highlights the unique, intuitive bond between the Maasai and their livestock—a relationship that transcends mere ownership and enters the realm of kinship.

Emotions and affect will emerge in Chapter 5 when discussing Maasai continued killing of lions. I propose that the concept of affective niches is valuable for the study of depredation-induced emotions. When depredation occurs, human-cow emotional states are altered. To properly understand depredation-induced emotions, we must take their specific environmental scaffolding or affective niche into concern. This provides an alternative to the standard 'internalist' interpretation of classic cognitivism and neuroscience according to which "emotions are conceived as internal states or processes and the role of the environment is confined to providing stimuli and receiving actions" (Griffiths and Scarantino 2009). Few conservation and human-conflict studies take emotions[43] into account and could gain from understanding complex emotional dynamics between people and animals, revealing new insights into why people decide to kill or not to kill.

Conclusion

The Maasai and their cattle exist in a symbiotic (and sympoetic) relationship, though not symmetrically, mutually shaping each other's existence while simultaneously transforming the environment they inhabit. This interspecies bond transcends mere economic valuation, irrational accumulation, or even cultural symbolism. While cattle are undoubtedly crucial assets in today's market economy, together, they and the Maasai make kin, collaborate in daily life, and co-construct ecological and affective niches. Over generations, they have grown attuned to each other's rhythms and needs, developing a reciprocal system of care that ebbs and flows with the seasons and life stages. This dynamic interplay between human, animal, and environment forms the cornerstone of Maasai ecology, exemplifying a complex, co-evolved system of mutual dependence and influence that goes far beyond simple economic considerations.

I must also highlight the multiplicity of ways in which cows are related to, much to do with the ecological, economic, and social contexts. Cattle are also (and increasingly) understood through their vital economic role; there are moments when a cow must be sold or slaughtered,

[43] Those who look at emotions mostly focus on emotions and attitudes towards wildlife and how they might influence acceptance of various wildlife management strategies (Dheer et al. 2021; Jacobs et al. 2014; Sponarski et al. 2015).

decisions made in the thick of necessity and changing circumstance. In these moments, the uneven power dynamic embedded within Maasai-cattle relations becomes visible: the needs and agencies of humans move to the foreground, especially during droughts or times of financial strain. These pragmatic recalibrations are intensified by increasing pressures on land availability, the fragmentation of rangelands, and climate change, all of which affect herd sizes, grazing patterns, and even the significance of cattle in Maasai life. Acknowledging this multiplicity unsettles any easy or romantic account: while Maasai-cattle relations can be intimate and reciprocal, they are also embedded in broader socio-ecological and economic strategies of survival, adaptation, and negotiation.

I open my ethnographic data chapters with an exploration of the Maasai-cattle relationship, as it would be remiss to delve into human-lion conflict without first acknowledging that cattle are at the very centre of this entanglement. Throughout the chapters of this thesis, I center the pivotal role that livestock—particularly cattle, but also sheep and goats—play in shaping Maasai lifeworlds. As I examine Maasai rites of passage, encounters with predators, and lion hunting practices, I foreground how the deep-rooted bond between the Maasai and their livestock underpins these events. This interspecies kinship often lies at the heart of Maasai-wildlife and Maasai-conservation conflicts, shaping interactions, perceptions, and responses to such conflict in profound ways.

PART III

ON LIVING WITH LIONS

Chapter 4: Going in for the kill: *Olamayio* & Learning New Ways of "Becoming-with"

For the stockbreeder as for the hunter, ~~wolves~~ [lions] and men are engaged in a dynamic interrelationship. Each protagonist is regarded as an actor in its own right whose behaviors, perceptions and practices act on the other and evolve in contact with the other.

— Nicolas Lescureux (2006)

This is a thesis about human-lion interactions, so naturally, I arrived in the field eager to witness Maasai, cows, and lions get tied up with one another. As it turns out, I quickly learned that lions, people and their cows, (mostly) try to avoid one another. Spotting a lion near the village was difficult; encounters tended to unfold in the bush, invisible to most and unexpected, when their paths happened to cross. As a result, both lion hunting and livestock depredation proved to be rare and elusive events to document, demanding one be in the right place at precisely the right time. People's belated accounts became familiar stories, retold to me many times but never directly witnessed.

Eager to witness these elusive events, I asked people to call me right away if they (or their livestock) heard, saw, or smelled any trace of lions. Yet, as I immersed myself in daily life, news of depredation incidents perpetually reached me too late, leaving me with a sense of missing out—like a detective always a step behind the suspect. Attacks often occurred far away from the village, or under cover of darkness as I slept. I felt distant from the very subject I had come to study.

I eventually realised that I didn't need to see a lion get caught up with people and cattle to learn about how they interact; in fact, a lot could be learned from a distance. Being present in the community during lion attacks enabled me to observe their aftermath firsthand, capturing their social, economic, and emotional ripple effects. I caught a glimpse of how these events affect families and the community at large, as well as how they were managed and processed collectively. Visiting families in the aftermath of losing a herd member offered insight into the range of emotions and responses such events can provoke. Some people reported incidents to conservation authorities, while others did not. Some expressed anger and resentment, while others accepted the loss and resumed their daily routines. On occasion, I witnessed ilmurran debating whether to embark on hunts, and elders stepping in to discourage such actions. Over time, as I became part of

my host families —human and nonhuman alike— I began to sense, though only ever partially, the layers of pain one feels when losing a cow.

Spending time among Maasai and their animals deepened my sense of what it means to live in close proximity to lions. Every day is a wager: raising the lifeblood of the household, all the while knowing it could be lost in an instant to the teeth of a prowling neighbour. The Maasai try not to tangle with lions, but know that encounters are an inescapable part of life. While people and cattle strive to steer clear of lions (though at times unsuccessfully), their lives inevitably become entwined and "these daily proximities and entanglements produce a deeply felt sense of mutuality," whether or not this mutuality is sought or welcomed (Govindrajan 2018, 7).

While avoidance is often the goal, there are moments when interaction with lions is sought, not avoided. There are circumstances that call for direct engagement with lions. Central to this is the practice of *olamayio* — the ritualised hunting of lions by Maasai warriors. Documenting this practice also proved challenging, not necessarily due to chance, but because of intentional secrecy, gendered boundaries, and the genuine dangers involved in following a lion hunt. Still, as with predation attacks, much could be learned about lion hunting from a distance.

To my surprise, elders were eager to recount stories of their hunts, detailing the number of lions they had killed and the celebrations that followed, as if reminiscing a prideful record of abilities, or at least what once were. Women also fondly recalled in their younger years the excitement and anticipation of the boys' triumphant return from the hunt, who were eager to impress the women and girls at the *manyatta*, who were welcoming them with celebratory dancing, bells adorning their legs. Young men and ilmurran, however, spoke candidly about the challenges they face in sustaining these traditions, while others dismissed them as outright foolishness. These conversations afforded me fractal insight into the complexity of Maasai lion hunting practices, *olamayio* (ritual) and *orkiyioi* (retaliatory), and their ongoing transformations amid shifting realities.

There is a growing call for a more nuanced and sensitive appreciation of local perceptions of wildlife to improve conservation interventions (Bennett 2016; Woodroffe et al. 2005), but in-depth ethnographic research on the Maasai's complex ways of interacting with lions remains limited (Goldman et al. 2010). This chapter addresses this gap by drawing on ethnographic knowledge from interviews and participant observation to provide a richer account as to how Maasai pastoralists and lions share space. I begin by exploring the practice of *olamayio* within the

broader context of moranism, considering its historical significance, the forces that have reconfigured it, and its current manifestations and mutations. I then discuss how my host communities are negotiating these shifting practices and what this means for Maasai masculinity and identity. Finally, I examine how these shifts have affected lion behaviour, as perceived by my Maasai interlocutors across the Mara and Amboseli ecosystems.

I draw from Haraway's (2008) concept of "species knotting" to explore lion hunting. Haraway, and similarly Ingold (2015), uses the imagery of the knot to illustrate how people, animals, and living organisms are threads that become tangled and tied up to one another, "coshaping one another in layers of reciprocating complexity" (*Ibid*., 42). As living beings form knots of connection, they are bound together and transform each other over time; they *become-with* each other. Her concept of knots emphasises that humans are neither separate from nor superior to other beings but are deeply interwoven into a global web of life and dependencies. What I find useful with Haraway's concept of knots is that it captures the messiness of interspecies encounters —they are not purely harmonious but involve complex, sometimes violent dynamics. Thinking with knots and mutual becomings foregrounds agency of all beings tied up, offering a relational conceptualisation of humans and wildlife as co-constitutive communities (Lestel et al. 2006; Van Dooren 2019).

This chapter considers *olamayio* as a knot of connection to explore the dynamic and reciprocal relationship between Maasai and lions, illustrating a process of *becoming-with-lions* in which both human and animal actors shape each other's ways of being. Moving beyond static categories, I argue that lions have responded to shifts in Maasai social practices by adopting new forms of sociality—transforming how they relate to people and their environment. In other words, as Maasai change how they interact with lions, so too do lions. Drawing on Ingold's (2018) ecological approach and concept of relationality, itself inspired by Gibson's (1979) theory of affordances, this chapter reveals how Maasai and lions continuously negotiate possibilities for action, generating evolving socialities that challenge fixed boundaries between nature and culture.

Understanding *Olamayio*: Pride, Bravery, and the Making of a Maasai Man

Olamayio, the practice of group hunting one or multiple lions, is a defining practice of young Maasai men during the moran (warrior) stage of their lives, a period lasting approximately 7 to 15 years. This stage marks a key transitional phase before full adulthood, marriage, and family

life. The Maasai social structure, based on age-grading and initiating each generation of boys to become warriors, responds to this important task of training young men to form a "standing army to protect the community from threats to people and livestock" (Goldman et al. 2013, 491). Spencer (1988, 116) describes *olamayio* as symbolising "the role of the moran pledged to defend their cattle." In my Maasai friend Kitasho's more specific words, "*Olamayio* is learning to protect from *Irmotenten* [raiders] and lions." Kitasho once was a brave warrior himself, protecting his family from cattle rustlers along the Kenya-Tanzania border.

Moranism stands in contrast and tension with the age-sets that bracket it: the uncircumcised boys (sing. *olayioni*; plur. *ilayiok*), still under parental authority, and the elders (sing. *ormoruo*; plur. *Ilmoruak* (plur.), who are focused on more individualistic responsibilities and priorities (see Appendix 4 for list of age-sets and important dates). Ilmurran occupy a liminal space between childhood and adulthood—characterised by freedom from parental control yet not burdened by the responsibilities of elderhood. The age-set system, as described by earlier anthropologists, is shaped by structural tensions and symbolic dichotomies of communal vs individual, wild vs domesticated, freedom vs authority, and sexual expression for pleasure vs procreation (Hodgson 1999; Llewelyn-Davies 1978, 1981; Spencer 1988).

Yet these dichotomies are shifting. Hodgson (1999), who draws on historical sources from the late 19th and early 20th centuries to create a portrait of Maasai masculinity, highlights that the age-set system, itself central to Maasai social organisation and masculine order, extends back centuries. And while some patterns and practices continued well into the 20th century, she notes, others changed over time. Rituals and norms adapted to accommodate shifts in social, political, and economic realities (see also Galaty 1993). Yet, Hodgson (1999) cautions against seeing precolonial masculinity as a static ideal abruptly altered by colonialism; instead, she suggests that colonial interventions created new opportunities and constraints, enabling different groups of Maasai men to reinforce, contest, and reshape masculine ideals. Many aspects of the age-set system, warriorhood, and lion hunting have changed between the time Hodgson has written and my fieldwork. My aim here is to capture a snapshot of *olamayio* and moranism in a postcolonial context, while acknowledging their inherently dynamic nature.

I experienced these intergenerational tensions firsthand during fieldwork, particularly in the Kisongo section of Amboseli. The younger cohort of warriors in the past have used *olamayio* to signal to the older ilmurran that it is time for them to become elders and that their successors

are ready to take on the responsibility of protecting the community. During fieldwork, the ilmurran of the Ilkiramat age-set (also known pejoratively as Nyangulo by their predecessors—a further reflection of inter-age-set rivalry) in Amboseli humorously expressed their reluctance to relinquish their position to the incoming Irmiponyi cohort. They questioned the new cohort's readiness and bravery, emphasising that they had yet to earn their status as warriors—a lion hunt, I was told, could challenge this narrative.

Olamayio has stood as a powerful symbol of moranhood, embodying Maasai ideals of masculinity, youth, wilderness, and freedom. As Hodgson (1999) notes, the period of life spent as a moran is defined by collective interests and solidarity with others in the *manyatta*. Traditionally, ilmurran would go on *olamayio* with their fellow warriors from their *manyatta*, forging bonds of fraternity and trust, while also engaging in a spirit of competition: the aspiration to be the first to spear a lion[44] was ever-present. Spencer (1988) recounts how the hero who killed the lion would return to the village in triumphant dance, carrying his trophy—the lion's mane, which the *manyatta* girls would later transform into a ceremonial headdress—while the women flocked to adorn him with beads around his neck. Yet, *olamayio* remained fundamentally a group pursuit, with the honour reflecting on the entire *manyatta*; the trophy was prominently displayed on a tall post within the warrior settlement. As one elder in the Mara noted regarding the competitive edge between warrior *manyatta*, "Killing lions made you superior. We were competing with other *imanyat*: whoever killed the most was the best *manyatta*." (senior elder, Mara, CI99). Spencer (1988, 147) similarly describes the disappointment of one group of warriors who were "the only *manyatta* without even a single lionskin trophy," illustrating the rivalry between warrior villages.

While participation in *olamayio* is not obligatory for ilmurran, it is widely regarded as a test of bravery and a source of pride. Many elders recalled aspiring to participate in their youth, seeing it as a meaningful accomplishment before graduating to elder status and helped attract the attention of girls and potential spouses. As one man stated, "Maasai practice *olamayio* to show bravery. Girls will love you if you kill a lion" (junior elder, Amboseli, CI30). Another man in the Mara noted, "Girls would prefer to marry men who killed a lion." (senior elder, Mara, CI65). His wife sitting nearby concurred, "I liked the morans who had killed lions." *Why*, I asked. "Because they are good; very brave. No one will attempt to fight them," she answered. The first warrior to

[44] Spencer (1988) notes a variation among the Matapato Maasai, in which the trophy is awarded not to the first person to spear the lion, but to the one who first grabs its tail.

spear the lion during a hunt is honoured with a new name, symbolising his bravery and achievement. This name becomes a lifelong marker of his accomplishment; known to everyone he meets as a testament to his courage and status within the community and beyond. In other words, the pride which one gains from spearing a lion follows him throughout his life.

Hodgson (1999) emphasises the crucial role of praise and ridicule in enforcing conformity to ideal norms of masculinity in Maasai society, with women (as both lovers and mothers) playing an important part in this process. She illustrates this through examples such as boys undergoing circumcision: they are not permitted to protest or show pain, as doing so would provoke mockery and bring shame upon their families. *Olamayio* is not exempt from this prestige/stigma system. The daring exploits and adventures of ilmurran, particularly their bravery in lion hunting, were recounted and celebrated in the songs of their girlfriends, wives, and mothers —reinforcing the social rewards of such acts, as reflected in the notion that killing a lion attracts feminine attention. Hodgson (1999, 128-129) characterises women as "guardians of the masculine order," asserting that "women were significantly responsible for ensuring that men upheld the ideals of the dominant masculinity of their age grade." Similarly, Spencer (1988, 7) notes that, although Maasai rites of passage are a "male experience […], each transition is grounded in the transformation of their relations with women and through women."

Indeed, *olamayio* is linked to a sense of prestige for the moran, but also for his whole family and community. It was often equated to modern academic achievements like obtaining a school diploma or graduating with honours. A senior elder from Amboseli made this parallel: "The *emanyatta* was a school. There were classes on lion killing, slaughtering [cattle], [social] discipline, herbal medicine, and livestock keeping. If you were the first to kill a lion, it is like getting the best grade in your class" (senior elder, Amboseli, CI19). This statement also highlights the multifaceted nature of moranism, where *olamayio* represented just one component of a comprehensive educational system for Maasai boys. Succeeding in *olamayio* was akin to excelling academically today, signifying mastery of the skills and knowledge essential to thrive in the Maasai lifeworld, such as the ability to protect your livestock and community from external threats. Parents took great pride in their sons' success in moranhood, much as they would in academic achievements today.

But for some of my interlocutors, *olamayio* went *beyond* organising relations between people; it was also a way to regulate interactions with lions. Several suggested that lions could be

conditioned to avoid people and livestock through this practice. In the words of an elder from Amboseli, "*Olamayio teaches* lions to fear people" (senior elder, Amboseli, CI19). Similar views were expressed in the Mara, "We scared lions so that when they see people, they run away. It was a way to ensure lions don't come near people." (senior elder, Mara, CI37). According to some, lion hunts functioned as a way to create social distance or a barrier between lions and people — lions would recognise Maasai men in their red shukas and keep their distance[45].

I met with many elders who are known in their communities for having been the first to spear a lion—a distinction that is inscribed in the new name they are given and carry for the rest of their lives. Since learning about *olamayio* through participant observation presented several challenges—as a woman, I was not permitted to take part in lion hunting, and though perhaps an exception might have been made for a *mzungu* woman[46], both the dangers of pursuing a formidable predator and the rarity of the hunt added further obstacles—I sought my understanding through the stories of these aging, yet renowned, lion hunters. Among them was Ole Saitoti, a respected senior elder of the Ilkitoip age-set from the Mara region. Ole Saitoti had earned a distinguished reputation in his village for his prowess in lion hunting, a feat that earned him this special name: Saitoti[47], meaning brave. We met in a small cafe in Aitong, in the Maasai Mara. He was tall and slender, his frame draped in the bright red shuka typically worn by elders. After the initial formalities, Dennis asked him how he had received his name, remarking on the fact that this is a name that is typically earned after killing a lion. His eyes lit up, as though eager to revisit cherished memories from his youth.

As we sipped our chai, he recounted his experiences as a moran and the times he participated in *olamayio*. He was animated in his storytelling and was proud to say that he was the first to spear not one, but two lions during his warrior years. He recounted the details of his hunts with vivid enthusiasm:

[45] In her own fieldwork in Tanzania, my supervisor (SD) observed a tour company using open safari vehicles accompanied by a Maasai guide dressed in a traditional red shuka, usually standing at the back. She similarly observed that wildlife, including lions, systematically fled from these vehicles, which raised questions about how such interactions affect the tourist experience!

[46] As a non-Maasai woman, I was granted access to spaces typically reserved for Maasai men. Goldman (2020, 18, 28) similarly describes her ability to assume an "honorary man" status as one of the multiple identities she navigated among Maasai communities.

[47] Other common names given to warriors who kill lions include: Melompuki, Pilenanka, and Mepukori.

Usually in *Olamayio*, we would plan. We were told there are lions there and we spent the night in a boma nearby. Then, at 5 am we would go out to find them[48]. When we met those lions, they tended to run away because when we spotted the lion, we would remove the grass from inside the bells on our legs and start doing *aisser* [war cries]. We could chase a lion for one hour before it got tired and annoyed. The lion would get annoyed by all the noise; from the bells on our legs and our cries. It would stop moving and takes cover. It would go in a bush and start roaring. We circled it but would give it some space, several meters…close enough to spear it. We came as close as possible to aim our spears at it. The first one to spear it was the one who kills the lion and gets a name. He would be given the tail and the mane. At times, 10 spears were thrown at the lion at the same time. So, you ask your allies to support your claim that you were the first one to spear it. Sometimes, morans fought for the title.

The tail would be put on the spear of the moran who cut the lion's tail and he would lead the other morans back to the *manyatta*. The first one to spear the lion would be dressed with the mane as they return to the *manyatta*. The women will reach the morans to put *shanga* [beaded ornament] on them, and they will all walk back to the *manyatta* singing and dancing. The *manyatta* would be in celebration. Morans would dance around.

The women blessed the morans with milk once they are back in the *manyatta*. The women also dried the mane in the sun. Once the mane is dried, the women make a hat with it. It would be used during ceremonies. The tail would be put on the horn and used for all the ceremonies for that age-set. When we make any announcement, we blow that horn. And when people are singing and celebrating inside the *manyatta*, this horn was used for fun.

Olamayio was our school. The lion hat was our honour. It means we performed excellent in the program!

Olamayio was not done all the time. It was mostly a competition between the moran *imanyat*. If one *manyatta* went and killed two lions, the other would try to go and kill lions too. It was a rite of passage, for *Eunoto*. A transition from moranism to being an elder. If that transition happened before you did *Olamayio*, it was shameful to your *manyatta*. *Olamayio* was our way of life [*Olamayio-orkerreri lang loo irmaasae*][49]. Our ancestors did this. We do this to test our braveness. The way they say the lion is the king of the jungle, morans conquer the king of the jungle. So many ladies were attracted to you when you kill a lion. The one with that name would tend to have more girlfriends. (Mara, senior elder CI99)

Through conversations with former lion hunters like Ole Saitoti, I learned that setting out to kill a lion is an endeavour fraught with difficulty and danger. Lions are elusive creatures, capable of traversing vast distances to evade confrontation. Their bodies are heavy and muscular, supported with paws nearly the size of a human head and a bite force of 650 pounds per square inch. I met countless elders who showed me parts of their thighs, legs, and arms with missing flesh—shown

[48] Lions are typically more active during the cooler early hours of the day, becoming increasingly lethargic as temperatures rise. Ilmurran usually approach lions once they have become sluggish from heat and fatigue. Furthermore, tracking and following lions on foot can exacerbate their exhaustion.

[49] This sentence frequently came up during conversations about *olamayio*. My assistant translated it into "*olamayio* is our culture," but after further probing, informed me that there is no word in Maa for culture, and that the sentence best translates to "*olamayio* is our way of life."

off as badges of honour—visible reminders of their encounters with lions. But it is not just lions' strength that make them formidable opponents for the ilmurran. Many hunters recounted lions' cunning, emphasising their wit as much as their physical prowess, a characteristic also noted by Goldman et al. (2010). In the words of Ole Saitoti, "A lion can identify the weakest member of the [moran] group. It will try to escape [the circle of ilmurran] by jumping on the one who fears it the most." According to him and other former lion hunters, lions can tell by looking in the ilmurran's eyes who is the weakest link in the circle. You cannot attempt to deceive a lion; it will sense your vulnerability. Lions are presented as clever individuals, with the ability to perceive human emotions. In the words of another senior elder elsewhere from the Mara, "Lions are very wise. If you seem frightened, they will scare you. If you look courageous, they will avoid you" (senior elder, Mara, CI46).

As such, lion hunting demands not only exceptional courage but also unwavering commitment. It necessitates endurance and coordinated teamwork among ilmurran, all while an element of competition underpins the hunt. Hunters must be prepared with the right techniques and overcome their fear in order to face an adversary that is as clever as well as powerful. This combination of factors makes lion hunting one of the most challenging and respected pursuits in moranhood.

Interestingly, olamayio was often associated with positive feelings toward lions, a connection also observed by Goldman et al. (2010; 2013). As illustrated by the words of one elder, "We do olamayio because Maasai love lions. We have respect for lions." (senior elder, Amboseli, CI1). Given that bringing death to a creature one holds in esteem may seem paradoxical, I asked elders whether they ever feared that the very practice they valued—killing the animals they respected—might lead to the lions' extinction. Several elders explained that olamayio was governed by norms aimed at preventing the complete eradication of the lion population while ensuring the continuity of this culturally significant practice. This was done by determining which lions could be hunted and how frequently hunts occurred. An elder from Amboseli, whose group of morans killed between 10 to 15 lions over a decade, explained:

> Olamayio was controlled. We didn't do it that often. The purpose was not to eradicate lions from the landscape because future generations would not be able to practice their culture. We made sure there was continuity by not killing the cubs[50]. We also targeted the big males. It's bad practice to

[50] Interviewees commonly used the term 'cub' to describe any young lion from birth up to subadult age (around 2 to 3 years). Subadult lions have a reasonable chance of surviving without their mothers, and lionesses often allow cubs

> kill more than one. There is even a Maasai proverb '*meerayu ilowuarak ware te nchani nabo'* [you cannot kill two lions under the same tree]. If we could not find male lions with thick fur, then we tried to find females. If we killed the females, then we had to kill the young cubs so that they did not suffer (senior elder, Amboseli, CI65).

Ole Saitoti in the Mara echoed this:

> My *manyatta* killed 17 lions. We didn't kill females. The rule is we only kill mature males; lions with a big mane. Once we meet a pride of lions that doesn't have these bigger males, we just leave them. We [group of warriors] never reached a time where we could not find these big males. By the time the next age-set comes, cubs grow up to become big males.

Some elders spoke of a curse that could befall ilmurran who acted recklessly or failed to show proper respect toward wildlife. In the words of a senior elder from Amboseli (CI63):

> The Maasai used to tell these boys: "If you kill these wild animals you will be cursed." Because there were stubborn morans that would kill animals for fun. These morans were killed by the same animals which they killed; so we believed in the curse. The curse could also follow their children. Because you killed an animal which had no intentions of injuring you. But if you killed an animal which killed your livestock, there was no curse for that type of killing. Olamayio was okay because that was our tradition.

Another elder from Amboseli shared a story about a curse (*enk'oki*) that befalls those who mistreat wild animals beyond justifiable bounds. He recalled a time when rhinos still roamed the region, "from Kitirua all the way to Sultan Hammud!" He recounted, "There were those morans who would follow rhinos all this way. They would find them sleeping and kill them. People were selling their ivory. These people, if they are still alive today, they are not okay. If you look at their families, they are not okay" (senior elder, Amboseli, CI76). Nadasdy (2007) contends that notions of gift exchange and reciprocity extend beyond human-human relations to include human-animal interactions, particularly in hunting contexts. His research among Yukon's Kluane First Nation explores animals' ability to impose sanctions on hunters who fail to provide them with "counter gifts." Although my Maasai interlocutors do not conceptualise gift relationships with animals in the same way as some Indigenous peoples of Canada discussed in Nadasdy's research, they similarly perceive animals as capable of generating spiritual sanctions. According to the elders' accounts, animals can inflict sanctions such as bad luck, sickness, or even death if the Maasai do not act toward them with respect. These spiritual sanctions function to balance power dynamics

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that are not their own to suckle. This cooperative nursing enables the pride to rear cubs even if a mother dies (Pusey and Packer 1994).

between humans and animals, reinforcing mutual respect and reciprocity. Thus, although the Maasai hunter-lion relationship is rooted in domination, animals remain active agents with the ability to enforce ethical hunting practices and uphold hunters responsible for their actions.

Figure 4 Herder demonstrating how he would spear a lion, Maasai Mara.

Despite these rules and sanctions, many studies have argued that Maasai lion hunting has become a threat to the species' survival in Kenya (Frank et al. 2006; Hazzah et al. 2009; Hazzah et al. 2014; Woodroffe and Ginsberg 1998). While senior Maasai elders maintain that the traditional practice was not intended to eradicate the lion population completely, the local human population has increased rapidly in the later half of the 20th century (Coats 2001), meaning more

ilmurran practicing olamayio may have contributed to the noted reduction in lion numbers. This decline in lion numbers is also attributed to various factors in addition to hunting, including habitat loss through land-use conversion, population isolation, and prey depletion (Riggio et al. 2013). Conservationists in the Amboseli ecosystem noted that poisoning, which intensified during the 1990s and early 2000s as a response to the hunting ban and conflicts with the KWS, was a major factor driving the lion population decline to near extinction.

Olamayio is often contrasted with *orkiyioi*—retaliatory hunts (Hazzah 2006; Woodroffe et al. 2005). *Orkiyioi*, meaning 'cry' in Maa, is an emergency call in response to a threat, human or nonhuman. The alert rallies people to come help. In *orkiyioi*, the hunt targets lions that attacked livestock, as opposed to ritualistic hunts which remove lions indiscriminately. Retaliation usually occurs after repeated predator infringements, causing frustration in the community. Unlike ritual hunts, *orkiyioi*[51] does not entail prior planning, is not limited to ilmurran (it can be done by men of any age-set; and it is not done for pride or to obtain a new name), and today is often done in secret to avoid retribution from authorities, so it not ceremonial and celebrated like olamayio.

When livestock is attacked by lions, herders may attempt to defend their animals by using their spears—many herders carry a spear when they graze with livestock. Other herders and community members might be called for support to chase away the lions, retrieve the carcass, and in some cases, retaliate against the perpetrator(s). Similar to olamayio, people generally follow unwritten guidelines about when it is reasonable to practice *orkiyioi*. An elder from Amboseli explained, "These days, you only retaliate if the predator is inside your boma; you cannot go out and kill it. Back in the day, if we heard lions around *imanyat*, we would go out and look for them and kill them[52]. We don't do this anymore" (elder, Amboseli, CI1). However, community members may deviate from this principle depending on the severity of the attack and the level of community frustration—a point I will discuss further in Chapter 5.

[51] Historically, the term *orkiyioi*, also spelled *olkiyioi*, likely had similar uses. Spencer (1988) discusses *orkiyioy* primarily in the context of raiding rather than hunting, translating it as a 'mustering' of ilmurran, which aligns with findings from this research. He also notes that the term can be interpreted as 'tear' (as in crying) and is associated with feelings of anger, indicating a complex emotional register that resonates with my own observations.

[52] This is also reported in Spencer (1988, 116): "When a lion is sighted, a cry goes up and the moran muster themselves in their battle finery, as when recruiting for the emanyatta, to mount a lion posse (*empikas olowaru, olamayu.*)"

Olamayio today: Reconfiguring Manhood/Reconfiguring Relations with Lions

Although Kenya banned game hunting in 1977, olamayio did not immediately cease, and uncertainties persist about its complete cessation within Kenya and along the Tanzanian border, for reasons I discuss shortly. In this section, I use ethnographic data to show how the changes in moranism and *olamayio*—driven by the hunting ban alongside broader social, political, and economic transformations—marks a shift in how Maasai men relate both to masculinity and to lions, as interconnected phenomena. I ground these insights in ecological psychology and ecological anthropology—theoretical approaches that can help us understand the lived, embodied transformations experienced by Maasai. Gibson's (1979) concept of affordances, as part of his broader ecological theory of perception[53], is defined by the *possibilities for action* that the environment offers to an organism, arising from the relationship between the organism's capabilities and features of the surrounding world. Building on Gibson's theory, Ingold's ecological approach[54] situates perception in ongoing, embodied participation and attunement within a relational, lived environment, rather than seeing it as a simple interaction with external objects or with a fixed environment "waiting" to be perceived, as Gibson posits. Complementing this ecological approach, Ingold's focus on relationality draws explicit attention to the dynamic intertwining of participants in shared processes of "being-with." Using affordances and relationality, I demonstrate that the transformations in the Maasai material and social world bring about new affordances (or what is possible to *perceive, act,* and *become*) and new ways of relating with lions.

My fieldwork was conveniently timed during a period of transition between the Ilkiramat (outgoing cohort) and Irmiponyi (incoming cohort) age-sets, meaning that I was able to witness the passage of young boys into the moran stage of their lives, as well as the passage of the aging warriors into elderhood. The young Maasai boys' transition to moranhood involves an initiation ceremony, *Enkipaata*, followed by a circumcision ceremony, *Emurata* which takes place some months or years after *Enkipaata*, depending on the age of the boy when he is initiated. For the

[53] Gibson's (1979) ecological approach to perception is a theory in ecological psychology that challenges the traditional view that perception involves constructing mental images or cognitive inferences. Instead, Gibson argues for direct perception, whereby organisms meaningfully perceive opportunities for action (affordances), which guide their behaviour in real time.

[54] Ingold is still left unsatisfied with how Gibson conceives the environment in his theory of affordances. Gibson understands it as fixed, inert, and composed of objects—essentially "ready and waiting" for the perceiver to discover its affordances—whereas Ingold views the environment as alive and in always in flux.

outgoing ilmurran, they will be celebrated in *Eunoto* (meaning 'planting'), where their heads are shaved by their mothers, symbolising the shedding of their warrior identity, and a blessing ceremony, where they eat meat of a blessed bull for the first time in front of their mothers. While I managed to observe *Enkipaata* (in Amboseli, Kisongo section) and *Emurata* (in Amboseli, Kisongo section, and Mara, Siria section), I did not get to witness *Eunoto* because the Ilkiramat age-set was clinging on to its warrior status and reluctant to cede to their successors.

The period of transition between the Irmiponyi and Ilkiramat age-sets offered a moment to attend closely to the unfolding enactment of moranhood and elderhood (and Maasai masculinity), attending to how these roles are negotiated and reconfigured in contemporary life. While the legal ban on hunting has directly constrained *olamayio*, shifting social and environmental dynamics have reconfigured the relations and material conditions that once sustained lion hunting and warriorhood. Formal education and Christianity, as well as economic and livelihood changes, have disrupted these practices in various ways and more broadly influenced how moranism is enacted today.

In the Mara, traditional ceremonies and spaces for ilmurran seemed to hold less significance among the youths I encountered. When asked about the location of their manyatta, most boys of the incoming moran age-set expressed limited awareness and minimal interest in participating in such ceremonies, often characterising them as archaic or ungodly practices. Many outgoing ilmurran reported missing these rituals due to boarding school, university, or work commitments away from home (e.g. selling Maasai beadwork on the coast or working in security jobs in Nairobi)—a trend observed by other researchers (May and McCabe 2004; McCabe 2003). This shift was poignantly summarised by a former avid lion hunter who said, "There are no more emanyatta for the morans [in this section]" (junior elder, Mara, CI9). This sentiment was also echoed by Ole Saitoti, who firmly stated, "In the Mara, *olamayio* is a thing of the past."

In my Mara field site, ceremonies associated with warriorhood tended to be practiced in smaller family settings instead of large community-wide celebrations. Notably, I observed an important link between moranism and Christianity. Many families now opt to send their boys to religious education retreats focused on spiritual development instead of *Enkipaata*, the traditional multi-day bush trek that initiates the incoming age-set of ilmurran. At those retreats, teenage boys are expected to learn Christian virtues and get closer to God. Becoming a Maasai man, then, can be an inward spiritual journey, directed toward God instead of outward toward one's age-set and

the bush. This shift signals a move away from the collective social world of warriorhood. Bialecki et al. (2008) contend that the adoption of Christianity can lead to a shift from collective social structures to more individualistic models, characterised by a reconfiguration of social ties, emphasising personal spiritual relationships over traditional communal bonds. Paradoxically, while Christianity today has an increasing influence on moranism, early missionaries viewed moranism as a significant obstacle to the spread of Christianity among the Maasai (Hodgson 2005).

In Amboseli, despite the influences of Christianity and formal education on moranism—and elders often remarking that moranism is in decline—community-level initiation ceremonies like *Enkipaata* continue to be vibrant. Experiencing young boys brimming with energy during *Enkipaata* evoked Turner's (2012) notion of "communitas"—moments within rituals where social hierarchies are temporarily suspended, and participants experience an intense sense of togetherness, collective joy, and shared purpose. This collective effervescence fosters lasting bonds and mutual recognition between age-mates which will endure into elderhood. I experienced this spirit of communitas when I joined hundreds of boys for the exuberant three-day *Enkipaata* initiation ceremony.

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In August 2023, Kitasho invited me to attend *Enkipaata*, as one of his sons was set to be initiated at this event. We joined hundreds of boys from across the Kisongo section for a three-day ceremony, which included a blessing with sheep's fat, two nights in the bush, and a 20-kilometer pilgrimage across the landscape. I brought my tent along for the journey, though the boys only had their shukas to sleep with. During this expedition, they learned valuable wilderness skills and developed their endurance—and so did I. Their fathers' age-set was present to guide them and prod them along to maintain pace. We walked alongside gazelles, zebras, and giraffes, immersing ourselves in the savanna's rhythm. A fleeting encounter with an elephant briefly sparked a primal fear within me. Yet, perhaps the most persistent challenge was the blinding, suffocating haze of dust, which coated everything in a fine, ochre layer—a phenomenon that has been steadily increasing over recent decades. While I lagged behind catching my breath or adjusting my shoes, the boys were full of energy, eager to come out on the other side to embrace their roles as the next generation of ilmurran.

Caked in a thick layer of dust, exhausted and hungry from our pilgrimage, we finally reached the large manyatta where community members, Maasai politicians, and tourists awaited

us with cameras, food, and water. There, we ate and rested, preparing for the closing ceremony scheduled for the following day. The next morning, we spent hours waiting for the speeches to begin. Elders and prominent political leaders from Kajiado county each took their turn to address the Irmiponyi age-set, offering blessings, prayers, and words of wisdom. They urged the boys to focus on school instead of traditional practices like *olamayio*. In response, hundreds of energised boys shouted, "No! We want to be *real* ilmurran!" This spirited outburst could be seen, following Spencer (1988)[55] and Hodgson's (1999) discussions on tensions between age-sets, as a performative act of rebellion against elders and an assertion of group identity. Nevertheless, this energy left me wondering whether the new generation of warriors in Amboseli will sustain their enthusiasm after circumcision. The pressures to conform to 'modern' Kenyan ideals are also present in Amboseli and may undermine this momentum. While elders may speak of moranism's decline in broader social terms, such episodic experiences of communitas affirm that rites of passage for Maasai age-sets still hold transformative meaning and communal vitality in Amboseli.

I returned to my host village after *Enkipaata* for a much-needed shower and some rest. On the journey back, I bumped into Frank, an adolescent boy from a neighbouring house. I asked him why he did not attend the event. "*Enkipaata* is very bad," he informed me. Frank explained that youths must prioritise school and said that "Western culture is changing Maasai traditions." I asked where he heard that *Enkipaata* was "very bad." He revealed that his pastor from a Pentecostal church discourages certain traditional Maasai customs, including moranism, *olamayio*, *oloiboni* (Maasai spiritual leader or prophet), and polygamy. *Enkipaata*, being associated with moranism and *olamayio*, is viewed negatively and discouraged by some Christian churches, an observation also noted by Goldman et al. (2010). Many of my interlocutors explained that Christianity has often linked Maasai customs with witchcraft—an association that they themselves echo by describing old Maasai beliefs and practices as witchcraft. As one man told me in the Mara, "Schools and the church are discouraging a lot of Maasai rituals. The church considers some of our rituals as satanic" (junior elder, Mara, CI7). I came to know that, much like my young neighbour, not every boy in Amboseli is interested in moranism—despite all the excitement and joy at *Enkipaata*.

[55] Spencer (1988, 6) describes the establishment of warrior *imanyat* as "achieved through a ritualised form of rebellion directed against their fathers," highlighting how these *imanyat*, and warriorhood more broadly, serve as symbolic acts of resistance against paternal authority.

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Figure 5 Scenes from Enkipaata trek in Amboseli, August 2023.

My experience at *Enkipaata* reveals that warriorhood continues to pulse with life in parts of Maasailand, particularly in the Kisongo section. Therefore, it is premature to declare its end there, as the incoming age-set of energised warriors is poised to replace the outgoing group and may attempt *olamayio* as a display of bravery. Older ilmurran, too, may seek a final opportunity to kill a lion before becoming elders, as also noted by Spencer (1988). As a Maasai community warden I encountered just after *Enkipaata* explained, "*Olamayio* is a problem for some time until it goes away and it's a problem again with the newly circumcised age-set" (junior elder, Amboseli, CI15). As noted above, *olamayio* can be used by the incoming age-set to assert their readiness and status, which, according to the warden, may indeed be used by the Irmiponyi ilmurran.

Yet, the continuity of Maasai practices unfolds alongside profound transformations in the Maasai material and social environment, which in turn reconfigure how Maasai boys perceive and

act on affordances—or possibilities for action—offered by their surroundings. First, relating to the material, physical world, it is increasingly difficult to practice *olamayio* due to changes in the landscape. One respondent in the Mara highlighted the environmental constraints on practices associated with warriorhood, "There's not really any bush left to conduct *olamayio* and moranism. It's all private lands or national parks now" (junior elder, Mara, CI19). Land privatisation and conservation efforts have reshaped the landscape, reducing the extensive open spaces necessary to sustain moranism and practices such as *olamayio*: expansive areas for *imanyat* to house large groups of people, and vast unpopulated rangeland where ilmurran can track and chase lions without endangering people or being seen by authorities. During the *Enkipaata* trek, I experienced how fences, private lodges and farms now define movement and compel detours. With much of Maasailand subdivided, few communal spaces remain open for such practices.

Alongside physical fragmentation, the landscape is subject to heightened surveillance. Conservation actors' increased capacity and improved technology mean that the landscape is now better patrolled, making such hunts difficult to practice due to their conspicuous nature. As one senior elder explained, "Back then, there were no organisations like IFAW and BigLife. The KWS did not have the capacity to patrol the entire ecosystem" (senior elder, Amboseli, CI56). As a result, lion hunting generally—whether in *olamayio* or *orkiyioi*—is now often done in secret, away from the attention of authorities (except in rare instances such as political protests, see Chapter 5). These shifts in hunting practices unfold within broader conservation interventions grounded in neoliberal economic frameworks (discussed in Chapter 1). By seeking to conserve wildlife while integrating rural livelihoods into market economies, these efforts have contributed to reshaping the relationships Maasai have with lions. I return to this dynamic with more detail later in the chapter.

Turning to the social environment, schooling is increasingly woven into the fabric of youth experience, gradually reshaping the meaning and feasibility of moranhood and lion hunting. As echoed in the speeches by leaders and politicians during *Enkipaata*, the rhythm of life for many boys is increasingly oriented toward formal education—a priority deeply held by their parents. Moranism, once a key institution to keep young, energised boys from 'staying idle,'[56] is now supplemented—and in some senses replaced—by education as a structuring activity during

[56] This phrase, "staying idle" (said in English), was frequently employed by Maasai adults to describe youths who remained at home, neither in school nor employed. This state of inactivity is viewed as undesirable, as it is associated with detrimental behaviours among young men. Such behaviours include engaging in recreational wildlife hunting (not limited to lions), developing substance abuse issues, or participating in irresponsible sexual activities.

adolescence. A senior woman articulated how Maasai boys and families are responding to this shifting social environment:

> Since there was no school back then, moranism would keep boys busy and give them a sense of pride. Nowadays, people don't practice *olamayio* because it's discouraged, and kids are going to school. They are getting scholarships because of those lions. If they start killing them, scholarships will be taken away (senior woman, Amboseli, CI16).

Schooling introduces new affordances—different possibilities for action and identity formation—that interlace with, and sometimes supplant, traditional practices.

The woman's statement also reveals that many parents recognise that their children's educational opportunities are often facilitated by conservation organisations—the very entities advocating for the cessation of *olamayio*. As a result, many perceive a direct link between wildlife conservation and their youths' education due to the bursaries provided by conservation organisations. Formal education is now widely perceived as essential to achieving success in contemporary Kenyan society, gradually replacing the role warriorhood once had. There is an understanding that this educational support is contingent upon abandoning practices like *olamayio*. While many parents view the shift from moranism to formal education as the optimal path to success in today's Kenya, they are also aware of the conditions accompanying this transition — namely, the expectation to abandon Maasai practices deemed harmful for conservation, such as lion hunting.

The pride once derived from spearing a lion can now be achieved through academic success, with young men gaining distinction by graduating from school. As a man from the Mara observed, "They [ilmurran] get nothing from killing the lions. Now, young boys get to excel in different ways, at school and in their careers" (junior elder, Mara, CI10). In contrast, boys who do not go to school due to their families' socio-economic circumstances or remote living conditions are commonly associated with moranism and lion hunting, as they often stay behind to take care of their family's livestock. In Kitasho's words, "Those who still practice *olamayio* today are those who do not go to school. They are still practicing the old way of life." According to him, these boys are most likely to rally their age-set to participate on lion hunts and try to convince their school-going peers to join them on *olamayio* during holiday visits. I asked how boys managed to have this influence over other mates, to which Dennis said, "They will make fun of them [school-going boys] for not practicing their culture." This echoes Hodgson's (1999) analysis of the roles

prestige and stigma play in forging Maasai masculinity. In effect, *olamayio* is becoming associated with youths who lack access to formal education. For those enrolled in school, the benefits of lion hunting mentioned earlier—such as pride and social status—are now perceived as more attainable through academic achievement. Consequently, formal education has come to be regarded as a more reliable pathway to financial stability and improved quality of life, supplanting the social capital once gained by killing a lion.

As formal education and career aspirations take precedence, the need for and feasibility of moranism continues to wane. What, then, are the implications for Maasai masculinity and identity? Both Spencer (1988) and Hodgson (1999) have shown how moranism was once central to shaping what it meant to be a Maasai man. Hodgson, focusing on the relationship between masculinity and modernity, describes how 'modern' Maasai men—those who embraced schooling, baptism, or Western clothes instead of pastoral ideals—were labelled *ormeek*, a term that originally referred to non-Maasai Africans but by the 1930s became a way to disparage 'modern' Maasai men. The term was invoked to "mark, mock, and ostracize any Maasai man who imitated Swahilis [non-Maasai Africans], who adopted the practices or fashions of modernity, who sought to be anything other than a real Maasai man" (Hodgson, 1999, 135). These days, however, most boys attend school, engage with Christianity to varying degrees, and aspire to markers of modern life—cell phones, motorcycles, and permanent houses. The distinction once marked by labelling someone ormeek is blurred; what was once a means to separate 'modern' men from 'authentic' ilmurran or elders no longer maps cleanly onto everyday experience. If Maasai identity and manhood once stood in sharp contrast to colonial ideas of the modern African, what does masculinity look like now, as 'being modern' becomes ordinary? What alternative pathways, performances, or negotiations of manhood have arisen?

Where moranism once offered a pathway to Maasai masculinity, young men and their parents now negotiate its meaning and relevance within the shifting conditions of contemporary pastoralism. What it means 'to be Maasai' and 'to be modern' is redefined in everyday life, shaped by families' choices and circumstances. As Hodgson (1999) notes, age-sets still organise masculine subjectivity and social relations. Male circumcision remains a prerequisite to becoming an adult man, age-sets are still given unique names, and men advance through grades together. Yet, "the experience, attitudes, and practices of being an age set member have changed" (Hodgson 1999, 142). Fewer young men can dedicate themselves to practices that once fostered age-set

solidarity—ceremonies are compressed to fit school holidays, many imanyat have disappeared, and gatherings of ilmurran are rare as education, work, and earning opportunities vie for their time. In the words of one junior elder from the Mara:

> It's just a matter of time until we're like everyone else [in Kenya]. Schools and Christianity are discouraging a lot of Maasai rituals. There is also not enough time now for boys to complete all the rituals related to Morranship. The only thing that remains that makes you Maasai is the Maa language, the circumcision, and your family origins. (junior elder, Mara, C17).

Many have expressed coming to terms with certain aspects of moranism changing. In the words of a man who graduated to elder status without having practiced *olamayio*, "Morans have accepted that things have changed" (junior elder, Mara, CI43). I also inquired with fathers, "How do you feel about your son not being able to participate in *olamayio* as you did?", the responses were largely consistent: acceptance. One senior elder in the Mara expressed, "I am okay with *olamayio* being abolished. So many morans were injured. It was stupid." (senior elder, Mara, CI58). Many parents noted that they are glad their children are in school instead of practicing moranism. One senior elder highlighted the shift in priorities, "It's time to leave *olamayio* behind. Boys must focus on school instead of killing lions! Now, there is no purpose for *olamayio*. We have the KWS to take care of animals now. They compensate us when predators kill our livestock" (senior elder, Mara, CI28). This statement reflects a broader sentiment that the next generation of Maasai boys benefit more from formal education than from bush skills which were once vital for Maasai way of life. With the advent of government-led wildlife management, the traditional role of ilmurran as a community's protective force against wildlife and raiders[57] has become less essential.

Some, most often men, find employment in tourism or conservation sectors, which serve both as incentives to stop killing lions and sources of masculine pride and social standing. Conservation organisations such as Lion Guardians in Amboseli employ ilmurran who were previously involved in lion hunting as an incentive to stop. These warriors become Lion Guardians, tasked with mitigating lion killings by patrolling the ecosystem, monitoring lions' movements and alerting communities when lions are nearby. They also play a crucial role in de-escalating tensions

[57] Conservation efforts have also led to a reduction in cattle raiding, which was particularly problematic along the Tanzanian border due to limited government surveillance. The Mara Conservancy provided satellite phones to communities near the border to call for assistance when confronted by raiding parties (pers. comm. with MC Administrator, April 29 2023). Thus, by helping curb raiding, conservation initiatives have indirectly diminished the security importance of warriorhood.

following predation incidents, preventing potential retaliatory violence. Guardians informed me that their employment was a key factor in their decision to stop hunting lions. This influence extends beyond those directly employed, as even non-employed former hunters respect the cessation of *olamayio* due to the benefits their peers receive. An outgoing moran explained, "Now we are seeing benefits from lions. If I go kill them, it's like I want my community members to lose their jobs. Out of respect for them, I don't go kill lions" (outgoing moran, Amboseli, FG5). Many of the men I met aspired to work in conservation and frequently asked me to connect them with NGOs.

Residents across field sites cited the benefits derived from lions through conservation and tourism as a justification for accepting the hunting ban. Overwhelmingly, my interlocutors associated the presence of charismatic species like lions with tangible benefits, particularly in the form of educational bursaries and employment opportunities. Many reminded me that such opportunities would not exist without wildlife. A woman from the Mara said, "I like that morans stopped killing lions because lions help tourism" (woman, Mara, CI19). Many like her are willing to support the hunting ban because a healthy lion population bolsters tourism, which in turn generates employment opportunities. A condition for many lodges to operate in Maasai regions is that a certain percentage of jobs must be allocated to local community members, though not all hospitality businesses respect these terms.

West (2006) argues that conservation-as-development transforms objects' traditional customary and use valued into monetary value, effectively commodifying the environment and social relationships. This commodification process strips objects of their social significance—rooted in human judgments and local institutions—and recasts them as economic commodities within market systems with hierarchies of value. Drawing from West's findings in Papua New Guinea, where harpy eagles and bilum bags were transformed into commodities through conservation-linked income generation projects, I see a parallel with the lion in Maasailand. Here, lion conservation increasingly frames the animal as an economic resource, reshaping Maasai social relationships and values around wildlife in a market-driven context. As conservation and development agendas increasingly entwine, mixing lion conservation with economic incentives (i.e. employment, bursaries, rural development), this is leading to a broader reconfiguration of social and ecological relations, namely by altering how people value and give meaning to lions.

Yet, as I will discuss later, the commodification of lions does not eliminate relationality but channels it differently.

Despite accepting that moranism is changing, in both ecosystems, people are also attuned to the ramifications and challenges arising from these transformations in warriorhood and Maasai masculinity. For instance, some expressed worry that this shift might lead to certain aspects of the Maasai way of life being forgotten, including loss of Maasai language, knowledge and skills. One man in the Mara expressed concerns over language loss, "The education system in Kenya is not favoring Maasai culture. When children come back from boarding school, they struggle to speak Maasai and milk cows. The school really discourages people from speaking their tribal language" (junior elder, Mara, CI96). The Maa language serves as a profound conduit for Maasai identity, bridging geographical and generational divides. It represents more than a means of communication—it is a living repository of cultural memory, social connection, and collective belonging that connects rural and urban Maasai, while simultaneously uniting younger and older generations. Formal education is often associated with the erosion of Maa among youths.

Exposure of Maasai youth to other ethnic communities and lifestyles during their time in boarding schools was often cited as a factor contributing to the transformation of Maasai ways of life, challenging the continuity of certain Maasai customs and practices. In the words of a senior elder in Amboseli,

> People who went to school don't see the value of Maasai way of life. Maasai [who go to school] do things like other tribes and *wazungu* [white people]. Before, children's only work was taking care of cattle. Now, children play football when they are back from school. Now, if you ask a child to take care of cows, they will get lost! The only benefit I see about these changes is education; we get [Maasai] teachers and doctors. If they could find a way to keep the culture with education that would be the best (junior elder, Amboseli, CI9).

Changing aspirations among Maasai families present challenges for the continuation of Maasai way of life, which is often viewed as backward or outdated by many urban Kenyans. School-level policies discourage the use of ethnic languages and prohibit wearing tribal attire, making it difficult for Maasai youths in boarding schools to connect with Maasai forms of expression and identity away from home. The teenage girls in my host family in the Mara were excited to wear their *shanga* [Maasai beaded jewelry] on school holidays. Early in my fieldwork, I naively asked them why they didn't wear them at school. They told me that if their teachers saw them wear such garment, they would face corporal punishment and have their jewellery taken away. Dennis, who

overheard our conversation, explained that schools in Kenya try to remove ethnic differences "out of children" as a way to prevent tribalism in politics and society—an ongoing challenge in Kenya since independence[58]— and that he, too, experienced this during his time in boarding school.

Other interlocutors noted a lack of traditional skills and knowledge being passed down to the next generation, making it dangerous for new ilmurran if they did attempt to practice *olamayio*. One man in the Mara said, "Boys nowadays don't have all the survival skills for the bush, so it is dangerous to hunt lions" (junior elder, Mara, CI7). I often witnessed this during fieldwork. One morning in the Mara, my host received news that two elands had been killed during the night by lions, just a few hundred yards from our house. Accompanied by his young sons and some neighbours, we went to investigate the kill site. As we approached, the boys retreated back to the house in fear. An elder present exclaimed, "Morans in Siria cannot kill lions! They are scared of them!" When I asked him why the boys had run off, he responded, "Because of schooling, they don't practice *olamayio*. No one in this young generation even owns a spear. How can they learn to use it?" (senior elder, Mara, CI49).

This apparent lack of courage can be interpreted as problematic from a security standpoint, especially among older people. An elderly woman in the Mara noted, "I would prefer if moranism was there. It gave me a sense of security. They protected people and cattle from wildlife. How will a man become a man if he can no longer practice *olamayio*?" (senior woman, Mara, CI8). Ole Saitoti, too, expressed concerns over the disappearance of moranism, arguing that the lack of bush training makes youths afraid of lions and therefore ill-equipped to care for livestock when grazing. He noted that the replacement of *olamayio* with KWS wildlife management has fostered an increasing fear factor among Maasai youth. He recounted an incident where a hyena entered his boma one night to highlight the contrast between his response and that of his son. "When I heard the hyena, I woke up and speared it. I called Lemek conservancy and said 'come pick your stupid fella!' My son didn't even wake up; he didn't hear anything. Young people don't have that instinct. Morans are walking like women now. What if you see a snake? How will you kill it if you are walking like a woman; nothing to defend yourself?" I asked him what he meant by boys walking like 'women.' He said it means walking without a spear; because women do not carry such

[58] Due to the highly localised nature of politics in Kenya—where politicians play a central role in resource allocation and development—political competition often revolves around ethnicity. Voters tend to support candidates they believe will best represent and advance their community's interests (Harris 2024).

weapons. Dennis then concurred, "Moranism prepares men to fight for themselves; to protect their community. Now this generation cannot protect their community." Still for some, especially elders, Maasai masculinity remains tied to carrying a spear and demonstrating bravery in the face of wildlife, embodying a protective strength that they fear is fading.

Finally, Maasai identity is "being reconfigured to contain the attributes of modernity historically associated with ormeek" (Hodgson 1999, 141). People across all age-sets, but especially elders, reminisce fondly about moranism and *olamayio* as ideals of Maasainess, yet also acknowledge that these ideals no longer fully resonate in today's context. Now, there are other ways of becoming a man and other modes of interacting with lions. Material constraints, social expectations, and shifting roles reshape young Maasai men's perception of masculinity, offering them new "possibilities for action." Formal education is now widely regarded as essential for success, effectively replacing the prestige once tied to *olamayio*. Many pursue new pathways to 'become Maasai' by harnessing opportunities offered by contemporary Kenyan life. For example, one can become a venerated Maasai man by excelling in school, securing a good job, and investing earned capital to acquire quality cattle and support his family beyond pastoralism alone. And bravery can now be embodied not by killing lions, but by guarding them. In short, Ilmurran are attuning to new sets of affordances and acting in ways that will enable them to engage effectively with changing social and material conditions.

Despite these mutations, evolving Maasainess remains rooted in enduring bonds to cattle and kinship networks—such as clans and family names—which continue to anchor belonging. Maasai masculinity is also expressed through selective engagement with rituals adapted to fit the rhythms of everyday life, and through the continued vitality of the Maa language[59] in daily interactions. Simultaneously, these shifts raise concerns, particularly among older generations, about the erosion of the Maa language, pastoral way of life, and the security once upheld by ilmurran.

As Dennis reflected, "It is difficult to return to a time when Maasai didn't go to school. We can only move forward now. But as long as we have cows, we will be Maasai." As many respondents were keen to emphasise, school and lions (alive, not dead!) are sure pathways to

[59] As formal education becomes widespread and occupations once deemed "non-Maasai" become common aspirations, fluency in the Maa language stands out as one of the remaining markers of Maasai belonging. Ormeek is now used applied pejoratively for Maasai men who cannot speak Maa.

accumulating cows today. Thus, rather than positioning 'modernity' in contradiction with Maasai identity, as in Hodgson's ormeek/traditional opposition, we might instead see it as a generative force, enabling new ways to reach Maasai ideals.

Learning new ways of *becoming-with* lions

The shift from hunting to guarding lions reflects a transformation in the relational field between young men, lions, and landscape—a reconfiguration of the affordances that are offered by the social, economic, and material environment. As new possibilities for action become available, young Maasai men and their families attune themselves to different ways of relating to lions. The Maasai-lion relationship is thus not erased, but reconfigured: new forms of engagement emerge, rooted in the possibilities now presented by conservation initiatives and by keeping lions alive, rather than those once offered by the hunt.

Perhaps most interesting is that many of my interlocutors describe the ceasing of *olamayio* as a *process of education*. This is best illustrated by the words of one man from Amboseli, "The Maasai have been enlightened. There is no need to do *olamayio* anymore. Now we see value in lions. We are learning the importance of these wild animals" (junior elder, Amboseli, CI9). Maasai have had to relearn how to interact with wildlife in order to best adapt to the demands of economic development in Kenya and of the international biodiversity conservation agenda, which are both linked through neoliberal conservation. As people are presented with economic incentives and education, they internalise new norms and subjectivities, and learn to see lions in a different light: as entities that have the potential to generate new economic opportunities, or as "conservation commodities" (West 2006). This process of education has formed a new way Maasai *think* about lions and *act* with/upon them.

This shift in Maasai relations with lions is experienced as reciprocal: many of my interlocutors recognise that lions themselves have changed how they relate to the Maasai. By adopting a new form of sociality with lions, Maasai argue that lions, too, have adopted new ways of being. I frame this as Maasai *becoming-with-lions*, in the sense that their social lives are profoundly intertwined, engendering a reciprocal becoming through their relational interplay (Ingold 2000). They continually shape and reproduce each other every time one or the other decides to kill or not to kill. Lions would have the ability to perceive the change in the way Maasai

relate to them, altering the affordances they perceive in their environment (Gibson 1979). As new possibilities for action open up, new forms of Maasai-lion socialities emerge.

Maasai link changes in their own behaviour to changes in lions' behaviour, demonstrating the ability of each to shape the other, or *to become-with each other*. Thinking of people as part of the environment and as entangled in a relational process with nonhumans is nothing new in non-Western ways of thinking about and experiencing the world, but is increasingly recognised and incorporated within Western thought. Ingold (2000; 2013) and Lestel (2006; 2014) challenge the notion that human and animal societies are separate (as in a distinct 'human society' from a 'lion society'), proposing instead that societies are inherently composed of multiple species interacting with and relating to each other. This framework challenges the notion of fixed boundaries between humans and animals, suggesting instead a 'hybrid community' formed by fluid, interconnected relations across species. Ingold's ecological approach brings sociality into the biological understanding of ecology, which deals with the relations among organisms and their physical surroundings but is primarily concerned with biological processes. According to Ingold's ecological perspective, both humans and animals are seen as constantly adapting to and being shaped by their *social* interactions (not just biological), which become core to how each understands and expresses itself in the world. This perspective suggests that changes in human activities in ecosystems, such as the Mara and Amboseli, would inevitably affect nonhumans cohabiting these spaces, and vice versa. Here I discuss the changes Maasai have noticed in lion behaviour. Maasai have described bolder, more unpredictable lions. I use Gibson (1979) and Ingold's (2000; 2018) ecological approach and the concept of affordances to explore lions' shift in behaviour.

As mentioned above, instilling fear in lions has been one of the motivations for hunting lions. Across both field sites, many interlocutors reported that the decline of *olamayio* and the overall reduction in lion hunting have led to a decrease in lions' fear of humans. Elders recalled that in their youth—when *olamayio* and retributive practices were more common—lions were markedly more wary. One elder in the Mara explained, "Lions would run away when seeing morans or smelling *osientu* leaves [sage leaves rubbed on warriors' bodies before a hunt]. Today, lions don't run from people. It might see or smell you and will just stay there" (senior elder, Mara, CI46). Similarly, elders in Amboseli noted that lions no longer flee upon seeing the distinctive red shuka cloth, with one elder remarking, "The behaviour of wildlife has changed a lot... Lions used

to run away when they saw a red shuka, but nowadays they don't" (senior elder, Amboseli, CI5). Ole Saitoti in the Mara echoed these concerns, noting that lions, which once fled upon hearing cowbells or spotting a shuka from afar, now often remain undisturbed, even when bypassed closely by herders.

Many community members reported an increase in lions' boldness, particularly their willingness to enter *inkang'itie* [Maasai settlements] in search of cattle to eat. Historically, lions that entered cattle enclosures were eliminated from the ecosystem whenever possible. As one man recounted, "I never saw a lion take cattle inside the boma when I was a moran. Those years, lions were only attacking lost cattle. There were certain lions who attacked inside bomas, but those were killed so they were not even allowed a second chance to attack livestock" (senior elder, Amboseli, CI58). Similar stories were mentioned in the Mara, "Before, the Maasai would kill or injure the wildlife that damaged our boma to scare them and they wouldn't come back. Now, we can't hunt or kill wildlife, so animals don't fear people" (senior elder, Mara CI39).

Increased attacks inside enclosures could also be attributed to the fact that Maasai living arrangements have changed with land privatisation and individuation. Lions that prey inside enclosures typically infiltrate them at night, making it challenging to chase them away. This difficulty is compounded by the fact that imanyat are becoming less populated as many are transitioning to single family living, potentially reducing the number of individuals available to respond to nocturnal predator incursions. Dennis and I frequently responded to calls from women, alone at home with their children while their husbands were away, informing us of lion attacks. When lions come inside the cattle enclosure during the night, women struggle to deter them alone, "While we want to chase predators away or kill them when they come inside the boma, it is not always possible. If no one is brave enough, or if there are no weapons easily accessible, or like in my case, if a woman is alone, it might not be possible to defend the cows" (elder woman, Amboseli, CI25). Another woman in the Mara told us that lions are not afraid of women, recounting a time when lions left her boma only when her male neighbours arrived on the scene. As residents of collective *inkang'itie* relocate to their individual parcels assigned during group ranch subdivision, homesteads become increasingly depopulated and far from one another. Lions are acting upon what they perceive as new opportunities to feed on cattle less closely guarded. This situation exemplifies how shifts in living arrangements have made households more vulnerable to attacks

by reducing the number of people, especially men and ilmurran, available for communal protection. In the words of an elder from Amboseli,

> Back then, it was rare for lions to jump inside the manyatta, though it did happen. In these cases, the lions couldn't survive. It was shameful for morans to let predators go away. The way manyattas were designed deterred lions from even entering the boma. Manyattas these days are less populated than before, leaving more gaps between houses for predators to enter" (junior elder, Amboseli, CI41).

This observation aligns with research by Ikanda and Packer (2008), who found that, in households that experienced attacks, the only variable showing a statistical correlation with attack rate was the number of people living at the homestead—suggesting that smaller homesteads are more vulnerable to incursions within the boma. Thus, multiple factors are altering lions' behaviour; not only the decline in lion hunting but also transformations in the physical environment and how people inhabit this space. These social and spatial shifts are tied up with broader processes we might identify as 'modernity.'

As a result of these combined changes—a reduction in lion killing and broader spatial transformations—lions would have developed a preference for cattle meat. They argue that lions which have now acquired a taste for the "sweeter meat of cows" roam freely in the landscape without fearing consequences. This is exacerbated by the reduction in wild prey availability. As Ole Saitoti said, "Zebras and impalas have reduced. Lions developed a taste for cattle. The cow is easier to kill, so lions will go for it." Traditional practice of lion hunting served as a deterrent, effectively 'teaching' lions that preying on cattle carried significant risks.

Livestock owners also reported an increase in daytime predation in the presence of herders, a behaviour they consider unusual. I, too, was stunned by the frequency at which Dennis and I received calls from herders informing us of depredation attacks. Lions are said to be taking more risks than they used to, venturing out during daylight hours more comfortably. Kitasho's wife noted that lions are taking more risks now because they are no longer kept in check, "When I took cattle out for grazing when I was young, no predator would attack. They would only attack when cattle got lost" she said. "Nowadays, they attack even when there is a herder present. Some lions might even attack a person if they try to chase them away. This is happening because people aren't killing them like before. Somehow killing them makes them fear people" (woman, Amboseli, CI13). What my interlocutors are noting, then, is that the social environment in which lions live has offered them new possibilities for action, or affordances (Gibson 1979). As lions perceive

anthropogenic presence as a lesser threat, a new opportunity for action (to hunt livestock with more impunity) is offered to the perceiver. Ingold (2018, 41) reminds us that perception is a public (or relational) affair; that it "requires us to participate with others, to attune our movements with theirs, to pay attention, and to care." Perception is "about being present and aware in the very moment of formation itself" and to be prepared to act at the right moment when conditions are favourable (*Ibid.* 42-43). Lions and Maasai are attuned to each other's movements and act upon opportunities as they present themselves, for the better or worse.

People even reported that lions seem to *be aware* of the impunity their protected status under conservation efforts allows them to enjoy. Interlocutors often explained that "Lions know they are protected" or that "they know the government is taking care of them," hence why they feel they can hunt livestock or roam in broad day light without facing any consequences. This perceived awareness, some argue, has led them to adopt what Maasai consider as risk-taking behaviour. This observation aligns with findings from Goldman et al. (2010, 346) who also noted that "Dangerous animals are perceived as 'knowing' that they are protected by the government, that people are not allowed to kill them and thus are as "taking advantage" of that situation."

A similar observation with Kyrgyz herders and hunters has been made by Lescureux (2007), who shows how the collapse of the Soviet Union and Kyrgyzstan's independence triggered dramatic changes in human practices—especially livestock herding and wolf hunting[60]—which in turn influenced wolf ecology and behaviour. Both humans and wolves came to perceive and respond to changing opportunities and constraints created through their intertwined histories and environments. Behavioural changes in wolves led to reconfigurations in Kyrgyz knowledge and perceptions about wolves, reshaping their relationship with the animal. Like lions to Maasai masculine identity, wolves, Lescureux explains, are intertwined with Kyrgyz identity and worldview, so disruptions in human-wolf relations correspond to a change in identity amid major societal transformation post-USSR.

Similarly, Kenya's independence and growing conservation sector has transformed Maasai-lion relations, with important changes to their identity. Yet, even as lions become

[60] Lescureux's (2007) interlocutors similarly noted that wolves are less frightened of people since the reduction in hunting. Following Kyrgyzstan's independence, state-supported wolf hunting declined: government bounties on pelts fell, ammunition became expensive, and professional hunters disappeared as low salaries pushed them into cattle keeping instead. At the same time, efforts to curb poaching through confiscation of rifles and traps further reduced hunting pressure on wolves.

commodities under conservation-as-development, commodification is itself a form of relationality—it is just oriented toward different values and outcomes (economic, conservationist, etc.). As lions are commodified (through tourism and conservation work), new relationships and ways of becoming-with-lions emerge. These are shaped by jobs, policies, and economic incentives, but still require attentiveness, learning, and mutual response. Thus, commodification does not erase relationality between people and lions; rather, it rechannels it. Maasai and lions remain co-constitutive, but the terms of engagement are shaped by shifting social, economic, and conservation logics. This raises new questions: if tourism crashes or incentives for conservation decline, where does that leave relations with lions?

Conclusion

This chapter took *olamayio* as a 'knot of connection' to reveal a relationship that transcends simple notions of conflict or coexistence. *Olamayio*, once a cornerstone of moranism, was a source of pride for young men who proved their bravery by conquering the most formidable adversary all the while instilling fear in lions. However, landscape fragmentation, formal education, Christianity, and conservation-as-development are among the forces reshaping moranism and Maasai masculinity more broadly. Through these shifts, Maasai have *come to learn* the importance of lions because of the benefits derived from maintaining their presence in the environment. Or, as per the ecological approach, now new affordances are being perceived and acted upon.

Lions have become entangled in a process of commodification, whose existence is associated with the potential to contribute to boys' and men's pursuit of respect and pride within their community. Commodification creates new fields of engagement and gives rise to new forms of co-constitution between people and lions. It is a channel for relationality, as it structures relations and attention along new vectors, requiring new knowledge practices, attunements, and values. A lion can send children to school, employ a guardian, or attract tourist revenues. Community members are negotiating the ban on hunting with new priorities, recognising that protecting wildlife, particularly iconic species like lions, can enhance their social and economic standing within today's Maasai society.

Just as the Maasai reconfigure their relations to lions in this everchanging world, lions, too, are adapting to these changes. The Maasai extend the process of education to lions—they are understood to be capable of adapting their behaviour to changes in how Maasai interact with them.

My interlocutors think of lions as bolder and less fearful to humans as the result of a reduction in hunting. In other words, as Maasai stopped killing them to pursue other social or economic gains, lions have perceived new opportunities for action and acted upon this new affordance. This perspective presents Maasai-animal relations as reciprocal; they are bound to one another through the creation and maintenance of social relations. Deciding not to kill a lion in order to receive conservation benefits is *a way* of relating to lions socially, and this choice—to kill or not to kill—will also trigger a response in the lion.

What the Maasai offer us is an understanding of the savannah ecosystem as a dynamic one, where human and nonhuman are enmeshed in a web of social relations through which they co-constitute each other and their environment in a process of mutual becoming. It shows us that the grassy plains are animated and in flux. This is not to say that researchers and practitioners in the field of conservation may not share this understanding of the environment—some do. Yet, many of the lion conservation interventions I encountered in the field remain focused on human behaviour rather than the lions', and put the burden on people to adapt for the sake of lions. Thus, shedding light on the Maasai-lion lifeworld can perhaps illuminate small paths toward recognising lions as agents, capable of making decisions, and learning new behaviours. It helps us apprehend lions as attuned to human action and active participants in the world's ongoing creation, rather than passive observers of a pre-existing reality. Still, few Euro-American scholars have been willing to accept this idea that animals are actors capable of engaging in social relations with humans and reluctant to expand their own analytic concept of society to include animals (Nadasdy 2007).

Moreover, adopting an anthropology beyond the human enables us to take Maasai knowledge seriously instead of representing conceptions of animals as purely symbolic or metaphorical, thus challenging static and deterministic paradigms. It requires us to be open to the possibility that there might be some truth to what they tell us and insights we can gain from human-animal relations (Ingold 2000; Nadasdy 2007). This approach allows us to explore how lions have co-evolved with changes in Maasai hunting practices. As Ingold (2000; 143) states, in this unfolding human-lion relationship, "both humans and animals undergo a kind of perpetual rebirth, each enfolding into its inner constitution the principle of its relationship to the other." In other words, interactions between people and lions continuously reshape and renew both beings, hence the use of Haraway's *becoming-with* to illustrate this always unfinished process. The nature of the

relationship between humans and lions becomes a fundamental part of how each sees itself and behaves. In the following section, I explore why Maasai continue to kill lions, despite seemingly having accepted the ban on hunting. I demonstrate how their motivations to kill are, again, entangled in how they perceive lions as co-constitutive agents within their lifeworld.

Chapter 5: Why Maasai Continue to Hunt

"We Live Together. Sometimes We Fight."
— Maasai woman and livestock owner, Maasai Mara, 2024

While the practice of *olamayio* wanes in parts of Kenya's Maasailand, the killing of lions persists. If Maasai have accepted the ban on *olamayio*, recognise the benefits of lions' presence, and find ways to negotiate conservation into their lives, *why does lion hunting continue?* This question has been asked by many researchers before me seeking to find answers. Goldman et al. (2013), for instance, argue that lion hunting among the Maasai arises from overlapping motivations that are simultaneously social, emotional, and political. Socially, they argue, lion hunting reaffirms the protective role of ilmurran within their community, provides a mechanism for selecting brave leaders, and allows young men to gain prestige. The hunt also facilitates social learning for both lions and ilmurran, reinforcing the dangerous reputation of each and helping to prevent lions from becoming habituated to preying on livestock (though this is framed by the authors as Maasai attributing human traits to lions, or "humanising" them). Emotionally, lion hunting offers a sense of revenge and helps Maasai address the loss felt after cattle are taken by lions. Politically, these hunts are seen as a reaction to a lack of control over wildlife management and an expression of dissatisfaction with conservation interventions. Goldman et al.'s (2013) analysis challenges earlier explanations that framed lion hunting dichotomously as either a cultural manhood ritual or a retaliatory act against livestock predation (Hazzah 2006; Hazzah et al. 2009; Woodroffe et al. 2005).

The hunt, I came to discover, is indeed not a discrete cultural practice—rather, as Goldman et al. (2013) propose, it emerges as a response to overlapping motivations. While I came across similar motivations as Goldman et al. in my field sites, the analysis I present here differs from theirs by explicitly recognising lion agency in shaping these motivations. My Maasai interlocutors presented lions as active participants in reciprocal relationships, so, to faithfully reflect their perspective, I present lions as my interlocutors did. I demonstrate how lions become entangled in human emotions, politics, and decision-making processes. So, with lion agency in mind, I reconsider the motivations identified by Goldman et al. (2013)—emotional, social, and political. I present recurring themes that emerged from conversations across both field sites. These themes

capture the interconnected yet distinct motivations driving lion hunting: as a form of education, a politically charged act, and a means of enacting justice. I argue that each of these interrelated motivations contributes to a more holistic understanding of lion hunting by shifting the focus toward the *intended outcomes* of the hunt; in other words, what the hunter aims to achieve. This approach expands on previous research on Maasai lion hunting which has primarily focused on the *causes* driving lion hunts but neglected exploring the hunters' intent (Goldman et al. 2013; Hazzah 2006; Hazzah et al. 2009; Woodroffe et al. 2005). Taken together, these themes reveal that grasping Maasai lion hunting requires attending to the role of lions as active participants within relational entanglements, alongside the intended purposes of the hunt, thereby offering a more holistic analysis than previous studies.

As Goldman et al. (2013) demonstrate, the motivations for killing lions are often complex and intertwined. To illustrate this complexity, I begin this section with a vignette that brings these dynamics to life. Following the vignette, I disentangle the intertwined motivations it reveals to engage in a discussion on the multiple, practical intensions behind lion hunts.

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On the night of May 12, 2023, a group of nine subadult lions broke into Sankale's livestock enclosure in Mbirikani, just on the edge of Makutano village, and killed all the sheep and goats within, as well as a dog. "They were hungry," said one of Sankale's neighbours. Awakened by the commotion, residents in Sankale's boma shouted and brandished torches to scare the lions away. Community rangers were called for help. They managed to chase three of the nine lions out into the thick bush outside of town. The remaining six lions stayed in the area overnight. The following morning, residents were surprised to find the six lions resting within the fenced compound of Big Life Foundation, a wildlife conservation NGO operating in the Amboseli-Tsavo-Kilimanjaro ecosystem. The NGO's headquarters are located near the village centre, alongside a hospital and a church.

This scene was upsetting for many community members. People were concerned and puzzled: *Why are those lions taking shelter at Big Life? Why haven't the rangers chased them far away yet? What if a lion jumps on an elderly person, or a child on their way to the hospital or church?* A crowd gathered in town until eventually, an armed group of about eighty men, comprising both young and older men, breached the compound's fence and proceeded to attack the lions by throwing stones and spears. Each took turns throwing spears, eventually resulting in

the death of all six lions lying within the compound. Many men did not have weapons in hand but phones to record the event, rapidly spreading the episode on social media.

This event drew so much attention, both domestically and internationally, that the KWS along with Big Life and the Group Ranch committee had to deliver public apologies. Six lions were killed in broad daylight, on the grounds of a reputed NGO, and in the presence of rangers and conservation practitioners. What compelled those men to act so boldly, in full view of the authorities? In talking with community members who were present that day, as well as others who learned about it through various lines of communication, I began to identify the intertwined motivations that brought this hunt into being. Diverse threads of motivations drew people to participate in this moment of collective action. Bystanders, women, children, and community rangers—those who did not directly participate in the killing—also had their own understanding of what led to the lions' demise.

Figure 6 One of the six lions speared at Big Life Foundation's Headquarters, Mbirikani.

Strange rumours about these lions began to spread in the community. People were saying that the lions had been released from another area. One man said, "Someone released caged lions

into the wild. It was painful because these lions were let go to disturb the Maasai" (junior elder, Amboseli, CI24). Others claimed that the lions had travelled from a different area, hungry and looking for easy prey. This group of lions were seemingly *different* from the lions people are used to in the area. People described them as scrawny; thinner than usual, even for subadults. But interestingly, people were saying these lions did not *know* how to behave around Maasai. In the words of a Maasai community ranger,

> People were saying these lions were new. They killed livestock here and they are busking just nearby; it's like they didn't fear us! It was a weekend; people were going to church. The community was irritated. They either came from Tsavo or they were just very bold lions [from here]. But lions around here usually don't stick around after killing livestock. It is usually only one which jumps in and scares the cattle out of the boma. But that day, all jumped inside one boma and each killed their own *entare*, and a dog and a donkey too. That man was very poor. He only had 11 *entare* and the lions came and killed all in one day. And that was after the drought; people had spent a lot of money to keep their livestock alive. He [the livestock owner] asked Bonham [Big Life's CEO] for the full compensation, but he was told to wait the 3-month timeline like everyone else. This man cannot wait 3 months; he has to feed and support his family and he was left without livestock. (outgoing Moran, Amboseli, CI64)

This event in Mbirikani aligns with what the Maasai refer to as *orkiyioi* —a hunt justified as an act of retaliation. *Orkiyioi* has become more prominent as *olamayio* has grown increasingly difficult to practice in today's context. This messy entanglement on May 13, 2023, encapsulates the diverse and often interrelated motivations and intentions that drive lion hunts today. Some individuals joined the hunting party to 'teach' the lions a lesson, while others were motivated by ongoing political tensions and dissatisfaction with conservation actors. For some, the event was an opportunity to advance their own interests. Meanwhile, others—such as Sankale, the man who lost all his livestock overnight—saw the hunt as a way to seek justice for personal losses within the relational meshwork of human and animal lives.

Disentangling the Threads of Motivation

As Maasai men and boys find new avenues for earning pride and respect beyond *olamayio*, other functions of lion hunting have proven more difficult to relinquish. Indeed, there remain practical reasons for killing lions which continue to motivate hunters. In this section, I untangle these interwoven motivations, using the vignette above as a case to explore these. I complement this analysis by drawing on conversations and experiences attending to other instances of Maasai-

lion encounters. I emphasise how my interlocutors' justifications for hunting often stem from a desire to shape their environment and social relationships to align with their specific needs and aspirations.

Hunting as Teaching (people and lions)

As my interlocutors tried to make sense of the event in Mbirikani, many lamented the increasing boldness and infringement by lions. There was a sense that these incidents by 'rogue' lions are a sign of "ilmurran not keeping predators in check" (junior elder, Amboseli, CI17). Many people justified killing these lions that day in Mbirikani because they were deemed unusually problematic and not of the ecosystem. One senior elder said, "Just like bad people in society, there are bad lions. You have to get rid of them. Killing these lions was justified." (senior elder, Amboseli, CI16). Frustrated and in disbelief, many in the community concluded that they could not allow these lions to rest nearby after killing a dozen livestock. The sight of the lions casually lounging within Big Life's compound after their meal felt like a provocation—even a mockery—to some, as if the lions were flaunting their 'protected' status. "It's like these lions *don't know* the Maasai," community members repeated, hinting at a breakdown in the previously maintained balance of respect and fear between humans and lions.

While it is common for lions to rest after a kill, community members told me that lions which predate inside Maasai enclosures *know* that they have done something bad and typically hide and keep their distance from people to avoid retribution. This aligns with Oriol-Cotterill et al.'s (2015a) findings that lions adjust their movement patterns near bomas, moving faster and straighter, likely to quickly exploit livestock prey while minimising detection by humans. What was particularly aggravating for the community was that these lions *chose* to rest near the village centre, putting women, children and the elderly at risk. The lions' choice to rest on Big Life Foundation's grounds may have fuelled rumours about their release into the wild. Such rumours likely stemmed from the Big Life's ongoing lion conservation efforts, leading community members to draw connections between the lions and the organisation's work. I also wondered why these lions went to rest at Big Life, curiously coinciding with what locals say about lions being 'aware' of their protected status, thereby finding safety among conservationists. However, their choice to rest on Big Life's property may be linked to the tree cover in the compound, which provides an appealing and shaded environment for the lions—though, it is also worth noting, the

compound is relatively close to areas with high human activity. In any event, community members felt they needed to eliminate these lions from the ecosystem because they did not meet their expectations of how lions *should* behave around people.

Pastoralists have developed a set of coping mechanisms to mitigate livestock depredation, including constructing fortifications, keeping guard dogs, and maintaining vigilant nighttime monitoring of their herds. Lion hunting, many interlocutors revealed, is an integral part of this repertoire of deterrence strategies. A practical motivation for lion hunting is *disciplining* lions—teaching them to fear humans and thereby protecting livestock from attacks. Goldman et al. (2013) identified this motivation in their study, where similar views were expressed about lion hunting as a form of predator management. Goldman et al. (2013, 498) conclude that this "anthropomorphizing of lions […] is an important component of their [the Maasai's] relationship with wildlife."

While labelling Maasai perceptions as anthropomorphism is not inherently wrong, doing so without acknowledging lion agency or the relational processes in the analysis risks reducing the Maasai's understanding of lion behaviours to mere attribution of human qualities[61]. It also risks undermining the legitimacy of lion hunting as a serious predation mitigation approach and overlooks its perceived effects on lion behaviour and ecology. As Servais (2018, 9) argues: "any description of animal mental qualities should be accompanied by a description of its relational context of discovery." Therefore, I emphasise that I do not portray the Maasai's understanding of lions as inferred traits, but as qualities directly perceived through encounters with lions, tying this back to Gibson (1979) and Ingold's (2000) understanding of perception and action.

I build on Servais's (2018) understanding of how people make sense of animals—herself drawing on Gibson's theory of affordances alongside Ingold (2000) and Milton's (2002) use[62] of

[61] The traditional and widely accepted definition of anthropomorphism is "the attribution of human characteristics to nonhuman things or events" (Guthrie 1997, 51). Servais (2018), herself drawing on theories from Bateson, Gibson, Ingold and Milton, challenges this definition and proposes one that includes pragmatist perspective where anthropomorphism is a situated direct perception of human properties by someone engaged in a specific interaction. She proposes this definition of anthropomorphism: "the *situated direct perception* of animal minds (or other human properties) in the behavior or bodily expression of animals, by someone who is engaged in a specific process of activity." (Servais 2018, 2).

[62] Ingold (2000) and Milton (2002) build on Gibson's theory of affordances to analyse animism in human-animal interactions. They argue, much like Bird-David (1999), that personhood is directly perceived by animist people through a *relational epistemology*, where attention is directed toward what animals or plants *do to themselves* in relation to others. This animist perception is then not a symbolic attribution but an embodied, direct engagement with the environment's affordances—action possibilities—revealed through lived relational experience.

the theory. She argues that people come to discover animals' mental qualities through situated, direct perception as they engage with and become sensitive to what the animal is doing to them. I suggest here that mental qualities in lions are recognised by Maasai through direct relationship and interaction, by *doing* something and letting themselves be affected (Servais 2018). Thus, rather than apprehending Maasai understandings of lion behaviour as inferred qualities or symbolic constructs—echoing Ingold's (2000) critique of perceptual relativism discussed in Chapter 1—I treat these as directly perceived qualities through embodied, relational (manifested in *affective interactions*), and context specific settings (Airenti 2012; Morris et al. 2000; Servais 2018; Wieder 1980). Others have observed that animal keepers develop a more intuitive, pragmatic understanding of animals through direct and sustained interactions, contrasting with researchers, who empirically study animals using logical criteria to identify mental attributes in animals (Servais 2018; Silverman 1997; Wieder 1980). Embodied encounters create learning opportunities for both human and animal (Keul 2013); a sort of relational epistemology (Bird-David 1999). Recognising the intuitive knowledge people develop as effective ways to know animals, I treat the accounts of my Maasai interlocutors as valuable expertise.

Now I look at the Maasai's strategies for managing livestock predation as developed through direct perception of lion behaviour. Many interlocutors described lion hunting as a way of 'teaching' both people and lions how to live with one another. Goldman et al. (2013, 498) write that hunting lions is a "social act, which is linked to the process of social learning by lions and *ilmurran* of the dangerous character of the other, and keeps lions from becoming habituated to preying on livestock." I propose that lion hunting is both a social and *ecological* act[63] as it may have implications on the environment more broadly, from how organisms engage within it to how they co-create their ecological niches.

As mentioned in Chapter 4, *olamayio* provided a way for young Maasai men to develop the necessary skills to protect themselves, their community, and their livestock from lions and other (human and nonhuman) threats. A Maasai conservation leader explained the importance of learning to live well within their surrounding environment, which includes developing the skill to drive lions away from settlements: "The Maasai [men and boys] were trained to live in the wild and to acquire the skills necessary to live with wildlife. They learned how to be bush smart. When lions came near manyattas, they would know how to chase them out" (CA1). This skill, he

[63] As Ingold's ecological framework would have it, ecological dimensions inherently encompass social ones.

explained, was passed down from older men to incoming ilmurran through the practice of *olamayio*. "*Olamayio* teaches ilmurran how to defend the community. We are taught from a young age how to hold a spear and where to spear a lion." Moranism cultivates a cohort of trained warriors in every generation, equipping them with the knowledge and skills to manage lion encounters as well as cattle raiders.

In addition to educating ilmurran, lion hunting is described as teaching lions. Hunting (ritualistic or retaliatory) is described as a way to 'teach' lions important lessons about human presence —to teach them *how to be* around the Maasai. It serves to prevent future predation attacks through two mechanisms: the removal of problematic individuals and the broader modification of lion behaviour. As one elder from the Mara explained, "We scared lions so that when they would see people, they run away. It was a way to ensure lions don't come near people" (elder, Mara CI37). Many interlocutors reported an increase in livestock predation following the enforcement of hunting bans, as they can no longer enact this deterrence strategy[64]. They remarked that lions have adapted their behaviour to diminished human threat, "Lions no longer fear humans; they know they won't be hunted. When I was young, lions feared humans because there was *olamayio* then" (junior elder, Amboseli, CI24).

Hunting lions as a means to deter future attacks was a recurring theme across both field sites. This perspective is grounded in the idea that livestock predation is a learned behaviour transmitted within the pride. Many interlocutors suggested that when lions witness members of their pride being hunted by people, it serves as a deterrent, prompting the survivors to modify their predatory behaviour towards livestock. In the words of a man in Amboseli, "Cubs who learn from their mothers to kill livestock grow with that habit. Lions can also teach that habit to others when they are mating" (senior elder, Amboseli, CI76).

Moreover, several of my interlocutors noted lions' tendency to become habitual livestock predators if they do not face punishment after predation. They noted that lions which prey on livestock develop a 'taste' for them and will continue predating on cattle. They cited this habituation as a justification for killing lions following a predation incident. As one senior elder in Amboseli explained, "We were killing lions because a lion who kills a cow today will kill

[64] This perception is exacerbated by concurrent environmental factors, notably increased and prolonged droughts, which rapidly diminish prey availability (Otichillo et al., 2000; Craigie et al., 2010), potentially making livestock a more attractive food source for lions.

another one tomorrow" (senior elder, Amboseli, CI55). Interestingly, many interlocutors employed a thief-police metaphor to illustrate the concept of problematic lions that must be addressed through hunting. A senior elder from Amboseli articulated this perspective, "The purpose of *olamayio* was to scare lions away from people. Cows were our only source of income; we needed to make lions fear us. Why do you find police guarding a bank? Ilmurran were like police guarding their cattle" (senior elder, Amboseli, CI14). This analogy illuminates hunting as a necessary deterrent rather than mere retaliation. Lion hunting emerges as a form of correspondence[65] that negotiates the boundaries of human and lion territories within their shared lifeworld.

Maasai understandings of lions seem to align with the scientific literature on lion behavioural ecology. Research conducted by Lion Guardians (2024) in Amboseli found that less than 20% of the lion population is responsible for 90% of predation incidents, indicating that a small number of problematic individuals engage in repeated attacks. Petracca et al. (2019) similarly found that once a problem lion is identified, it tends to become increasingly problematic —the more livestock it kills, the more likely it is to continue—creating a positive feedback loop that reinforces this behaviour, which becomes difficult to break. Similarly, Woodroffe and Frank (2005) note that livestock predation by lions is relatively uncommon, and that selectively removing habitual stock-killing lions may help prevent the spread of this behaviour through the population. These findings, while they do not suggest that themselves, align with Maasai argument that eliminating these specific individuals may be the only way to prevent future predation. Some informants proposed that lions can be 'taught' to avoid livestock by teaching them to fear Maasai; one elder explained this involves "creating social distance or a barrier between lions and people so that when lions would see Maasai in red, they would be scared" (CA1).

Moses, a Maasai community ranger who has worked closely with lions in the Amboseli ecosystem, explained, "Lions will prefer to hunt cattle on their territory before hunting wildlife on other prides' territory" (elder, Amboseli, CI2). Lions' hunting practices are deeply connected to the landscape and other organisms around them (Loarie et al. 2013). Moses, who has been monitoring lions since his youth as a moran and now as a lion conservationist, explained that venturing outside their home range for prey, especially when there is insufficient wild prey in their

[65] I borrow this term from Ingold (2020), who uses it to refer to our active engagement with the world around us, emphasising the interconnectedness of human and nonhuman lives. In his framework, correspondence reflects a dynamic relationship where beings respond to one another, shaping their existence through mutual interactions.

territory due to drought, may cause trouble for lions (risking attacks from other lions), leading some to prey on cattle within their familiar terrain when the opportunity presents itself. Similarly, Valeix et al. (2012, 78) explain that "the costs associated with following migratory prey (both energetic costs and the significant costs of losing an established territory, along with associated reproductive loss and risk of infanticide) are likely to be higher than the cost of shifting to other less preferred prey," with a slight preference for livestock over resident wild prey[66]. Hence, retaliation against stock-killing lions serves as a way of reshaping the relational dynamics between humans and lions, 'teaching' them through embodied encounters how to coexist within the shared environment they inhabit. In other words, reminding lions that preying on Maasai cattle may cause trouble, too. This might encourage lions to either seek wild prey beyond their immediate territory or resident prey which might be more difficult to hunt, thereby reducing predation on livestock.

The effects of fear on behavioural adjustments, known as "ecology of fear," are documented components of predator-prey dynamics (Brown et al. 1999; Laundré et al. 2001; Lima and Dill 1990; 2010; Preisser et al. 2005; Sih 1980) as well as in intraguild dynamics with larger carnivores (Durant 1998, 2000; Hunter et al. 2007; Pangle and Holekamp 2010a, b). Predation risk can create a "landscape of fear" (Laundré et al. 2010), wherein animals perceive spatial variation in predation threat, leading to behavioural adaptations such as avoidance of certain areas and shifts in distribution (Oriol-Cotterill et al. 2015a). While research on the ecological effects of human predation on lions remains limited (Oriol-Cotterill et al. 2015b), hunting (or its absence) may have far-reaching effects on niche construction, habitat use and community structure. Indeed, as apex predators, lions' interactions with humans can have cascading effects through multiple trophic levels, fundamentally shaping ecosystems. For instance, their relationship may affect prey-predator dynamics (Gehr et al. 2018; Muhly et al. 2011; Smith et al. 2015, 2017; Suraci et al. 2019), mesopredator dynamics (Green et al. 2019; Prugh et al. 2009; Ripple et al. 2013; Zanón Martínez et al. 2022), trophic interactions at all levels and mechanisms shaping predator niches (Dorresteijn et al. 2015), and even the vegetation (Ford et al. 2014; Yovovich et al. 2021). In short, hunting doesn't just shape lion behaviour, it can have far-reaching ecological effects.

[66] In the study by Valeix et al. (2012), livestock accounted for 85% of the lion's diet during periods when migratory prey were absent, despite the high abundance of resident prey. The authors suggest that livestock were preferred over resident prey due to their high abundance, ease of capture, and predictable distribution in space and time.

Finally, the objective of reshaping relations with lions—both by educating them to fear humans and by eliminating habitual livestock predators—motivated many participants in the Mbirikani incident, as it does in other instances of lion hunting today. Hunters' actions are not simply reactive but emerge from a desire to recalibrate the shared space between Maasai, their livestock, and lions—that is, to prevent future attacks from lions perceived as problematic or unaware of how to behave around Maasai. Both *olamayio* and *orkiyioi* are understood as practices that encourage lions to maintain distance from people, cattle, and homesteads, by creating a *landscape of fear*. While *orkiyioi*, or retaliatory hunting, targets specific lions deemed problematic, *olamayio*, a more indiscriminate form of lion hunting, is believed to foster a broader awareness among lions of human presence and its associated risks. Both forms of hunting are not just preventive measures against future attacks, but a dynamic process of correspondence between Maasai, lions, and livestock, with potentially far-reaching ecosystem effects. Hunting emerges as a means through which Maasai actively shape their relations with lions and the broader environment; it is a process of mutual learning, where lions are guided in how to interact with Maasai, their cattle, sheep, and goats within the shared, ever-evolving environment they co-inhabit.

Notably, I witnessed this understanding of lion behaviour shape conservancy operations in the Mara. While conducting playback research in Lemek Conservancy, I spent many hours with the rangers—most of whom are Maasai from nearby villages—eagerly awaiting calls about lion sightings. One day, we received word that a lion had killed a cow which was grazing inside the conservancy during daytime. The herders had attempted to save the cow, using sticks and spears to drive the lion away. I inquired whether such actions were permitted inside the conservancy, as other conservancies within the Mara do not allow the use of spears. I noticed on earlier occasions herders carrying spears while tending their livestock within Lemek, but was unsure whether this practice was authentic or merely a performance for tourists, as some conservancies require rangers to dress in traditional attire to provide visitors with a romanticised Maasai experience. The ranger confirmed that the spears aren't just for show. He explained that, unlike other Mara conservancies, Lemek allows herders to chase lions from their kills to retrieve the carcass, though without killing or injuring them. When I questioned the rationale behind this potentially dangerous practice, the ranger emphasised the importance of preventing lions from feeding on livestock carcasses, even those they had killed. "They must take the cow from the lion so it can know that it did something bad. You don't allow them to feed on the cow," he explained. This policy reflects Lemek

Conservancy's unique management structure, as it is independently run by Maasai landowners, affording them greater autonomy in decision-making. Other surrounding conservancies do not permit herders to engage with lions in this manner, as it can lead to attacks and human injuries. Instead, herders are required to report such incidents to conservancy rangers—although not all herders have access to functioning phones—and wait for their arrival, which can sometimes take a substantial amount of time, allowing the lions to feed on the carcass.

Hunting as Politics

When discussing the incident in Mbirikani, another common response was, "it was all politics." This phrase invited deeper investigation: What kinds of politics motivated those men to kill the lions? Who were the key actors, and whose interests were at stake? As I delved further, I came to realise that people had different ideas about the 'politics' at play that day. Here, politics is understood as the negotiation and contestation of power over resources and decision-making. Hunting, in this context, emerged as a form of protest against what they saw as inadequacies in recent conservation governance. In this section, I demonstrate how Maasai use hunting as a means to contest prevailing power dynamics—either to assert local agency or to seek improved governance over conservation matters. Recognising lions as agents in these interactions, I also explore their roles as political actors within these power struggles.

Many informants framed the incident as a protest against what they saw as rigid and insensitive conservation interventions, especially the way uniform rules are applied without recognising the varying severity of local predation incidents. For example, many community members are dissatisfied with how Big Life's livestock compensation program operates, despite claiming a 97% reduction in lion killings since its implementation in 2003 (Africa Geographic 2023). Critics highlighted how the program's structure, particularly the lengthy period between livestock loss and compensation, fails to account for the immediate needs of economically vulnerable families—like Sankale who lost all his shoats on the eve of May 12, worried about how he would feed his family and send his children to school. As a Maasai Big Life employee explained, "People wanted to be compensated right away. They didn't want to wait for the money. When too many cattle die, it's too painful, and the payout is every three months" (junior elder, Amboseli, CI22). The three-month wait is widely seen as excessive, but its shortcomings become especially stark during times of acute hardship. As a result, this standardised, bureaucratic

approach to compensation is often regarded by those affected as insensitive—or lacking in compassion—for victims' urgent needs and circumstances.

Many community members also interpreted the incident as a manifestation of frustration with conservation authorities' response to the lion attack, which they perceived as both inadequate and delayed. They questioned why Big Life and the KWS did not make greater efforts to remove all the lions from the village right away. As one man explained,

> It is Big Life that didn't respond quick enough. The thing that made people kill lions, is that there was a lot of pain, and they saw the lions just lying there. Big Life took too long to respond; they should have chased them away. If any incident like this happens, they need to act quickly and be closer to the people affected, monitor the situation, and assist the family (junior elder, Amboseli, CI50).

This perceived inaction or detachment was seen as a failure by the organisations to adequately recognise the severity of the situation and the importance of Maasai safety, and was consequently interpreted as a sign of disrespect toward the community.

Frustration also stems from a broader loss of local authority over wildlife management. Before the hunting ban was enforced, Maasai communities exercised direct control over problematic individuals. Now, they rely on external actors to respond. As one senior elder in the Mara recalled, "Before, if a lion killed a cow, Maasai would retaliate. There was a day, around 20 years ago, we killed a group of 14 lions because that pride killed so many cows. By then, the KWS did not come." (senior elder, Mara, CI73). Older community members who experienced the pre-ban period expressed a similar loss of agency over management of the wildlife due to the community's inability to respond to incidents themselves. A senior elder shared his frustration,

> There is a sense that Maasai lost control over the wildlife. We depend on the conservancy to solve conflict with wildlife, but it's not always very responsive. There's a feeling that animals don't belong to us like they used to. We can't manage them and don't benefit from them (senior elder, Mara, CI49).

This diminishing control over wildlife management has led to reliance on conservation authorities to respond to incidents, resulting in feelings of disconnection from the animals that once *belonged* to them. Reliance on external bureaucratic systems often leads to disempowerment and frustration, especially when responses are perceived as inadequate, like in the case of Mbirikani. Processes for reporting predation incidents and claiming compensation are often complex and time-consuming, disproportionately disadvantaging community members who are illiterate or geographically

isolated—those most in need of support. Compensation payments can take months or even years to materialise, further exacerbating feelings of lost control.

For the Maasai, authority over wildlife implies social responsibility and stewardship towards these animals. As the elder noted above, when the Maasai speak of wildlife as no longer their own, it reflects an erosion of agency and control in this relationship—a loss of their capacity to mutually shape each other. They must now rely on external institutions to define and regulate their relationship with wildlife, a process that alienates them from the very environment that sustains their identities and livelihoods (Martin 2017). In the words of another elder, "We are being told how to act around them [wildlife]" (senior elder, Mara, CI42). The lions in Mbirikani embodied the power wielded by conservation and government agencies that now govern wildlife in Kenya. Their relaxed and unusual presence in Mbirikani—and the fact that they did not move upon seeing a crowd of people—served as a stark reminder to the local community of their diminished role in shaping interactions with wildlife. It reminded them that entrusting this relationship to outside actors has only emboldened the lions. As one non-Maasai conservationist noted, "These compensations schemes discourage people from addressing issues themselves—the traditional way— and have created lions that feed on livestock. At what point will we no longer accept the impact this has on communities?" (Amboseli, CP8).

Ideas of 'politics' were also linked to the contentious issue of grazing restrictions in the nearby Chyulu Hills National Park, enforced by KWS. In May 2023, the recent drought exacerbated tensions between Maasai in Mibirakini and conservation authorities as people desperately sought pasture and water for their cattle in the Chyulu-Tsavo ecosystem. These restrictions limit access to traditional grazing lands but also symbolise a broader struggle over land use and resource management (Brockington 2002). The resulting friction reflects a longstanding conflict between pastoralist livelihoods and conservation efforts in East Africa, as I discussed in Chapter 1.

A KWS warden assigned to ANP highlighted the contrasting management approaches between his office and the Chyulu-Tsavo team, "The KWS in Tsavo arrest people very quickly. They are more strict there. They are just following Kenyan law. But Amboseli has a special agreement to allow grazing, unlike in Tsavo." Amboseli's management team has adopted a more flexible approach in recent years. Rather than rigidly interpreting the law, they prioritise community relations and make decisions that balance legal requirements with local needs. He

concluded that maintaining good relations with the pastoral communities living adjacent to national parks is crucial to prevent incidents like the one in May 2023,

> Allowing cows to graze is the single most essential thing to be on good terms with Maasai and reducing human-wildlife conflict. Otherwise, they will get annoyed, and they will do something like killing lions. In national parks in Kenya, human activities are not allowed. Amboseli is a national park. We are bending the rule here. We have an agreement with the community. Wildlife travel onto community lands during droughts. We have to allow Maasai to come to the park. If you are chasing them with guns, imprisoning them, restricting them from the park, how do you think they will behave when a lion comes and kills one of their cows?

Contrary to this approach, the KWS in Tsavo responds to illegal grazing by arresting herders and confiscating their livestock. This practice of detaining both herders and their animals separately is particularly offensive to the Maasai community. The warden noted that stricter enforcement in Tsavo is partly driven by the need to protect the endangered black rhinos in the area, "Human presence where rhinos live is problematic. We must protect rhinos at all costs because they are endangered. We cannot risk conflict there." Nevertheless, Maasai livestock owners see this issue very differently. "We are Maasai, we know how to behave around wildlife," Dennis told me after our chat with the warden. "If it's between letting our cows die or risking grazing alongside rhinos, the choice is simple for us," he added. My interlocutors also reported instances of KWS rangers accepting bribes to allow pastoralists to graze, thereby restricting pasture access to those families able and willing to pay bribes, and undermining the rhino protection rationale for keeping people out of Tsavo.

The hunting incident at Big Life's headquarters unfolded after a severe drought and many community members had already lost a lot of livestock in the months preceding the event. Households made many sacrifices to prioritise the survival of their cattle, such as taking their children out of school to afford grass or walking long distances in search of pasture. Recent memories of being denied access to nearby protected areas for grazing during the drought added to a sense of resentment within the community that day in Mbirikani. A Maasai employee at Big Life suggested it was the compounded effects of the drought and the mismanagement of grazing rights that led those armed men to kill the six lions,

> We just had a very bad drought and people lost a lot of livestock. During that drought, we took our livestock in the park [Tsavo]. In Amboseli [National Park], they have no choice but to maintain good relations with the community because it is surrounded by group ranches. But the KWS

> arrested herders in Tsavo. Some of them are still in prison. Why is the KWS not listening to us when we Maasai are their partners in conservation? (senior elder, Amboseli, CI27)

It is worth noting that this man, despite being a long-time employee of Big Life, is also a member of the Maasai community in Mbirikani. Like many of his neighbours, he too attempted to graze his cattle inside Chyulu Hills-Tsavo during the drought, only to be denied access. His role as both a conservation actor and community member illustrates the complex, interconnected—and at times contradicting—positions many community members navigate in this region, straddling both conservation efforts and pastoralist needs.

The culmination of inadequacies in the compensation scheme, the delayed response to the predation incident, strained relations with the local KWS office, and a broader sense of lost agency in wildlife management all motivated participants in the hunting party. The anger and frustration that had built up in the months leading to the incident reached a boiling point; the attack of those six lions was the drop that overflowed the glass. For many, killing those lions was intended to provoke a response from conservation actors. The event drew national and international attention, compelling them to respond. A local ranger explained that *orkiyioi* is viewed by many Maasai as a political tool to pressure conservation stakeholders to act swiftly on certain issues. He said, "People now use *orkiyioi* to alert other people to pressure organisations to pay or compensate for loss of livestock. If you create an alarm, you force these organisations to be proactive" (outgoing Moran, Amboseli, CI64). An outgoing moran in Amboseli admitted to using this strategy, "At times, when we conflict with the KWS, we kill wild animals. By killing wild animals, we pain the KWS the same way their animals pain us" (FG5).

Lion hunting can thus serve as a deliberate strategy for pastoralists to pressure organisations into prompt and appropriate action following predation incidents, or to allow livestock to graze in certain areas during severe droughts. In this way, hunting becomes a means through which Maasai can reclaim a sense of power and agency, asserting control and influencing decision-making within a system where they often feel marginalised and excluded from governance. This dynamic aligns with Lichtenfeld's (2005) observation that Maasai–lion relations closely reflect the degree of control, or lack thereof, that the Maasai hold over conservation-related decision-making processes. Similar instances of illegal hunting as protest against conservation authorities have been documented in Tanzania, Uganda, and Iran, highlighting how hunting can

challenge power imbalances in decision-making that affect local livelihoods (Ashayeri and Newing 2012; Harrison et al. 2015; Western 1982).

Yet, these acts of resistance can be co-opted by local politicians to advance their own agendas—an aspect that remains understudied in the literature. Some informants stated that local leaders, particularly the chairman's political rival, exploited the community's existing frustration to motivate the armed crowd to attack and kill the six lions. In the words of a high-ranking Maasai conservationist,

> There was a competitor who wanted to ruin the reputation of the current group ranch chairman so that he would not be successful at winning the seat on the new cooperative[67] body. They [voters] see Big Life as the achievement of the current chairman. Since the incident in Mbirikani, Big Life stopped the scholarship program. The community will blame the current chairman" (junior elder, Amboseli, CI18).

He also suggested that the killing affects the group ranch chairman's standing with conservation NGOs. The incident, he argued, created negative publicity for both conservation actors and the group ranch committee, potentially giving the chairman's competitor an advantage.

Many of my interlocutors emphasied that local leaders wield significant influence over how the community responds to predation incidents. As one community member explained, "How the community responds to predator attacks depends on how our leaders communicate the information to the community, ensuring they do not incite anger" (junior elder, Amboseli, CI24). Therefore, swift and compassionate responses from leaders are essential; otherwise, it may leave a gap for others to exploit the situation for personal gain.

Hunting as Justice

In this section, I explore another motivation for killing lions: the desire to rectify perceived injustices. To frame this discussion, I draw on Adrian Martin's (2017) work on just conservation, which defines justice in terms of fairness—what individuals perceive as fair or unfair. Importantly, justice is subjective and context-dependent, shaped by personal experiences and perceptions.

Sankale experienced profound anguish. Despite being aware that retaliating against the lions may disqualify him from receiving compensation payments under the community agreement

[67] Mbirikani Group Ranch was subdivided in 2023 and at the time of fieldwork, the community was transitioning to a cooperative governing body to replace the previous group ranch committee. The cooperative will be managing lands set aside for conservancies during the group ranch subdivision process. This leadership role is seen as prestigious and associated with benefits deriving from international agencies and tourism partners.

with Big Life, he and several community members chose to kill these lions anyway. They were consciously willing to forgo the compensation they would receive in three months in exchange for immediate relief or a sense of justice. As Sankale's neighbour said, "The pain of losing all 11 goats inside his boma was too big. They had to kill them!" (junior elder, Amboseli CI17). This suggests that in moments of intense grief and anger, the promise of future compensation may prove inadequate in alleviating the profound pain caused by the loss of livestock—a loss often equated with losing kin. Research has shown that, while compensations can neutralise the costs associated with conservation, they are rarely commensurate with the experiences of loss and injustice (Woodhouse et al. 2022). The wounds of conflictual encounters with wild animals often extend far beyond the economic realm, and into the realm of social relationships and embodied emotions. This is evident in accounts from some families, who described how household heads suffered from high blood pressure due to the stress and emotional pain of losing livestock. Colombetti (2014), drawing on the enactivist tradition in cognitive science, argues that emotions and feelings are not just something we experience in our minds, but are deeply rooted in our bodily existence.

In Maasai communities, the pain of losing livestock to predators is often felt at the collective level, something similarly noted by Dickman (2010) who explains how a single severe incident can generate fear well beyond those directly affected. Community members frequently described the suffering of their neighbours or fellow villagers after depredation attacks as their own. This could be linked to the idea that all cattle on Earth belong to the Maasai, or that community members know that a lion which kills the neighbour's cows today may kill theirs tomorrow. This shared experience of loss underscores the interconnectedness of Maasai social fabric and highlights how unaddressed grievances can rapidly permeate the entire community. This shared experience can be understood through the Deleuzian concept of *affectus*, Massumi's (1995) notion of *affect*, or Ingold's (2018) idea of *being affected*. Distinct from emotion—which is typically conceived as an internal feeling that leads to expression—affect is not confined to individual subjects. Rather, it manifests as a force or intensity that moves people; it is non-conscious, embodied, and laden with potential. In other words, affects offer a way of theorising about the social forces that might trigger the body to respond in a certain way. In this context, a depredation attack becomes a point of intensity, opening up potentialities for action, thereby influencing how the community might respond to the loss. The affective and emotional nature of

human-animal encounters plays a crucial role in shaping the immediate and long-term responses to predation attacks, yet it is often underexplored in existing literature.

Anger was a polarising emotion that day in Mbirikani. As one man who was present explained, “People are most likely to retaliate if they are angry; like if the KWS takes too long to respond. People killed these lions because they were angry at Big Life — they didn’t respond to the issue quick enough in a way that made the community feel safe” (junior elder, Amboseli, CI1). The event sparked longstanding resentment linked to unfair treatment of people compared to wildlife. Throughout my time in the field, I frequently encountered variations of the phrase “they care more about wildlife than people,” with ‘they’ referring to conservation actors and the government (often conflating the two), a common narrative across Maasailand (Hazzah et al. 2014). Such statements underscore the Maasai’s enduring experience of inequality in conservation priorities, where wildlife protection has often taken precedence over the welfare of local communities and their livestock—an issue that remains ongoing, as evidenced in Loliondo and Ngorongoro, Tanzania (Amnesty International 2023).

The imbalance in conservation responses and attention reflects a lack of recognition for Maasai lives, livelihoods, and identities—and in turn, their inseparable connection to cattle. They perpetuate the idea that wildlife is more valued than Maasai’s cattle, which is perceived as disrespectful and unfair by the Maasai. An outgoing moran succinctly expressed this sentiment, “The KWS only comes when we kill lions. When lions kill our livestock, no one cares” (outgoing Moran, Amboseli, CI45). They see this imbalance as entrenched in Kenyan wildlife law, which inherently positions people and cattle as inferior to wildlife, valuing human loss at 5 million shillings, and lions at 20 million. One elder from the Mara highlighted the disparity between compensation for livestock losses and penalties for killing protected wildlife,

> Why do they give us peanuts when a lion kills a cow, but when one of us kills a lion we are fined 20 million shillings? Even if they pay us the same value of the cow, the compensation programme still doesn’t bring justice. Conservationists value lion’s life more than our livestock or humans. (senior elder, Mara, CI73)

Martin (2017) argues that a lack of respect and recognition for certain ways of life and cultural identities can foster resentment, undermining support for conservation in the long term. The collective and visceral experience of livestock loss, which is amplified by the feelings of resentment and marginalisation discussed above, affects how communities evaluate potential—

and acceptable—solutions. For instance, some of my informants remarked that even *full* compensation for livestock losses would not equate to justice for predator attacks. Compensation, in reality, falls short of covering the full value (economic, social, emotional) of the lost cow. It fails to account for the potential value the livestock would have generated during the interim period, such as milk production, offspring, social status derived from cattle ownership, and the emotional attachment to the animals. As illustrated in Chapter 3, Maasai have a deep, complex relationship with their cows. Losing one is like losing kin—a bond that transcends monetary value. Some, therefore, view retaliatory killings of lions responsible for depredation as a more immediate and satisfying form of justice as it is seen as commensurate with the emotional loss incurred. Such actions circumvent the need to wait for authorities to respond and are regarded as reciprocal punishments matching the perceived crime, reflecting a traditional understanding of justice that conflicts with current conservation laws and practices.

A common phrase that emerged across my two field sites when discussing lion hunting was "*tenerr enkishu nikiarr siyiok*" [lions kill our cows, we also kill them]. Dennis translated this sentiment to "tit for tat." Lions that predate on domestic animals are often portrayed as thieves stealing another's property, and consequently, they are seen as deserving appropriate punishment. As Kitasho explained,

> I don't have a problem with them [lions] except for some cases when they kill livestock or people. When that happens, we find a way to deal with them. Lions and hyenas that come to kill our livestock, we deal with it by killing them. But the rest, we are okay with them. Just like a thief who comes in your boma, you must kill it. If we kill it, it will prevent it from coming back for more.

Retaliatory hunts provide a sense that justice is served, ensuring fairness by matching the penalty to the crime, similar to Hammurabi's "an eye for an eye." However, with the ban on hunting, Maasai can no longer practice this form of justice openly. As one elder said, "We are not able to take justice into our own hands because of conservation" (senior elder, Mara, CI49). Conservation has become the Maasai's main avenue for restoring a sense of justice after predator losses, primarily through compensation and other community benefits. Yet, as noted earlier, external justice is not considered fair because it is not commensurate with the loss experienced by pastoralists. Moreover, the non-lethal, often financial, nature of conservationist responses is believed to influence lion behaviour in ways that may worsen the problem over time. The community sentiment of being "damned if we do, damned if we don't" was palpable. When a

depredation attack occurs, individuals must wait—sometimes for hours or longer—for rangers to arrive, and on occasion, they never do. This liminal period between the attack and the anticipated resolution often breeds anxiety and frustration. As the wait extends, individuals may begin to question the efficacy of this imposed system. Questions of identity—and especially of masculinity—may come to the fore, leading some to think, "I'm a Maasai, this is how we do things. I don't need these rangers to handle the situation."

For the Maasai, living well with wildlife does not preclude killing them. One can live along well with wildlife and still hunt those that are deemed a threat. This can be illustrated by one senior elder who recalled living well with wildlife and sometimes killing individuals for reciprocal justice, "We lived well with wildlife. We didn't have compensations back then. If you met a predator that killed cows, you would kill it. It's instant justice" (senior elder, Mara, CI42). These punitive acts ("tit for tat") which were otherwise seen as facts of life might seem as conflictual to those outside looking in. As mentioned, for many Maasai, coexistence with wildlife includes the occasional killing of wildlife—aligning with emerging understandings in conservation science that coexistence does not exclude the presence of conflict (Durant et al. 2022; Linnell 2013). Green et al. (2024, 7) call on conservationists to "broaden the notion of coexistence by removing the assumption that coexistence always equates to life for wildlife." Animal rights activists, however, have had a loud voice in the conservation world in Kenya, thereby influencing certain ideals of human-animal coexistence (pers. comm. w/ David Western[68] December 18 2024). Diverging ideas of coexistence can lead to misunderstandings between conservation stakeholders and Maasai communities. Such misinterpretations and misunderstandings between conservation actors and Indigenous communities are not uncommon, as noted by Blaser (2009), and can hinder effective conservation efforts. Blaser's concept of political ontology examines the misunderstandings that emerge between interlocutors with differing ontologies, particularly in settings where attempts are made to integrate Indigenous and scientific knowledge. However, these are not mere misunderstandings; there are significant power dynamics at play in determining which ontologies are recognised and privileged in decision-making processes (*Ibid*.). In conservation contexts, entrenched hierarchies of knowledge have led to the frequent undervaluing or marginalisation of

[68] David Western is an important figure in the Kenyan conservation landscape. He has been working in the Amboseli ecosystem since 1967, researching human-wildlife interactions and helping develop many of the area's conservation interventions.

Maasai perspectives on human-wildlife coexistence. This can be exacerbated by tourism development interests, which, for the sake of tourism revenues, dictate how the Maasai should live with the wildlife and land they inhabit (Nelson 2012).

While my interlocutors often reminded me that "Maasai have always lived with this wildlife," they have had to adapt their ways of coexisting with lions and handling predation incidents to better align with conservation and wildlife tourism priorities. Yet, restricting Maasai strategies to predation mitigation overlooks the depth of Maasai knowledge and practices for managing their relations with lions. Today, justice for predation is increasingly defined by financial compensation in lieu of lethal retribution—a means of redress that many Maasai perceive as insufficient. This shift raises critical questions about the long-term implications of imposing such a model of coexistence on Maasai communities. How will this approach to justice reshape the Maasai's relationship with wildlife? As monetary benefits become the expected price for living alongside wildlife, such an approach could engender a new kind of environmental ethic, one that reconfigures bonds and boundaries between people and animals. This contrasts with earlier ways of dwelling, where the presence of animals was as natural and unremarkable as clouds in the sky, requiring no compensation to share space.

Conclusion

As a result of the retaliatory hunt in Mbirikani, funding for community programmes were put on hold until those involved 'paid' 42 cows to Big Life. This number was calculated as seven cows per lion killed—an agreement Big Life has with the community. Those who participated in the hunt were disqualified from receiving conservation-related benefits, including school bursaries and compensation. Although Big Life has since resumed its scholarship program, at the time of writing, the children of the men who participated in the lion-killing incident were still not receiving their scholarships, despite the compensation for the predated livestock having been paid back. As one man rightfully noted, "The six lions killed in May at Big Life's HQ is a loss to the entire community. So many students lost their scholarships, and it wasn't even their fault" (junior elder, Amboseli, CI50).

The men who hunted those lions were aware of the agreement the community had with Big Life, yet they still decided to kill them. Despite knowing that they might risk losing benefits from conservation, killing those lions still felt, for many, like the right thing to do. The various,

intertwined motivations discussed in this section converged to influence their collective, affective response. Some were motivated by a local leader they believed in, others were frustrated by the ongoing tensions with the KWS. Others took a risk, hoping the event might advance their claim for better conservation policies, such as an improved compensation scheme. Some intervened to enact a sense of justice and to assert their role as protectors of their community and livestock.

The event in Mbirikani serves as an exemplary case encapsulating the diverse, overlapping motivations for lion hunting that I encountered across both field sites during my research. While often perceived primarily as a cultural practice, or a retaliatory response to financial loss, lion hunting among the Maasai serves multiple, entangled purposes beyond these limited categories. People often hunt lions with *intention* in mind. This includes ecological management, such as eliminating problematic individuals from an ecosystem and teaching lions how to behave around Maasai—thereby limiting future predation attacks in the future. Lion hunting can also be a tool for people to shape their social and political world. 'Politics' and trouble with local conservation stakeholders often emerge as motivating factors for lion hunting (Goldman et al. 2013), reflecting broader research findings that wildlife often become entangled in human-to-human conflicts (Dickman 2010; Margulies and Karanth 2018; Pooley et al. 2017). Lion hunting can also be a means through which livestock owners obtain justice—a form of retribution they feel is commensurate to the pain felt from depredation but that is not provided by their government or conservation actors. Importantly, this practice predates current conservation regimes, embodying a sense of autonomy and justice, deeply rooted in the Maasai's relationship with wildlife and the environment.

So, what insights can we glean from these ethnographic observations to rethink and more effectively address conflictual encounters between humans and wildlife? I propose an approach that addresses affects and emotions, fosters clear communication and trust, and is rooted in justice and fairness. This framework ensures a more compassionate response to 'conflict,' a need already highlighted by Pooley (2022). Moreover, I advocate for moving beyond the concept of conflict itself, focusing instead on what is at stake for all parties involved. The perception by external actors that communities are in conflict with wildlife—despite these communities feeling they have already sacrificed much for conservation—heightens pastoralists' sense of vulnerability and frustration, which can in turn drive retaliatory killings of large carnivores (Marker et al. 2003; Naughton-Treves and Treves 2005).

Throughout this thesis, I have deliberately chosen to use terms like 'livestock predation' or 'cattle loss' rather than 'human-wildlife conflict.' This choice provides greater specificity and aligns more closely with Maasai perceptions of these incidents—that predation is an unfortunate fact of life. By using precise language, we eliminate ambiguity and avoid the need for readers or listeners to speculate about the nature or perpetrators of these events.

Emotions in conflictual human-animal encounters are often overlooked, yet they play a decisive role in how people address depredation and other damage to livelihoods. Feelings are inherently relational, not individual (Ingold and Vionnet 2018). Maasai communities perceive each other's pain and respond to each other's affective and emotional states during such situations with lions. Feelings can quickly spread across the whole community, making it all the more crucial for conservation stakeholders to swiftly engage in a clear and compassionate dialogue. Importantly, monetary compensation alone is insufficient to address these complex emotional responses. Davis and Goldman (2019) argue that focusing solely on financial payments risks overlooking other, important factors that can influence the effectiveness of conservation efforts. Losing a cow is like losing kin (perhaps similar to losing an animal companion), triggering complex emotions that extend beyond economic loss. Recognition of this loss by conservation actors can go a long way.

I also showed that the root of conflict for the Maasai may not lie in predation incidents themselves—which are often accepted as an inherent part of pastoralist life—but rather in the inability to respond with what they consider an appropriate form of justice. The true conflict arises when Maasai feel disempowered to enact their own form of justice—one that recognises agency in lions. This suggests that more direct community engagement in the response process could provide a sense of agency and ownership over the outcome. For instance, this could involve engaging community members, and particularly predation victims like Sankale's family, in collaborative decision-making processes regarding the appropriate response to the six lions present that day—perhaps incorporating elements of restorative justice for the lions. Such involvement could potentially mitigate the perception that the KWS has exclusive 'ownership' of wildlife, reinforcing the idea that local communities are also legitimate stakeholders in wildlife management. This shift in approach could bridge the gap between conservation goals and Maasai practices, potentially reducing conflicts and fostering a more collaborative form of wildlife stewardship. Moreover, recognising Indigenous knowledge and their ways to relating to the

environment can foster support for conservation—acknowledging Maasai perspectives on lion agency and their mutual relationships is, in itself, an act of justice grounded in epistemic respect.

Trust, transparent communication, and clear dialogue are also crucial elements in conservation partnerships, which appeared to be lacking in Mbirikani on May 13, 2023—the absence of clear information about the planned management of the problematic lions exacerbated the situation, leaving people uncertain and frustrated. As a researcher working in these communities, I frequently encountered such communication shortcomings where local residents seemed uninformed about ongoing projects or received conflicting information due to indirect communication channels, resembling a game of 'broken telephone.' Important information, including legal documents and agreements with conservation stakeholders, was often held exclusively by local politicians and conservation organisation, though not readily accessible to the public. This lack of transparency created barriers to informed community participation and decision-making in conservation matters. Given my own struggles to obtain clear information, despite having access to resources, time, and certain privileges as a researcher, I often pondered how much more challenging it must be for local community members to access accurate information and engage in meaningful dialogue with conservation stakeholders. Political leaders do not always have incentives to be transparent or deliver clear communication—though they should be held accountable—so conservation stakeholders should engage more frequently and widely with the communities where they work. Many former group ranches and community associations already use WhatsApp groups to share information; conservation agencies could create similar channels to provide timely and accurate updates on policies and interventions that affect people's livelihoods. Addressing these communication barriers (and critically, the underlying power imbalances that shape how, when, and whose voices are heard) is crucial because it builds and maintains trust among stakeholders (Davis and Goldman, 2019; Young et al. 2021). Increased transparency and communications can help shift power; they provide the information that communities need for better decision-making and puts them in a stronger and more informed position. Lack of transparency, on the other hand, can exacerbate misunderstandings and hinder effective community participation in conservation efforts.

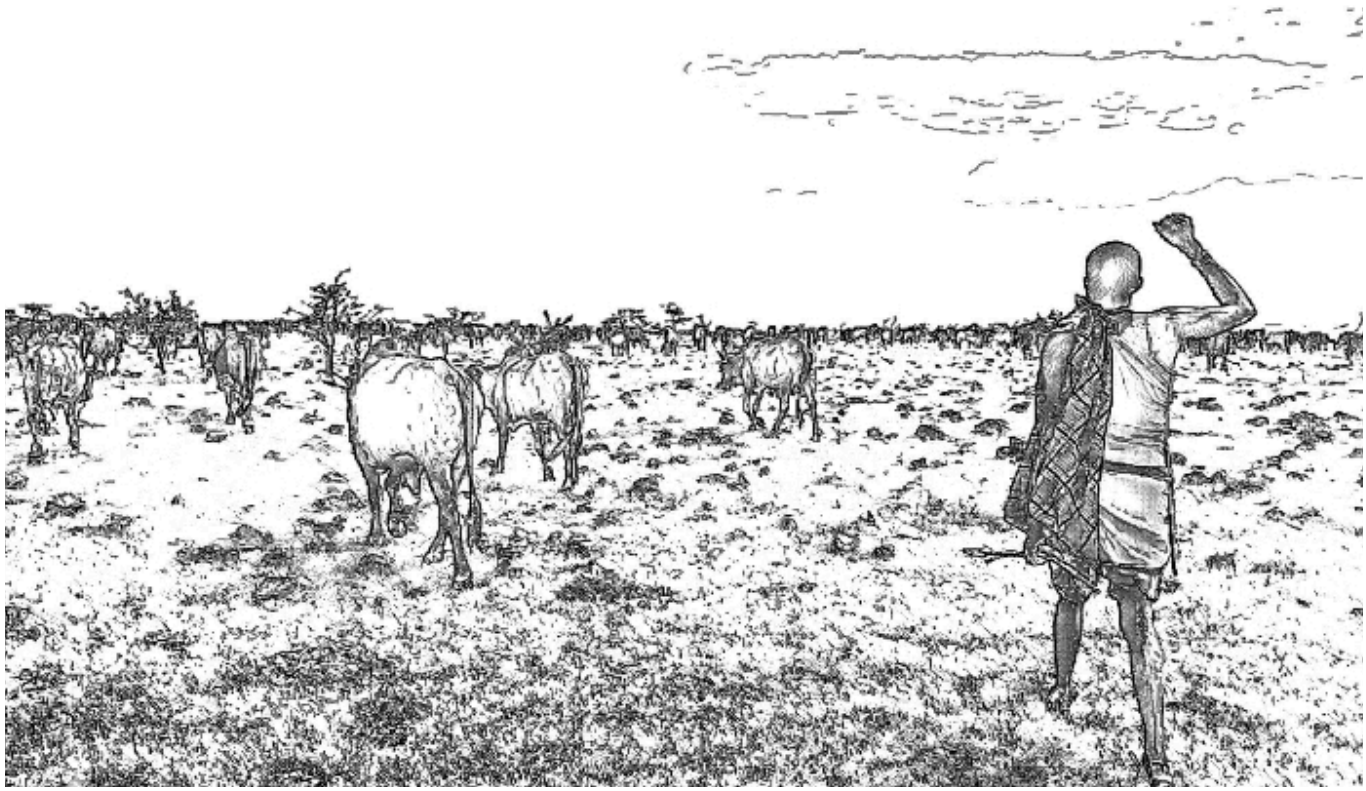
Perceptions of fairness and justice have an important influence on the outcome of conservation interventions (Martin 2017). If conservation measures are deemed unfair—such as hunting bans, grazing restrictions, and perceptions of inadequate responses to wildlife-related

threats and damages—hunting can become a form of political protest (Goldman et al. 2013). I also maintain that hunting may function as a means for communities to enact justice on their own terms. If communities deem the terms of conservation agreements as unjust or responses to depredation as insufficient, they may resort to taking matters into their own hands. These actions, while potentially at odds with formal conservation policies, are often justified within their own ethical frameworks.

Finally, we must move beyond a narrow understanding of lion hunting that focuses solely on its causes and instead adopt an approach that seeks to understand the *intended effects* behind these hunts. This shift in perspective would cultivate more appreciation for how Maasai perceive and relate to wildlife, potentially making conservation efforts more effective in the long term. By understanding the desired effects of hunting, stakeholders can develop targeted solutions that address these underlying motivations rather than merely attempting to eliminate the immediate causes. For instance, given the severity of the situation (considering the post-drought context, uncertainty about the lions' provenance, and the political transition within the group ranch), Big Life Foundation could have anticipated the heightened risk of this hunt and made an exceptional decision to compensate Sankale swiftly, bypassing the usual bureaucratic delays. This approach would have demonstrated a more responsive and adaptable conservation strategy, one that appreciates the collective affect and emotions surrounding livestock losses to lions. This decision could have been clearly communicated by Big Life to other community members, explaining that it was a special exception granted to Sankale due to the extraordinary circumstances of the incident. Transparent communication of this nature would likely have fostered greater understanding and trust among the community, with long-term benefits.

PART VI

ON HERDING



Chapter 6: Working Together in Staying Alive: Herding as an Intuitive Practice

Talking to animals, putting oneself in their shoes, so to speak, and learning patience in regard to them, respecting them as they are, implying that you know them and recognize them—all this belongs to communication, to being together engaged in work.

—Jocelyne Porcher (2002)

Dennis and I met Julius, a Maasai herder, during a market day in Aitong, Mara, when I was looking to buy a goat for *orpul*. In chatting about our research project, we asked whether we could accompany him while grazing the livestock under his care. He had traveled from the Loita region seeking employment in the Mara, which he referred to as the home of "rich Maasai." He found work grazing another man's cattle within a conservancy where the owner held membership. As a landowner, the herd owner is entitled to graze a certain number of cattle within the conservancy. Julius, friendly and eager to share his expertise, agreed to let us accompany him as he tended to the livestock under his care. I assured him that I would try to be a capable assistant, not complicate his work.

I had to ask permission from conservancy management to be able to access the conservancy by foot. Fortunately, as peak tourism season had not yet begun, my request was granted. The management noted that tourists might have raised eyebrows at the sight of a *mzungu* woman walking with cattle inside the conservancy. This experience contrasted with my fieldwork in Amboseli, where the absence of operational conservancies made accompanying herders into the bush a much less bureaucratic experience.

Dennis and I met Julius the following day around 8 am for chai. *Olchokut* normally live with the *olopeny* and the herd in their boma[69]. The *ilchokut* are often given a small area within the enclosure to install a temporary makeshift tent. This way, they sleep close to the cattle. We found Julius sitting outside of his black plastic tarp tent, with a red shuka around his body. Mornings in the Mara are chilly and damp. A thick shuka is needed to keep warm during those crisp morning

[69] Though it is common in some conservancies in the Maasai Mara, like in Mara North Conservancy, for herders to sleep in temporary bomas *inside* the conservancy to facilitate a rotational grazing plan. Herders will sleep in makeshift tents, circling thousands of cattle with their encampment. They shift their encampments in rotation throughout the year to allow for grass to replenish.

hours. Herders in the Mara typically delay their morning departure for grazing, largely because conservancy management requests that they wait until the morning game drives are completed and the tourists have returned to their lodges for breakfast. This request stems from tourism partners who report complaints made by tourists regarding the presence of cattle within the conservancies. The other reason for a late morning start is because of milk. Families with large herds might take a few hours to milk all their lactating cows. The women in the household normally start milking shortly after 6 am, when the sun starts to rise. Once all the cows are milked, they prepare the chai for the family, the herders, and any visitors that come by the boma, like Dennis and I.

Every morning, as the chai is being prepared by the women inside the house, the cattle, the *olchokut*, and the *olopeny* prepare for the day ahead. The *olchokut* and the *olopeny* inspect the herd, checking for any issues such as limping, illness, tick infestations, or missing animals—a process Jablonski et al. (2020) call "the morning routine." It is good practice for the *olopeny* and their *olchokut* to discuss a daily plan, including areas with good forage, watering locations, and potential challenges or threats perceived the day before. They consider: Do the cows need water or salt lick? Where is the grass plentiful and which areas are open for grazing? Were any predators sighted yesterday? The *olopeny* might even escort his herd out of the boma as they head towards the pastures to supervise the cattle and the herder. However, due to diversifying livelihoods, the *ilopeny* are now less engaged in this morning routine as they might have other commitments or work away from home—a common pattern in rural Kenya, where people, especially men, frequently travel elsewhere for employment (see McCabe et al. 2014 for a similar pattern among Maasai in Tanzania). Julius's employer did not accompany us in the morning routine while I was there; in fact, I never got a chance to meet him because he was working elsewhere.

As the sun gets warmer and the air drier, the cattle are restless for their daily pilgrimage to green pastures. A mood of anticipation stirs through the *enkang*, as hooves scuff the dust and bodies press forward. They begin to make their way outside the enclosure. By this time, the morning routine concludes and everyone's had their chai. We set out around 9:30 am with Julius's herd. The community becomes more active with increased movement. Each herd in the area exits their respective enclosures, fanning out across the landscape in a choreographed dispersion, each group instinctively knowing its position in the unspoken queue. Julius vigilantly prevented his herd from mingling with other herds as we made our way towards the conservancy land. Mixing cattle from different herds, he explained, can lead to lost animals and fights between bulls. "A cow

[caught up with the wrong herd] will start going around looking for its herd. It will get confused. So, we have to do *enkibooroto*."

Enkibooroto is the practice of closely grouped to prevent them from scattering. In Julius's words:

> In the Maasai way of herding, we practice *enkibooroto*. It is keeping the cows closely together when they are walking and grazing, as opposed to letting them disperse across a large area. You should be close to the cows. When we were young boys, our fathers used to say we should be close enough to hold the tail of one of the cows we are herding. If we weren't able to do this, we would get punished because it is bad to be far from your cows.

Figure 7 Julius herding the cattle into the conservancy, strategically placed at the back of the herd to push herd members to the day's grazing spot.

A good herder, he said, will continually and strategically reposition himself in relation to the herd and its location within the landscape. He strives to keep the herd as cohesive as possible, while

recognising that sparse forage may necessitate allowing the animals to spread out for adequate nutrition.

Walking along with Julius offered a welcome respite from the monotony and sedentary routine of village life. This experience was distinct from the participant observation conducted in and around the households. There was an undeniable thrill, tinged with an element of danger, as I ventured into areas typically off-limits to pedestrians—spaces usually traversed by outsiders like myself only from the safety of vehicles. Treading the open rangeland on foot, I found myself exposed to wildlife. Exposed to *lions*. I was getting closer to what I came to study.

I tried not to think of fatal scenarios. Instead, I focused my attention on Julius's grazing techniques and the cattle's movements. Julius and Dennis were great mentors as I set out for my first time. They told me everything I needed to know to keep up with them: what to observe, how to position myself within the herd, proper whistling techniques, and strategies for managing straggling cows. They emphasised the importance of staying mentally active throughout the day, carrying a walking stick, and using whistles and shouts to maintain awareness among both livestock and wildlife.

I quickly learned that herding is a demanding task. Keeping the cows together demands constant attention, leaving no time for phones, rest, or even conversation; a good herder is always being pulled in one direction or another. Though surrounded by animals, the experience first felt isolating. Boredom quickly set in—a precarious situation when a wandering mind could easily lead to losing sight of the ever-moving cows. Indeed, cows move surprisingly fast, and the larger the herd, the more challenging it becomes to maintain pace. I had arrived with my notebook, eager to record my observations, but I soon discovered that the constant movement made notetaking virtually impossible. It struck me then, as I recognised the incompatibility of herding and writing, just how deceptive the apparent slowness of a distant herd can be. From afar, cows appear to amble leisurely across the landscape. Yet, within the herd, a palpable rhythm emerges, a purposeful forward march that leaves no time for distractions, no opportunity to glance down at a notebook, lest one be left behind.

"What do you think about when you're herding?" I asked Julius. As a daydreamer myself, I wondered how herders kept themselves occupied mentally during long days in the field. Out there, one is mostly alone with the cattle; phone reception is patchy at best, and even if it weren't, staring at a screen would put the herd at risk. "I think about what I'm doing," Julius responded, his

tone suggesting my question was somewhat foolish. Perhaps I wasn't fully engaging with the tasks at hand. Realising I needed to immerse myself more sincerely in the process, I tried to find interest in seemingly mundane aspects of herding. I was guided by Despret's (2016) approach: as researchers working with nonhumans, we must seek to make them interesting and hold "open the possibility that surprises are in store, that something interesting is about to happen" (Haraway 2015 about Despret's research practice, 10). With this in mind, I approached herding with renewed curiosity and attentiveness, allowing the cattle and other critters to surprise me. It's about asking the right questions, Despret (2016 [2014]) writes, and leaving the possibility for animals to change us in unexpected ways through our interactions. So, I began to wonder: What do cows find intriguing? What matters to them? What do they need and want? I came to discover that this is *precisely* what Julius was thinking about, keeping his mind continually busy. This chapter delves into this attunement; a careful process of "working together" across species boundaries (Despret 2008). Indeed, herding is a collaboration between human and animal—a joint accomplishment in successful husbandry, or what Haraway (2016) calls "sympoiesis" (making-with). By attending to cattle's innate capacity to be interesting and attuning myself to their needs and cues, I began to see that herding is a constant *conversation* between herd and herder. It is the herder's mission to decipher the cows' needs, just as it is the cows' responsibility to attend to their herder's guidance. This demands active, embodied attention, mutual responsiveness, and a deep sensory engagement with the unforgiving savannah, where survival hinges on the swift recognition of subtle signs. It is through my phenomenological herding experiences that this chapter takes shape.

I examine Maasai herding practices such as *enkibooroto* and other forms of sensory engagement through which herd and herder collaboratively navigate vital processes of reproduction: eating, drinking, sleeping; living and dying well with each other—all while avoiding lions. Far from being a simple task, herding demands a profound understanding of animal behaviour, both domestic and wild, and a keen sensitivity to subtle environmental cues. Herding work requires a heightened state of alertness, with the body and all its senses attuned to the rhythms and dynamics of the surrounding environment. I draw on phenomenological insights into embodied perception and anthropology of techniques (Coupaye and Pitrou 2018; Ingold 2000; Mauss [1935] 1973; Merleau-Ponty 1962) and anthropological work on interspecies communication (Daly and Shepard 2024; Kohn 2013) to unpack the embodied expertise, or intuition, that informs Maasai herds and herders' work. To address the common critique that

multispecies studies often remain anthropocentric—that is, overly reliant on human-derived theories and cognition models—and fail to fully engage with nonhumans' intrinsic capacities, I inform my field experiences with scientific understandings of animal behaviour (Daly and Shepard 2024; Descola 2014; Shepard and Daly 2022). I draw on ethological research on cattle, lions, and other wildlife encountered while herding to contextualise my ethnographic accounts. Scientific studies, while inevitably linked to human experience, provide mechanisms to move beyond solely human models by using empirical approaches to explore animal experiences, testing whether anthropomorphic perceptions align with animal behaviour, and offering important insights into how animals might think, sense, and feel (Boissy 2020; Désiré et al. 2002).

Herder Intuition: Sensing Bodies and Interspecies Communication

Dennis and I conducted participant observation with herders across both the Mara and Amboseli ecosystems, repeating this process several times with five different herders in each location, with a total of 10 days of herding. Like with Julius in the vignette above, we accompanied herd(er)s as they left the *enkang* in search of water and pasture. At times we accompanied adolescent boys, at other times paid herders from elsewhere in Maasailand, and occasionally older, more experienced herders from the local area. Though I had confidently promised to be a capable assistant, I realised herding was far more demanding than anticipated. Herding involves a set of embodied, situated skills and techniques which take a long time to develop. As I outline here, herders use specific commands to guide the livestock, employ strategic walking patterns to direct movement, and maintain remarkable attunement to both the herd's dynamics and the surrounding wildlife. They maintain a keen awareness of spatial features and their own position within the expansive, sometimes disorienting landscape—a sensation I experienced firsthand.

Before delving into the flow of signs exchanged between human and nonhuman in the labour of herding, I first attend to the body (both human and nonhuman) as a central subject in this labour. I contend that centering the body as the medium of perception is essential for exploring the sensorial capacities that enable interspecies communication. This discussion is framed within phenomenological perspectives that situate perception within the body, alongside insights from the anthropology of technique, to highlight the embodied, technical, and intuitive skillfulness for effective herding. I then examine how this embodied expertise is harnessed by both humans and animals to detect signs, share meaning, and take action, especially in navigating dangerous

encounters with lions and other predators. Ultimately, this collaboration reveals complex webs of more-than-human sociality, where the Maasai's relations with lions are often mediated through their cattle, entangling all bodies in a shared world of vigilance and care.

Centring the Body in Intuitive Practice

In herding, the whole body becomes a technical tool—not an object or a passive instrument being used by the mind, but an active *subject* through which perception and action unfold within the environment. As Maurice Merleau-Ponty writes, "The body is the vehicle of being in the world" (1962 [1945], 82). We perceive, understand, and act in the world through our living body, not as an object but as a subject. As I demonstrate here, the body facilitates the movement and feeding of cattle, relies on its embodied memory of the landscape to orient the herd toward greener pastures, and through its perceptual sensibilities, interprets signs and communicates meaning to others. In short, the body plays a central role in perception, communication, embodied cognition, and meaning-making; as Omrani (2023, 130) remarks, the body "carries and communicates meanings through its own grammar and organic systems."

The simple guidance I received—where to stand, how to direct the cattle, what to look out for— proved insufficient to instil confidence in my herding abilities. Were the cows close enough? Was I too far back, or too close? Was one missing? Had they grazed sufficiently? Herding felt less like a step-by-step procedure and more like cultivating an embodied expertise, what I refer to as *intuition*. Unlike formal knowledge transmissible outside practical contexts, intuition "is based in feeling, consisting in the skills, sensitivities and orientations that have developed through long experience of conducting one's life in a particular environment," a learning process Ingold terms 'enskilment' (Ingold 2000, 25). It reflects a tacit, embodied knowledge enabling practitioners to make decisions fluidly and adaptively without relying on explicit rules or representations. French philosopher Henri Bergson (1912) describes intuition as a way of knowing that integrates cognitive and sensory data (thus exceeding representation[70]), connecting us viscerally with change as it unfolds. More recently, affect scholar Lauren Berlant (2011) characterises intuition as "a trained

[70] By this I mean that intuition goes beyond intellectual or analytical knowledge, which breaks things down into static parts and general concepts. Intuition is about apprehending the continuous, qualitative movement of life by combining sensory input and reflective understanding into a unified mode of knowing.

thing," emphasising its recursive formation through a lifetime of accumulated experiences and affects.

Intuition is about trained perception. It is developed in part through (both supervised and unsupervised) perceptual learning practices—that is, the changes in the way we perceive or interpret sensory information that result from repeated exposure, practice, or experience (Connolly 2019; Gibson 1963). These changes are relatively permanent and consistent, meaning that over time and with experience, our perception becomes more refined or altered in a stable way. For example, while the acacia trees appeared identical to me, for Julius they were recognisable markers, as he came to learn which features are important for their identification. Similarly, Julius could tell when the cows had eaten enough, knowing which behavioural characteristics to look for in their feeding. I, on the other hand, lacked the exposure which makes subtle differences stand out.

Intuition involves the mastery of body techniques. The anthropology of technique views life as a process of production by which humans develop technical processes (body techniques; gestures, speech) to make sense of, interact with, and influence vital processes (life, death, decay) (Coupaye and Pitrou 2018). Within this framework, the Maasai have developed herding techniques to enable and optimise cattle reproduction which in turn contribute to the ongoing cycle of human life. These techniques are inherently embodied. As Mauss ([1935] 1973, 75) emphasised, bodily techniques are not innate or natural; they are "effective and traditional," meaning they are both proven (efficacious) and socially transmitted (traditional). An effective technique must be attuned to the specific qualities of the material or body it acts upon (i.e. cattle; the rangeland ecosystem), enabling its latent potentials (i.e. cattle health, adequate nourishment, yearly reproduction, milk yields, avoiding predation) (Coupaye 2021). In doing so, effective techniques "enable potentialities to become visible, relations that enable relations," meaning that the right techniques reveal hidden potentials, meanings, or connections—such as actualising the potential of the semi-arid landscape and the cattle, configurating more-than-human social bonds, and thriving amid seasonal variability (Coupaye 2021, 423). Maasai children learn these effective embodied herding skills early on through playful imitation in herding games, cultivating these skills well before herding in the bush, and progressively applying them as they take on more advanced herding tasks with age (Grandin 1983; Grandin 1988; Tian 2017). Intuition, in this sense, is the internalisation of these "efficacious and traditional" techniques.

These techniques harness the herd(er)'s bodies' ability to perceive and respond to the actionable possibilities, or affordances, offered by the environment to realise the herd's potential (see Chapter 4 for a more detailed discussion on Gibson's concept of affordances). The herder's methods must be attuned to the specificities of both cattle and land; they must suit the temperament of the animals, the lay of the savannah, seasonal variability, and the moment's risks. A good herder does not force the herd into a shape but uses his entire body to *work with* the animals' tendencies and the landscape's affordances to bring out the most fitting movement or formation for that context. The acacia trees, the positions of the cattle, and the patterns of the savannah are not just passive backdrops; they actively invite certain actions and responses. For instance, when we needed to escape nearby lions, Julius harnessed the layout of the land by steering the herd toward an open field, where he could maintain clear sightlines of the herd and any approaching lions. He also explained how he positions himself within the environment and adjusts according to the time of day to practice *enkibooroto*:

> In the morning, you should be at the front of the herd to make sure cows don't run into lions. In the evening, be at the back to push them towards their home and prevent them from spreading. And when they are grazing, you should be in the middle. If you are at the back when they are grazing, they will spread and they will be easily attacked. But when you are in dense thickets, you should be leading first, in case there are lions hiding. This is the Maasai way of herding. You are always supposed to know where you should be.

The herder's intuition enables him to detect and use these affordances effectively. In this ongoing practice of staying alive and thriving amid uncertainty. As such, intuition is a process of education inseparable from *doing* in idiosyncratic environments. Such sensitivity to the environment's affordances is crucial in arid and semi-arid environments where harsh seasonal and competitive conditions can quickly ravage a herd. Herders and cattle must leverage their intuitive ability to adapt to seasonal variations—dynamic shifts that shape new possibilities for action. In the wet season, the Maasai practice the 'linka' system, which creates a bimodal grazing pattern where cattle graze near and far from the household at different times, taking full advantage of plentiful forage (Butt 2010; Western and Finch 1989). Conversely, in the dry season, herders must skilfully track scarce, patchy resources, increasing cattle movement and reducing pure grazing time while optimising survival within constraint (*Ibid*.).

This embodied, situated expertise became apparent in my own struggles to herd. My movements were clumsy, stumbling over branches as I tried to attempt *enkibooroto*. My body felt ill-adapted to the demands of the work and the rugged conditions of the bush. Unfamiliar with the

cattle—their individual personalities and group dynamics—I found it difficult to interpret their moods and desires. Enduring the harsh environmental conditions, maintaining the herd's pace, and preventing the cattle from scattering—all while staying alert to signs of predators—felt overwhelming. When I paused to record field notes, I would quickly become disorientated: the herd receded into the distance, leaving me momentarily lost within a seemingly homogenous landscape. By midday, depleted of water and hungry, I marvelled at the endurance of herders who labour without sustenance until sundown.

Finally, herding exemplifies the process of enskilment which eventually builds into intuition. It is also an example of where technical and vital processes are entangled in a "regime of co-activity" between humans and nonhumans (Pitrou 2017). Herding work demands sharp perceptual attention, rich knowledge of the landscape, and a sophisticated repertoire of somatic techniques and ways of knowing—technical, environmental, sensorial, and semiotic—passed down through generations, shaped by ongoing environmental attunement, and honed through years of hands-on practice. Maasai herders and their cattle engage in what resembles a dance, each aware of its position and direction in the chaotic collective. They anticipate and interpret one another's behaviours and movements. Julius can distinguish a contented grunt from a fearful one, just as the cattle hear the nuances in Julius's whistle and know its meaning. The role of sensory information —olfactory, auditory, visual, and kinaesthetic cues—is essential to this dance. These sensory cues enable communication and signalling between herd members, shaping herd(er)s' decision-making processes and their interactions with the ecosystem more broadly. In the following section, I delve deeper into this sensory ecology so central to intuitive herding.

Sensory Ecology for Interspecies Communication

I mentioned above that a good herder *works with* the animals under his care; that his techniques must be "attuned to the properties attributed to the thing upon which [his is] acting" (Coupaye 2021, 423). This necessitates various forms of interaction and communication between living beings involved. Sensory evaluation and the exchange of signals about opportunities, desires, fears, and threats shape the movement of Maasai herd(er)s across the landscape. Drawing on the work of Shepard and Daly (2022), I call this dynamic, sensorial process of mutual responsiveness between bodies *Maasai sensory ecology*.

In biology, sensory ecology is a field focused on understanding the sensory systems of animals to explore how they perceive their environments and how these perceptions influence their interactions with the world (Dangles et al. 2009). In Chapter 2, I briefly discussed how biologist von Uexküll challenged the mechanistic notion that animals react blindly to stimuli by suggesting that they interpret *significations*. This world of signification in which the animal is immersed is what von Uexküll termed the *Umwelt*, or what Ingold (2000) refers to as lifeworld. This lifeworld is the subjective perceptual 'bubble' in which each organism lives. It is therefore dependent upon the senses that a particular organism possesses along with the internal workings of its nervous system (Burnett 2011). Organisms act based on preceptors (*Merkwelt*), meaning their perceptual experience of the world shaped by their respective senses, and effectors (*Wirkwelt*), a set of actions that organisms' bodies are capable of accomplishing (Uexküll 1934/2010). Things, materials, and phenomena gain their qualities according to the organism's needs and the way through which it can act upon these needs. Thus, action is "intimately attuned" to perception (Ingold 2011, 79).

In anthropology, sensory ecology is an approach that foregrounds how sensory modalities (sight, sound, smell, touch, etc.) are not mere passive receivers but actively involved in shaping behaviour, communication, and survival within situated webs of ecological and social relations. It provides a framework to examine "the way in which human-nonhuman relationships are mediated by sensory engagements" (Daly 2024, 143). This approach investigates how sensory perceptions, such as taste, smell, and sound, both shape and are shaped by interactions between humans, nonhumans, and their environment. The field of sensory ecology has been informed by the work of scholars such as Glen Shepard (2004), particularly his work on human-plant interaction and intelligence in the Amazon, as well as other anthropologists focusing on sound (Feld 2012; Whitehouse 2017) and olfaction (Daly 2024) to understand human-environment relations.

Drawing on sensory ecology's emphasis on the senses' role in mediating human-nonhuman relations, Ingold's (2000) work further deepens this understanding by highlighting the interconnectedness of sensory modalities. He discusses "sensory coupling" in perception and action, arguing that perception involves an inseparable integration of the senses, rather than a distinction between them (2000, 105). In practice, the senses are closely intertwined and work together when paying attention. For example, Ingold writes, a birdwatcher first hears the bird before homing in on the source of the sound. Here, the organs of hearing serve to orient vision towards its target (*Ibid.,* 279). Pink (2009, 28) also makes the case for the interconnectedness of

the senses, drawing from studies in neurobiology that demonstrate that "what we perceive […] is a product of inputs from different sensory modalities that combine, substitute, or integrate." When a herder makes his way through the bush, his senses amalgamate and orient each other. Rather than mediating between things that happen in the world and representing them in the mind, as proposed in Western thought, the herder already *acts* as he observes—"there can be no observation without participation" (Ingold 2000,108).

Building on the interdependence of the senses and the inseparability of perception and action, it is also crucial to consider how these sensory processes extend beyond human experience to encompass nonhuman beings and their modes of communication. Shepard (2018) argues that, if we are to take nonhuman interlocutors seriously, we must engage with their distinct modes of communication and expressions of intelligence, while also seeking a more biologically informed understanding of their behaviours and capacities (see also Shepard and Daly 2022). The field of ecosemiotics, particularly, examines how humans, animals, and the environment engage in sign-based relationships through visual, auditory, olfactory, and tactile communication systems. Eduardo Kohn's (2013) work with the Runa of Amazonian Ecuador has become a cornerstone in this field. He argues for a broader understanding of semiotics, proposing that nonhuman beings also use signs to re-present and interact with their surroundings. As he states, "not all signs have languagelike properties, and […] not all the beings who use them are human" (26). During my walks with herd(er)s, I came to understand herding as an activity whereby humans and cattle must engage in sign-mediated relationships with their environment in order to ensure their collective flourishing.

Communication unfolds beyond the confines of symbolic language, instead taking shape through a shared, semiotic landscape of signs accessible to both herd and herder (Kohn 2013). Cattle use a range of sensory modalities—such as chemical signals (smell, taste, and pheromone detection), auditory, and visual cues—to perceive their environment and communicate with each other and their herder(s). I contextualise my observations of herder-herd interactions by incorporating knowledge on cattle cognition, sociality, perception, and communication (George and Bolt 2020, 2021; Green 2020; Moreno García et al. 2020; Mounaix et al. n.d.; Munksgaard et al. 1997; Padilla de la Torre and McElligott 2017). My observations resonate with this scientific literature: cows are gregarious, social animals, with the ability to foster and communicate emotions with their human and nonhuman kin. As Padilla de la Torre and McElligott (2017) remark, "cattle

are not just simple herd animals, but instead show evidence for complex cognitive and social behaviors, as well as rich emotional lives" (522).

The herder must be acutely aware of his animals' sensory universe to understand how they perceive and mediate various signs in their environment, as this information helps him guide the herd. Experienced mentors guide him, offering clues on how to consult and attend to his cattle—"watch out for this, attend to that," leading him to develop "sophisticated perceptual awareness" (Ingold 2000, 37). However, this instruction only takes on meaning in the herder's own engagement with the herd, as he comes to know his cattle intimately through practical involvement with his whole, sensing body. It is through this "education of attention" that the herder develops the ability to skillfully perceive and respond to his herd as they move through the environment, making meaning together (Ingold 2000, 37).

Julius and Dennis, along with other herders, offered some 'clues' to guide my attention when herding. I learned that cattle possess the capacity to alert others, including their herder, to potential dangers. Indeed, their sense of smell is more acute than humans', owing to two olfactory systems: the mucous membrane of the nose and sinus, and the vomeronasal organ (Albright and Arave, 1997). Cattle can detect pheromones in predator secretions, such as those from lions, which trigger fear responses that communicate the potential danger to the rest of the herd. When one animal detects a threat, it releases stress-related pheromones that modify the behaviour of other cattle (Boissy et al. 1998; Schloeth 1956; Signoret et al. 1997). The presence of chemical signals in cattle excreta further alerts other herd members of dangers, potentially triggering avoidance behaviours (Mounaix et al. n.d.). This chemical signalling serves as a warning system, often leading to visible reactions like excitement, urination or defecation. I witnessed this when herding with Julius. As we approached a dense thicket, several of his cows raised their tails and began urinating, causing others to jump and scatter. Dennis grabbed my arm with excitement and exclaimed, "Look! This is what cows do when they smell a lion! When the cows stop grazing and start to smell around, you know there's something around." Dennis whistled loudly at Julius who was far ahead of us to get his attention. They exchanged a few words in Maa and swiftly redirected the cows towards a more open area. Thankfully, we avoided encountering any lions that day. "They probably smelled the pee or poop of a lion that was here earlier, which means there are lions around," Dennis added. We remained particularly vigilant for the rest of the day.

Dennis and Julius also taught me how to recognise signs of lions' presence by observing wild animals. The presence of certain animals, they explained, can indicate that a lion is nearby. Knowing how to read those signs, they said, would keep me and the cattle safe. "Hyenas and jackals like to stay close to lions because they might get a chance to scavenge from their kills," Dennis explained. "And vultures circling overhead could signal a potential kill and predators nearby." Good herders pay close attention to wildlife's behaviour, knowing that animals alter their behaviour in the presence of predators. For example, if multiple herbivores are all looking in the same direction, it might mean they've spotted a predator. When zebras and antelopes spot lions, they sometimes bully them by moving towards them as a group, a behaviour that warns others of the danger. This is known as predator inspection behaviour whereby prey observe and follow predators at a safe distance to gather information or to deter them through group action (Caro et al. 2004; FitzGibbon 1994). Certain types of birds and monkeys emit strident alarm calls upon spotting big cats (Seyfarth 1980), and ground birds like crested francolins make distinctive alarm calls, as they are particularly vulnerable. Baboons, who also spend time on the ground, will alert their peers as well. Therefore, a keen herder stays vigilant to these vocal signals and learns to distinguish alarm calls indicating big cats from those signalling other threats. "The alarm calls of prey animals will help you determine if there is a lion nearby," Julius said. Like cattle, these wild animals are often the first to spot a lion, much before humans. "If you notice these animals acting like they saw a lion, pay attention to which direction they are looking. Then, check for tracks on the ground. Walk your cows in the opposite direction."

Herders can also use their cattle's sense of hearing to detect lions. Cattle possess a remarkably acute sense of hearing, far surpassing that of humans; they listen constantly as a way of remaining vigilant to their surroundings (Mounaix et al. n.d.). Their auditory range extends from 23 to 37,000 Hz, encompassing a much broader spectrum of frequencies than the human ear can detect (*Ibid*.). This heightened auditory sensitivity allows cattle to perceive sounds that are entirely inaudible to humans, which is crucial for survival. It enables them to detect potential predators from considerable distances and accurately locate the source of sounds (Heffner and Heffner 1992). An approximate localisation of the predator is sufficient to know in which direction to flee. Alert herders, therefore, can learn to pay attention to their cattle to avoid lions.

Cattle also use their voices to communicate between themselves and with their herder. They can recognise distinct meanings (warning, threat, anguish, call to gather) in their

conspecific's vocalisations: mooing, grunting, bellowing (Hall 2002). Recent research demonstrates that cows maintain individual identities through their vocalisations and use them to communicate with one another (Green 2020; Green et al. 2019). Green's (2020) cattle bioacoustics studies reveal that cattle retain their individual voices across different emotional states and throughout their lives, using distinct vocal cues in both positive and negative situations. This vocalisation helps them maintain contact with the herd—and, I argue, with the herder as well—while expressing a range of emotions, including excitement, arousal, engagement, and distress, likely to attract social support from conspecifics (and possibly interspecifics). Green et al. (2019) suggest that recognising cattle's vocal individuality could assist human handlers in detecting individual cattle's needs, improving their welfare in the long run. Herders attuned to their animals' vocal individuality and the nuances within them are better equipped to understand their emotional states and respond appropriately.

I observed how ilchocut and *ilopeny* could distinguish between the low, contented moos of well-fed cattle and the higher-pitched, anxious calls of animals sensing danger or pain. One morning, Dennis heard a distinct, agitated bellow from a cow within the enclosure. He immediately knew something was amiss and quickly located the cow in the herd to inspect her. He discovered that she was limping due to a thorn in her hoof. This ability to recognise individual voices within the collective enabled Dennis to provide prompt, individualised care, demonstrating how attuned herders can notice when their animals are sick, happy, or distressed, effectively responding to their needs and emotional states.

Research has also shown that vocal communication with cattle is also possible via the human voice. Cattle are sensitive to the human voice and can identify it. Inflections in the voice and recognition of the person calling have been shown to lead to behavioural changes (Waynert et al. 1999). One study found that calves can respond to their name when told to suckle or leave the group by their human handler (Murphey and Douarte 1983). Maasai herders' ability to direct their herds efficiently across dangerous landscapes relies on cattle's identification of, and sensitivity to, the human voice and its signals. This explains why Julius's cows were initially reluctant to respond to my commands; my voice was unfamiliar to them, lacking the history and established connection, and my foreign accent likely added to that unfamiliarity.

Cattle who become habituated to their herder's voice and the nuances in the tone can make sense of their commands and respond accordingly. Julius and Dennis showed me how herders

'talk' to their cattle. When Julius was whistling at the lagging cows, Dennis exclaimed, "See those cows are running because Julius is *talking* to them like 'Come on! Move fast!' He went at the front first, shouted at those fast cows to reduce their speed. Then, he came at the back for the lagging cows to speed them up. You see, all those [lagging] cows are running now, because he is talking to them." The leading cows understood Julius's commands to reduce their pace, just as the straggling cows understood that they had to pick up theirs. I also learned that Maasai give names[71] to their cows enabling them to easily call and command them from a distance. "If there is one moving in a separate direction, you can also call the cow by its name. These notorious cows have names," Dennis explained.

Herders must also adapt their practice to cattle's sense of sight. While their laterally positioned eyes provide a wide field of vision (up to 330°), cattle have weak perception of detail. They have long sight, but long to focus (Mounaix et al. n.d.). They also possess blind spots both behind them and in the front where their lines of sight do not converge; these blind spots expand when the animals are frightened or stressed (*Ibid*). Knowing these vulnerabilities, herders strategically position themselves to protect the herd. This includes leading the cattle into dense thickets, with the herder positioning himself at the front to check carefully for hidden lions, while actively scanning the surroundings—especially from behind—to prevent predators from exploiting the cattle's limited vision.

Maasai sensory ecology extends to herders' attentiveness to their animals' forms and personalities. Animal personality is understood as consistent individual differences in behaviour among individuals of the same species that remain stable over time and across various contexts, encompassing correlated behavioural, cognitive, emotional, physiological, and morphological traits (Carere and Maestripieri 2013; Dall et al. 2004; Gosling 2001). I was always amazed watching herders effortlessly identify individual animals within crowds of hundreds of cattle, especially since I struggled to pick out the cow I had purchased for *olpul* among a small group of about 20. Maasai pastoralists develop intimate knowledge of their cattle's individuality through physical, behavioural, vocal, and genealogical attributes, perceiving idiosyncrasies that escape the untrained eye. Remarkably, it almost seems as if Maasai can *sense* when an animal is missing from

[71] Galaty (1989) explains in more detail the Maasai cattle naming system. Names are often associated to the animal's genealogy, the social and economic transactions by which it (or its ancestor) was acquired, or descriptors (behavioural or physical) of the animal itself.

their herd without counting, revealing a deeper, intuitive understanding of the herd's composition. In fact, the concept of counting cattle itself is taboo among the Maasai, implying that such skill is a deeply ingrained expectation of Maasai life. When I inquired about the size of Ben's herd, one of my host in the Mara, he responded, "Maasai don't count their cows." I asked, then, how Maasai know the number of animals they own, he explained, "One should know, like a father knows all his children"—once more, alluding to Maasai-cattle kinship.

Herders use this remarkable skill to identify each member of the herd swiftly when they are out grazing, ensuring the whole remains together. Research on ruminants shows personality types, such as shy versus bold, informs their grazing patterns—with shy animals grazing slowly and in tight groups, and bold animals moving faster and spreading out more widely (Moreno García et al. 2020). The mix of individual cattle personalities generates a collective 'culture' of habits and knowledge passed down across generations (e.g. socially important individuals can affect herd cohesion, movement, and resource use) which herders must be attuned to. Herders learn to recognise these individual traits and the herd's 'culture,' enabling them to detect atypical behaviours (e.g. if a fast cow becomes slow, it might be sick) or missing animals. Herders blend their knowledge of individual personalities and group dynamics with auditory markers to track members of the herd simultaneously and prevent the group from scattering. For instance, they associate movement patterns of social groups—leaders at the front, followers in the middle, and stragglers at the back— with individual spatial locations and sounds, such as the bells around cows' necks. As Julius explained, justifying why it is important to listen for the bells around the cattle's necks,

> There are three groups of cows: some that lead the herd, some that stay in the middle, and some that lag behind. Each group should have a cow with a bell. At times, if the herder is not keen, he may lose the ones at the front or at the back, who often wander off together. Mostly, cows get lost by group. If the herder was sleeping and wakes up, he might find the middle group, but notices the cows at the front or in the back are missing. The bells make it easier to find the cows because you can hear them from far away. If the cows are too far, the herder will check for hoof prints and follow them until he hears the cowbells.

Through their rhythmic chimes, these bells create a shared acoustic landscape guiding the herder's movement, enabling him to practice *enkibooroto*, in turn enabling herders and cattle to safely navigate the rangeland together. This auditory information is integral to the semiotic processes of signification and interpretation that shape herding decisions.

The placement of bells on cattle is a practice grown out of a deep, ongoing attentiveness to the animals. From their intimate understanding of individual animal behaviour and spatial habits, herders strategically affix bells to specific cows within each group. Cows prone to wandering or scattering are prioritised for bell placement, transforming them into auditory markers. These carefully chosen bells not only facilitate the identification of individual animals but also enable herders to locate their livestock across vast distances or within dense vegetation. Julius explained that each bell possesses a subtly distinct timbre, allowing experienced an *olchokut* and *olopeny* to identify individual cows and group affiliations based solely on the bell's unique sound. Bell placement is not static but unfolds in response to the changing conditions of the cows themselves—their pregnancies, injuries, illnesses. Consequently, herders must be intimately acquainted with the herd's dynamics to adjust the bells in concert with the herd's own transformations.

Galaty (1989) noted this remarkable ability of Maasai pastoralists to recognise and remember individual cattle, attributing this skill to a system of 'symbolic' herd organisation where "multiple dimensions of cultural classification provide for cognitive organization and redundancy" (Galaty 1989). According to him, the Maasai have developed a sophisticated system of classifications that include culturally defined categories for animals (e.g., brands and earmarks, livestock names and descriptives) and patterns of identification built up through experience (e.g. genealogical lineage, visual markers, spatial distribution, grazing preferences and behavioural traits). This cognitive organisation, he argues, is institutionally shaped and honed through direct experience with cattle over time. This system relies on redundancy: if one descriptor (e.g., coat colour) fails, others (lineage, spatial position) compensate, enabling herders to swiftly detect any disruption in the herd's usual pattern. Since cattle tend to scatter due to differences in feeding preferences, walking speeds, and temperaments, herders track each herd member through what Galaty calls "rumination" on these symbolic classifications. By fine-tuning their visual and auditory perception, they can swiftly identify missing members and locate them before they become vulnerable to predators. This process subdivides the herd into manageable 'chunks,' enabling efficient cross-checking across multiple dimensions.

However, in line with the ecological approach to perception I have taken thus far, I understand this process to be more embodied and intuitive than strictly symbolic: rather than fixed cognitive schemas, these patterns emerge from ongoing relational and perceptual engagement between herder and herd. In other words, this classification system is less about establishing and

memorising static symbolic categories than it is a dynamic, *relational* process of knowing and *doing* together. It is not the attribution of characteristics that helps herders know their livestock; rather, their knowledge emerges from their interactions and process of becoming-with. Maasai herding involves adaptive and improvisational response to changing herd and environmental conditions, requiring embodied skills and sensory attunement that cannot be fully captured by static symbolic representations.

The use of bells as auditory markers illustrates that this process is relational, embodied, and multisensory. As the herder moves along, bell sounds constantly change (variants) due to movement and environment, but their unique tone and the cows wearing them remain constant (invariants). Herders detect these invariants (or consistent features) to guide their movement without having to mentally reconstruct fragmented sensory data. “Listen carefully,” Dennis told me as the bell sounds from the back group became quieter. He knew immediately that some cows were straying. Without needing to think hard or check a mental list, he followed the softer jingles while clapping his hands to hurry the lagging cows. This moment shows how Dennis’s ears and body moved together seamlessly with the herd and sounds—tracking the familiar bell patterns and spatial cues in real time. It was less about memorising symbols or ticking boxes mentally than directly sensing how the herd’s rhythms shift as one moves through the land. Perception (across multiple sensorial modalities) and action thus unfold together as a seamless, embodied process rather than neatly separated into discrete cognitive steps. Ingold (2000, 166) writes, “perceptual activity consists not in the operation of the mind upon the bodily data of sense, but in the intentional movement of the whole being.” In other words, perception is not static reception; it’s an active process of moving, sensing, acting simultaneously.

Poor herders are those who fail to attune to the individual members of their herd and cannot swiftly identify when an animal is missing—a lapse that often leads to the animal’s death. One herder in the Mara recounted an attack on the herd he was employed to care for, attributing the incident to a mistake made by a second herder who was responsible that day. The second herder had failed to notice that one of the cows was nearing birth and did not monitor it as closely as he should have when they were out grazing. “He did not notice that the cow was left behind.” It spent the night alone in the bush. “The cow was left out and gave birth. So the lions attacked the baby and its mother during the night.” A good herder, on the other hand, seeks the cow’s perspective (i.e. what bears meaning from its point of view) by engaging his whole body in perceiving what

the animal observes, senses, feels, or lives (Despret 2013). As Dennis often explained, a good herder is *curious* about the animals under his care and continuously learns from them through embodied discovery as they move along. Despret (2013, 61) terms this embodied communication between human and animal *embodied empathy*: "feeling/sensing/thinking bodies [that] undo and redo each other, reciprocally though not symmetrically, as partial perspectives that attune themselves to each other." That herder who failed to bring the pregnant cow back to the *enkang* lacked this embodied empathy; he failed to be curious about the pregnant cow's condition and to provide appropriate care.

Herd and herder *become-with* one another, just as Maasai also become-with lions (see Chapter 4). In the shared effort to access sufficient grass and overcome obstacles, humans and animals develop a bond that goes beyond simple ownership or caretaking. This bond is characterised by mutual understanding and social engagement, as they learn each other's ways through continuous interaction. Paine (1994) described this process as "reciprocal learning," wherein animals come to understand their herders' ways just as herders learn about the habits and needs of their animals. A skilled herder lets his cattle's intrinsic skills of perception and capacity for action inform his decision and movements. He makes use of his cattle's acute olfactory and auditory senses to detect danger, alongside his own perceptual abilities to pick up on signs within the environment. Herding, therefore, is not only a relationship between herder and herd, but also a relationship with the dynamic world in which they labour. Herding exemplifies a relational epistemology whereby human and nonhuman get to know the world through their interactions and mutual attunement (Bird-David 1999). Together, herd and herder perceive the world as they move within it, "attending to it, and discovering, along the way, what it has to offer, whether for good or for ill" (Ingold 2018b, 39).

This synergy between Maasai herder and herd challenges negative stereotypes about cattle: far from being simple, docile creatures, they are intelligent animals that actively participate in decision-making concerning pasture access, migratory routes, grazing locations, and their status within the herd. They communicate their preferences, moods, and fears in various ways, from lowing calls and body language to the formation of social groups. The relationship between herders and their cattle is built on mutual dependence and shared hardships, particularly evident in their cooperative efforts in avoiding predators, among other threats. Maasai sensory ecology is grounded in the recognition of the intelligence of their animals and their capacity to inform

decision-making. As Julius aptly noted, "Cows sense things we can't detect. The first indication that there are lions around, cows will tell you." A skilled herder must appreciate this early warning system by remaining attentive and act swiftly. It is through this attunement that herder and cattle communicate while navigating the rangeland. This mutual understanding is essential for maintaining herd cohesion, preventing animals from straying, and ultimately, protecting them from lions. Research has shown that scattered and lost cattle are more likely to fall prey to predators (Ogada et al. 2003; Jablonski et al. 2020). By keeping livestock closely herded and minimising instances of unattended animals using their embodied expertise, herders can significantly reduce the likelihood of lion attacks (Valeix et al. 2012; Ogada et al. 2003).

Ingold (1974) observed a similar dynamic in reindeer herding, highlighting the collaborative nature of pastoralism: animals benefit from enhanced pasture exploitation and protection against predators through their relationship with herders, while humans benefit from their flesh—it is a form of mutual care. He notes that reindeer separated from the main herd are particularly vulnerable to attack (*Ibid*., 524), a principle equally applicable to Maasai cattle. Constant communication between herders and their cattle allows them to work together to outmaneuver predators. In this "hybrid community" (Lestel 2014), both herder and herd respond to each other, share meaning, forming deep social bonds that enhance their collective resilience.

Knowing Lions

This attunement to livestock and the environment enables herders to move with their surroundings, sensing and evading lions as they graze in the bush. As noted above, Maasai knowledge of lions is developed *through* their cattle, making it a relational type of education. The careful perception of cattle-derived signs—sounds, tracks, scents, behaviours—builds herder's knowledge of lions as it simultaneously guides their movements. Furthermore, experienced herders also develop their astute understanding of lions through direct encounters, collective knowledge exchanged within the community and amongst herders, as well as intergenerational experience in navigating predator-prey dynamics. A testament to their adeptness at knowing and avoiding lions, my ten days of grazing passed without any direct encounters with these predators.

I introduced the concept of intuition earlier to capture how herding comprises a set of skills, sensitivities, and orientations developed through sustained interaction within the environment. Intuition guides herd(er)s toward what demands attention, how their senses attune to the landscape

and to the behaviours of animals (both domestic and wild), and what forms of actions are appropriate. It is with this intuition that herders navigate the landscape and adapt their herding strategies based on the lions they might encounter during their work. Herders are attuned to how lions respond to their cattle's presence: will the lions remain hidden in a thicket, or will they strike? Are these lions cautious or aggressive? Over time, through direct engagement—attentively observing, tracking, and responding to their surroundings—herders develop knowledge of individual lions and different prides. They can discern the nuanced characteristics of different prides, their habitual locations, behavioural tendencies, and levels of threat, while recognising each lion's distinct identity and pride affiliation. They also become adept at reading landscape and vegetation features (and time of day) that increase the likelihood of attacks, such as dense thickets, watering holes, and tall grass. It takes time to build up the necessary experience to know how to respond to lions, as direct encounters are relatively rare, demanding years of dedicated herding to gain the necessary expertise.

The herders I followed demonstrated a remarkable memory of past predation incidents involving their herds and other local livestock. When asked to recall the most recent attack on their herd, herders' responses often unfolded into detailed narratives recounting not just the most recent attack but a series of encounters in the region, linking specific incidents to particular prides in distinct locations. Through these accounts, herders can identify areas associated with certain lions and even be able to track prides' movements across the seasons. This knowledge is important when choosing grazing routes. When entering the territory of a known aggressive pride, or when aware that males are engaged in territorial disputes or that females have recently given birth to cubs, they exercise heightened vigilance.

Drawing again on the concept of animal personality, herders recognise that lions, much like cattle, possess distinct personalities—some are shy, some are bold, others clumsy or lazy. Goldman et al. (2010) also note that Maasai understand each lion to exhibit individual agency and distinct behavioural patterns. Herders perceive lion personalities through factors such as territory, group composition and conspecific interactions, hunting tactics, and previous interactions with people (e.g. whether a lion has hunted cattle before, if it was persecuted, or if it has learned to associate killing livestock with reward). Consequently, they are often able to identify specific animals responsible for livestock predation. They refer to these lions by name, reflecting their unique personalities and facilitating communication about dangers among fellow herders. For

example, in Lemek Conservancy, there was an infamous lion called "One Touch" (said in English) because once it touched a cow, it died instantly—leaving herders no chance to save it. Herders, then, know not to confront this particular lion without the support of a rangers' vehicle. This understanding that lions differ individually aligns with scientific research (Linnell et al. 1999; Swan et al. 2017). Stander (1990) identified specific lions that repeatedly preyed on livestock, while others did not exhibit such behaviour, suggesting that some behaviours may be socially learned. As one elder explained, "Cubs who learn from their mother to kill livestock grow with that habit. Lions can also teach that habit to others when they are mating[72]" (senior elder, Amboseli, CI76). Research on the development (ontogeny) of hunting behaviour in large carnivores demonstrates that prey selection is substantially learned during carnivores' development (Caro 1994; Holekamp et al. 1997).

When discussing their encounters with lions, herders across field sites often categorised lions into different 'types' based on their hunting strategies, territories, and gender, among other traits. One type of lion was described as employing a clever tactic to outmanoeuvre cattle's advanced olfactory abilities by moving against the wind to mask its scent, rendering it undetectable to the herd. As Julius explained:

> If the cows are walking in the same direction of the wind, they will not smell the lions. This is a tactic lions use to attack cows. If the wind is blowing west, the lion cannot come from the east. It will come from the west so that the cows don't smell and alert the people in the boma.

These lions are described as able to kill a single cow without being noticed, with the loss only discovered when the herd returns home, when the *olopeny* and *olchokut* conduct their routine check. Herders from Amboseli noted that 'park' lions—those residing within Amboseli National Park (ANP)—are particularly challenging for livestock to detect due to the region's salty soil as the smell masks their scent. One herder explained: "Even if the lion [from ANP] comes against the wind, they cannot smell it. But those lions outside the park, cows can smell them more easily." A skilled herder takes these factors into account when moving livestock inside the park, attuning to the cows' sensory capacities—or lack thereof—and navigating the landscape in a way that reflects an embodied responsiveness to both cattle and environment.

Another type of lion, herders noted, exhibits more cautious behaviour, retreating at the sight of livestock and startled by the sound of approaching bells. Others, however, embody a more

[72] Here referring to the two-day consortship period, where lions may hunt.

aggressive disposition, attacking cattle directly and visibly, often hunting in coordinated groups. In these coordinated attacks, lions fan out to chase prey towards strategically positioned individuals, effectively trapping their prey. When both sexes participate, females—relying on their speed and agility—take on the roles of stalking and chasing, while males, with their greater strength, deliver the fatal blow, especially for large prey such as giraffes. These cooperative hunting strategies are documented in Schaller (1972). Herders describe these bold lions as more aggressive because they appear unconcerned about being seen. Their coordinated tactics make them all the more menacing. Herders must remain vigilant, attuned to the tactics of these predators and prepared to respond from multiple directions. This embodied knowledge allows herders to assess the type of lion threatening their herd and adapt their strategies in real time to protect their livestock.

In the event of a face-to-face encounter with a lion, herders must be ready to make swift, strategic decisions—whether to change the herd's direction, shout at the lion, run, gather the cows, rescue an injured cow, or leave the lion alone—whichever option will minimise livestock loss. The ability to think quickly and know how to approach a lion are essential skills for a herder. Julius, recounting a lion attack on his herd just days before our meeting, vividly illustrated the importance of quick thinking and decisive action: "A lioness approached the cows from behind [taking advantage of the cattle's blind spot] without seeing her coming. The lioness managed to jump on a cow and bite its neck." Julius was able to respond quickly, owing to his strategic placement within the herd. "I was in the middle when it happened. I ran towards the back and shouted at the lioness and waved my stick in the air. The lioness released the cow before it had time to kill it," he added.

This incident, like many others shared by herders, highlights the importance of a herder's attention and positioning during encounters with lions—often, a matter of seconds can mean the difference between life and death for livestock. Equally important is a herder's ability to assess when saving one cow is not worth risking an entire herd, particularly when faced with numerous lions. Herders' ability to respond quickly to reclaim prey from predators "may have the dual effects of reducing livestock losses in the short term and, in the long term, preventing predators from developing a 'taste' for killing livestock" (Ogada et al. 2003, 1528). This concern about predators developing a preference for cattle meat was frequently raised by interlocutors (see Chapter 4 and 5). Scientific research has also demonstrated, as highlighted in Chapter 5, that the more lions kill

livestock, the more likely they are to continue (Petracca et al. 2019) because problematic hunting behaviours are learned and will be repeated if effective (Caro 1994; Holekamp et al. 1997). As such, there is a strong expectation that herders must attempt to retrieve a cow—even if it is already dead. "Some fathers can even tell their boys not to come home until they retrieve the cow," Dennis said, illustrating how deeply ingrained the expectation is for Maasai men to defend their livestock at all costs. Bringing the carcass back to the boma is considered good practice, as leaving it behind risks reinforcing predatory behaviour. Herders with access to mobile phones may call rangers or community members for support, but they must first act swiftly to chase off the lion. Or else, by the time help arrives, the predator may have already fed on the animal.

This urgency underscores why bravery (*epi* in Maa, used to describe someone courageous) is such a highly valued quality in herders—and among Maasai men more broadly. An *olchokut epi* is a herder who does not flee upon encountering a lion. Herders across both ecosystems remarked that running away in times of attack can provoke lions to target the herd. This is probably sound knowledge, as there are other cases elsewhere where people recommend staring back at large felines so as to discourage them from attacking humans (Jalais 2010; Kohn 2013). Consequently, a good herder must stand their ground and remain composed when encountering lions. As one Maasai herder explained, "Us Maasai know how to control them [lions]. You cannot run away. If you do, they will finish you" (junior elder, Mara, CI113). Intuition plays a crucial role in enabling herders to respond with the right strategies when faced with predators, fostering confidence that, in turn, cultivates the bravery necessary to stand firm in the face of danger. However, many elders lament that this trait is increasingly absent in younger men and boys today. *Olamayio* served as a way to cultivate this intuition (and bravery) among Maasai men as it created more or less controlled scenarios in which young warriors encountered lions. These experiences prepared them for future encounters, reducing the element of surprise and fostering the composure and confidence necessary to confront such predators later in life.

Maasai herders perceive a reciprocal awareness between themselves and lions, believing lions are capable of knowing them too. Herders interpret how lions respond to their presence and that of and their cattle. And through their interactions, lions are understood as calculating predators that assess the social context—specifically, the age and capability of herders—before deciding to attack. The age of the herder was frequently cited as a key factor lions evaluate in their decision-making. One elderly livestock owner from Amboseli recounted an incident that occurred a few

months before my arrival. A lion killed four of his goats in broad daylight, despite the presence of herders. Although the boys tried to chase the lion away, they eventually had to run home to call for help. “The lion took advantage of the fact that the two herders were young boys,” he explained. The boys, who were around ten years old, were unable to pose a significant threat. “Usually a lion calculates the distance between the herder and his herd. The lion monitors the herder. If the herder is near, it will not attack, unless the herder is a small boy. Those two young boys were inside the herd, so the lion knew they were young, that’s why it took four shoats” (senior elder, Amboseli, CI58). The lion, according to this elder, perceived the height of the boys to be not exceeding that of the cattle, and assessed that they did not pose a significant threat.

In addition to considering the age and bravery of the herder, herders explained that lions assess the distance between the herder and their cattle. “Lions tend to attack if the herder is considered far enough from his herd for it to be comfortable to attack,” one herder noted (junior elder, Mara, CI111). Consistent across all herders interviewed was the observation that lions evaluate human presence before deciding to prey on cattle. Many reported that a minimum distance of approximately 100 meters is necessary to prevent attacks. Depredation incidents were frequently observed when cattle approached lions within this threshold[73]. The observation that attacks are more likely to occur when livestock approaches within 100 meters of lions aligns with established knowledge of lion hunting strategies. Although lions cannot outrun their prey, they can out-accelerate them, necessitating a close approach to ensure a successful kill before the prey reaches full speed. Consequently, lions typically initiate their charges at distances under 50 meters (Orsdol 1984).

Lost or unattended livestock are most likely to be targeted by lions due to the absence of humans to deter them or “witness them doing something wrong.” This observation corroborates the findings of Valeix et al. (2012), who noted that lions are more likely to target unattended livestock. Their research suggests that lions conduct a cost-benefit analysis when considering livestock predation, balancing the benefits of accessing livestock against the risks associated with raiding. Close supervision of livestock has been shown to significantly reduce predation risk. Herders emphasised that keeping livestock closely grouped, maintaining distances below 100 meters from lions, and minimising instances of unattended animals can greatly reduce the

[73] To estimate distances, herders pointed to objects that represented the approximate gap between their herd and the lions during the most recent attack.

likelihood of attacks. This aligns with research by Ogada et al. (2003), which found that herds under close supervision are less likely to fall prey to predators. Additionally, studies on other carnivores suggest that improving husbandry techniques holds promise for reducing livestock depredation (Akrim et al. 2021; Stahl et al. 2001).

Interestingly, lions were often described as capitalising on situations where they can seize cattle with minimal risk—particularly the risk of being seen or confronted by people. Many believe that lions are *aware* of their actions when they attack livestock: "The lion is very wise. If it kills a cow, it knows it's doing something wrong," remarked Julius. While this may not mean that lions possess moral awareness, it highlights their ability to learn from past experiences and adjust their behaviour accordingly. Studies support the idea that lions exhibit cognitive decision-making, learning from encounters and adapting strategies to minimise risk (Loveridge et al. 2007).

Consistent with the observations of livestock owners discussed in Chapter 4 and 5, older, experienced herders have noted a change in lion behaviour over time. However, as few seniors continue herding into old age, the number of firsthand accounts is limited. A non-Maasai herder who has worked in the Mara for 36 years remarked, "Lions have increased. And nowadays, lions don't fear people; it's people who fear lions" (non-Maasai senior herder, Mara, CI124). Across *olopeny* and *olchokut*, and in both the Mara and Amboseli, the perception that lions are becoming 'more friendly' or 'less afraid of people' is common. As lions demonstrate the ability to assess and act upon opportunities and hindrances—and with reports of their behaviour becoming bolder—it is more important than ever to employ skilled and vigilant herders to minimise livestock attacks. However, as the following chapter will explore, various social and political economic factors often make it difficult for herders to excel at their work.

Conclusion

In Maasailand, predators—much like cattle—do not merely exist in the backdrop of human activities. Rather, they are subjects with agency, playing an active role in shaping herd(er)s' decisions. Herding exemplifies the process of becoming-with where herders, domestic and wild animals continually respond to and shape one another and the landscape through their movements and interactions. This relational practice involves what Ingold (2000) calls an education of attention, as herders accumulate knowledge about the habits of their animals: their movements, gestures, preferences, health, and wellbeing. The herder's body becomes a tool for interacting and

communicating with other beings, as well as a repository of technical knowledge. Fully engaged in perceiving what the animals observe, sense, feel or live, herders enact their own senses—touching, feeling, handling, looking, and listening—to discover what bears meaning from their animals' point of view and exchange signs across species boundaries. This embodied relation transforms both human and animal as they become social partners and strategic allies in navigating the savannah's hazardous pastures. Through this collaboration, herders bring "into being animals that nourish humans, and humans that nourish animals" (Haraway 2015, 11).

As I have shown in this chapter, herders come to understand lions through their cattle as well as through direct experience encountering them. Over time, they accumulate experiential knowledge and cultivate a refined intuition for responding effectively to lions across diverse contexts. Through herding, herders get to understand lions' individual personalities and decision-making as reflecting both opportunism and an ability to calculate risk by assessing factors such as the herder's bravery, age, and distance relative to his herd. They come to understand lions as calculated animals capable of making decisions based on their needs, circumstances, opportunities, and hindrances. This knowledge informs how herders respond to lion encounters. Good husbandry is learned by doing—attuning oneself to the environment through sensory engagement and practice, rather than relying on pre-existing frameworks or instructions. This process results in tacit knowledge: the ability to *feel one's way* through tasks based on accumulated experience and attunement to subtle cues in the environment. This intuition allows skilled herders to make decisions fluidly and adaptively.

Given that I did not encounter any lions during my 10 days of herding, it appears that direct lion encounters remain relatively rare on a daily basis. Herders and livestock actively employ various techniques to minimise interactions with lions, as described here. Moreover, many depredation incidents happen out of the herders' sight—for example, when livestock is lost, hidden behind bushes or when herders are absent or negligent. Therefore, herders must spend considerable time herding to develop the knowledge necessary to understand lion behaviour—because it is through these direct, 'embodied encounters' that people and lions learn about each other and negotiate space (Keul 2013).

Traditionally, children began their herding journeys at a young age, under the tutelage of a mentor, often a parent or an older relative such as a sibling or cousin. Novice herders were guided by experienced herders who helped them develop their own set of perceptual skills over time and

through experience. Their responsibilities grew incrementally, from caring for young sheep, goats, and calves grazing near the boma to herding adult cattle. Through this extended apprenticeship, herders developed an intimate knowledge of their herd, understanding the dynamics of livestock as individuals and as a collective. They became attuned to the rhythms of seasons, the ever-changing landscape, and the dynamic behaviours of local wildlife. This gradual process honed their skills in navigating challenging terrains while fostering confidence in approaching wildlife. This process of enskilment—encompassing body techniques, technical knowledge and multisensory cross-species communication—develops only through prolonged dialogue between child and elder, human and environment.

Despite its depth and value, herders' ecological knowledge and embodied expertise is often undervalued both within their communities and beyond due to political economic factors. As I will discuss in the following section, this lack of recognition may stem from perceptions of the body as humanity's "first and most natural instrument," obscuring the sophisticated embodied expertise required for herding (Mauss 1934, 75). This lack of recognition creates conditions where herders have few incentives or resources to excel at their work, build meaningful bonds with individual livestock, deepen their understanding of the landscape, or develop their intuition. Consequently, they are frequently pushed into situations that put their herds at greater risk from predators, thereby exacerbating tensions between livestock owners and lions.

Chapter 7: *Aimalmal* & The Political Economy of Herding in Kenya's Maasailand

…we contend that traditional livestock husbandry practices, including herding, are not antithetical but instead essential to lion conservation in that they help prevent the vicious cycle of conflict that reduces tolerance and leads to lion killing.

— Kevin Jablonski et al. (2020)

In the previous section, I examined what constitutes good husbandry practices in the Maasai lifeworld by attending to the intuition developed for effective herding and survival in a landscape of predators. This section shifts focus to the political economy of herding, examining an emerging trend I observed in Maasailand—one that has also been documented among pastoralists more broadly: the rise of contractual forms of employment in herding (Bassett 1994; Beck 1980; Bourgeot 1981; Bradburd 1990; Ensminger 1996; Moritz et al. 2015; Murphy 2015; Schareika et al. 2021; Spencer 1988; Sperling 1987; Turner 1999). This development signals a shift from kin-based cooperation and customary labour arrangements toward outsourced, paid employment. In effect, the intimate ties that bound herders, the community of animals, and their environment are being reconfigured by new economic logics and labour relations—potentially making livestock more vulnerable to lion predation attacks.

In this chapter, I use a historical materialist lens to examine the forces driving this trend in my field sites. I investigate how these emerging labour relationships produce and sustain systems of domination and power, craft new valuations of labour and hierarchies of worthiness, and reconfigure Maasai masculinity. Building on the previous chapter, I show how the neoliberal restructuring of herding has disrupted, and in many cases diminished, the embodied expertise and herding skills that once underpinned pastoral life. I conclude by considering potential strategies to support hired herders in enacting best herding practices.

To ground this discussion, I begin by examining what constitutes bad herding practice, known in Maa as *aimalmal*, and the factors contributing to its occurrence. The term *aimalmal* carries significant stigma, signifying a failure of responsibility that no herder wants to bear. I draw on insights from my time following five herd(er)s in each ecosystem on their journeys across the

rangeland and interviews with many more around the household[74], where I encouraged them to reflect on what makes a good or bad herder and to discuss the factors that shape their ability to practice quality herding. Since a "measure of herder effort/skill is how other herders view the quality of each others' work" (Turner 1999, 288), I asked herder to informally assess their peers' abilities based on diligence and level of success (such as whether they maintain healthy body condition, successfully fatten cattle, minimise losses to predation, and reliably safeguard livestock during grazing and at night). I continued these conversations until I reached, which occurred quite quickly, and was struck by the consistency of responses across both field sites. While most Maasai herders agreed on the characteristics of good herding, many admitted that socioeconomic constraints often prevented them from consistently practicing these ideals—issues I will explore in this section.

Aimalmal

One late afternoon, Dennis and I were driving on the periphery of Amboseli National Park, searching for lions for our playback experiments. Just as we were about to give up and head home, my assistant spotted a man in the distance, running toward our vehicle and away from his herd. He remarked that this was unusual. "There must be a lion there. There is no way a herder can leave his herd like that unless there is danger," my assistant noted. We drove towards the figure and soon made out a tall adolescent boy, sweating and trembling. Dennis rolled down the window and exchanged a few hurried words in Maa. After quickly unlocking the car doors, the boy climbed into the back seat. Although I couldn't fully follow their conversation, it was clear that an emergency was unfolding. I glanced at the boy in the back; he was shaking and appeared to be caught between adrenaline and shock.

My assistant pressed the accelerator and sped forward, following the boy's frantic directions as he tried to recall the exact location of the incident. We drove through tall grass until our view cleared, revealing a lioness breathing heavily—mouth stained with blood—over a brown cow she had killed moments before our arrival. A lion typically waits a few minutes to begin

[74] In the Maasai Mara, 20 herders were interviewed, aiming to interview a minimum of three herders in each conservancy where playbacks studies were conducted. In Amboseli, 12 were interviewed in the areas around Amboseli National Park. Some herders were shadowed during their daily work, as discussed in Chapter 6, although not all consented or received conservancy permission for this observation.

feeding on its prey to ensure it is fully dead and no longer poses a threat. The lioness had not yet begun feeding on the carcass, and the boy was eager to reclaim it. Dennis quickly locked the car doors, worried he might bolt from the vehicle to save his cow. The boy asked to use my phone to make a few urgent calls: first to the cow's owner, then to a community member with a vehicle, and finally to friends who might help retrieve the carcass—or confront the lioness if necessary. Meanwhile, Dennis phoned the park rangers, worried that the situation might escalate once more people arrived on the scene.

While we waited for others to arrive, I asked the herder about what had happened. He explained that the lioness emerged from a thicket, pursued the herd, and attacked her victim. He said he was running to retrieve his hidden spear from the park boundary, as weapons are prohibited inside Amboseli National Park. Later, Dennis pointed out inconsistencies between the herder's initial account—what he had told him through the car window before picking him up—and his revised story. It seemed that after calming down, the boy had time to construct a narrative to avoid admitting to *aimalmal* (poor herding practices). Unable to acknowledge his failure to protect the herd, he crafted an explanation that absolved him of responsibility for the lioness's attack.

When we found the boy, he told Dennis that he was bathing in a nearby water hole while his herd was on its way home: the cows were making their way to the boundary of the park. He had told my assistant that it was a hot day and he simply wanted to wash himself before returning home. He also mentioned that another herder, responsible for overseeing an adjacent herd, had disappeared—perhaps asleep somewhere under a tree. Dennis estimated that there were over 400 cattle between the two herds, seemingly left unattended. This came as a shock to both Dennis and I. This area was frequented by a pride of three lionesses with seven subadults, which is why we were patrolling the area in the first place. Lionesses with young ones need to hunt to feed them, often relying on livestock when hunting wild prey becomes too challenging. Additionally, since this was the end of the rainy season, many herbivores had left the park, making cattle grazing nearby potentially an easy and attractive target. Why, then, was the herder bathing and leaving both his and his peer's cows unattended?

That question proved difficult to answer because, after the shock of the incident subsided, the boy was less willing to discuss his initial explanation. We all returned to the *olopeny*'s boma with the cow's carcass, transported by a KWS vehicle. Dennis and I stood near the herder while the meat was being prepared for a feast shared amongst several families. The herder, now more

composed and confident, stood at the centre of attention—no longer the frightened boy we had seen inside the park. Everyone wanted to hear how bravely he faced seven lions. We waited for an opportunity to speak with him privately about his account—particularly concerning the time he spent bathing in the nearby swamp—but he was less inclined to talk now that things had calmed, so we did not press. Dennis suggested that he might feel shame given the state we found him in. Perhaps, if the other herder had been present while he was bathing, the lioness would have stayed away. Likewise, if the boy had remained close to the cows, that cow might still be alive today.

The situation escalated when the boy's friends—mostly young men of moran age—attempted to enter the park to help retrieve the carcass, prompting a non-Maasai ranger at the gate to emerge from the office with a firearm. This action deeply aggravated the community. I couldn't help but wonder whether the lioness would still be alive had I not been present; Dennis and me calling the park's community conflict rangers—who arrived quickly and helped bring the carcass home—the confrontation could easily have turned violent. Once the firearm appeared, the community's attention shifted away from the predation itself and toward the ranger's conduct. Later, as we roasted the cow's flesh over the fire, one man remarked, "It is our land that we lend to you [the government]. You cannot pull a gun on us and tell us we can't go in." The incident left me reflecting on how often such confrontations—sparked by authority and mistrust—end fatally for lions in these contested spaces.

This herder exemplified what other herders had been describing as *aimalmal*. This Maa term refers to a person who neglects their responsibility to care for their cattle. It stands in contrast to *abarani*, which refers to a person highly knowledgeable about livestock and especially skilled at cattle recognition (Galaty 1989). The concept of *aimalmal* surfaced frequently in my conversations with herders. When asked what prompts a lion attack, they invariably answered: *aimalmal*. A wide range of poor husbandry practices fall under this label, such as keeping cattle unattended, falling asleep while grazing, maintaining too much distance from the herd, or being intoxicated on the job. Herders explained that those who practice *aimalmal* are far more likely to suffer livestock losses to predators. Supporting this, Lion Guardian data shows that lost livestock account for >80% of lion attacks on livestock in the Amboseli ecosystem (Jablonski et al. 2020).

I witnessed firsthand how negligence can lead to predation and potentially escalate into conflict. In the aftermath of an attack, emotions run high, and if park rangers respond in a manner that frustrates local communities attempting to address the situation swiftly, it may snowball into

human-to-human conflict and potentially result in wildlife casualties. So, if herders know the importance of proximity and that lions are opportunistic hunters, why do bad herding habits occur? How can herders avoid engaging in *aimalmal* practices?

Figure 8 Scenes from the predation incident in Amboseli National Park.

Life under Contract: Herding as Employed Labour

In pastoral communities, labour is often "bound to the herd through family relations" (Schareika et al. 2021, 60). In Maasai custom, boys and ilmurran took responsibility for herding their father's cattle, aware that certain animals already belonged to them and that the remaining herd would eventually be divided among the brothers after their father passed away. This

expectation of future ownership encouraged the sons to work diligently, as their efforts directly contributed to the herd's growth and their own eventual share (Schareika et al. 2021; White 1990). Today, however, herding in the Mara and Amboseli ecosystems is increasingly becoming a form of employed labour, where those responsible for herding cattle are often not tied to the livestock through kinship. Scholars have noted this trend among other pastoral groups in Africa (Bassett 1994; Ensminger 1996; Turner 1999; Moritz et al. 2015; Schareika et al. 2021), but few studies have explored this phenomenon among Maasai pastoralists[75].

Indeed, during my time following herders, I observed that herding responsibilities were often outsourced to men and adolescents outside kin groups, at times even from outside the local area. Those employed were almost always individuals lacking formal education from economically disadvantaged families or regions who sell their labour relatively cheaply. Many young men, like Julius, travel to the Mara[76] (from other parts of Kenya's Maasailand, like Siria, Loita, and Kajiado) or to Amboseli (primarily from Tanzania's Maasailand) in search for employment. During my research in the Mara, I also encountered a few herders from non-pastoral backgrounds, originating from regions outside Maasailand (primarily Kipsigis/Kalenjin). Herders typically approach herd owners' bomas directly in search of work, sometimes advertise their labour at livestock markets, while others rely on personal networks, such as asking friends if they knew anyone seeking employment. This suggests a relatively high supply of young Maasai men actively seeking herding work, often initiating contact with livestock owners themselves. While data on the scale of this trend remain limited, Nkedianye et al. (2020) found that, in surveys of 100 households per site, 16% of households in Amboseli and 29% in the Mara employed one or more herders. In my observations, hiring herders is common among middle- and upper-income households alike, with upper-income families almost always employing them.

This change in herding labour reflects broader socio-economic transformations in pastoral communities before, during, and after the colonial period, as documented by anthropologists and

[75] Spencer (1989, 11), writing about Matapato in the late 1970s, briefly notes the emergence of wealthier families hiring herdboys as "an incipient form of labour exploitation whereby the wealthy may take on the impoverished as herdsmen, offering them little more than fodder as payment and the very occasional animal to build up herds of their own." Hired herding labour is also referenced in BurnSilver 2009 and Jablonski et al 2020, though their analysis remains limited. Yurco (2017) discusses the rise in pastoralists seeking employment in private ranches in Laikipia, Kenya.

[76] The Mara has a reputation of being a place where "the rich Maasai" live. Landowners receive monthly land lease payments from conservancies, some at a rate of 40,000 Ksh per month (≈£244), which is a considerable sum by Kenyan standards.

discussed in Chapters 1 and 4 (Campbell 1993; Ensminger 1996; Fratkin 2001; Galaty and Bonte 1991; Rigby 1988). The transition from kin-based to commodified labour is part of a larger shift from a pastoral system organised around "cattle logic" to a capitalist system driven by "capital logic" (Rigby 1988; Schareika et al. 2021). This shift occurred over a long period of time, through interaction with non-pastoral groups' capital (primarily through trade and moneylending), which influenced Maasai way of life, as well as social, political, and economic institutions (i.e. labour relationships, property rights, resource allocation, and political authority). Early records and archaeological evidence indicate that Maasai pastoralists engaged in trade with Chinese, Arab, Persian, and Portuguese merchants and usurers well before the 17th century (Rigby 1988). However, it was the intensified contact with outside traders and colonial powers from the nineteenth century onwards that fundamentally changed how they lived, traded, and organised themselves (*Ibid*.). Despite these external economic and political pressures, Rigby argues that Maasai society managed to maintain its unique structure and resisted a full transition to a capitalist "class society" for centuries. Even during the early colonial period, Rigby (1988) argues, the Maasai largely resisted modernisation projects, continuing to manage family herds through common pool resources and kin-based labour (Bobrow-Strain 2009; Chang and Koster 1994; Rigby 1985; Schareika et al. 2021; Zaal 1998). According to Rigby (1988), clear class divisions[77] began to appear in Maasai social formation during the late colonial period (1890-1960) but were not consolidated before the post-independence period (1960-present)[78], as traditional Maasai systems broke down under the weight of external factors such as colonial land grabs, development policies, and commoditisation of cattle. It is in this context that abstracted herder labour appeared.

[77] Here I mean class divisions in the Marxian sense; not simply to mean inequality or elite power alone, but as a historically-determined system of class relations and labour exploitation, mediated *through the production process*. While some scholars (Goldschmidt 1974; Schneider 1979) have claimed that African cattle-herding societies are "naturally" capitalist because livestock can be managed, accumulated, and used like money or investments, this view treats capitalism as a set of individual *behaviours* that can be "naturalised" as opposed to being a social order.

[78] Efforts by Western development agencies and African governments since the colonial period have aimed to transform pastoralism into ranching and integrate pastoralists into market economies, promoting privatisation and sedentarisation (Fratkin 2001; Galaty 1994; Schareika et al. 2021). The introduction of group ranches in 1968 sought to protect Maasai land rights but also encouraged individual land ownership, with mixed success (Galaty 1992; Kimani and Pickard 1998). Increasing enclosure of pastoral lands due to factors like agricultural expansion, land grabbing, and subdivision has intensified competition for resources (Abbink et al. 2014; Chatty and Colchester 2002; Mwangi 2007). These changes have pushed pastoralists toward diversified livelihoods, including ranching, farming, and wage labour, reflecting a gradual shift toward capitalist relations (Bobrow-Strain 2009; Rigby 1985; Schareika et al. 2021).

This trajectory aligns with Spencer (1989), who observed in the mid-1970s the early forms of labour exploitation arising as wealthy families hired poor herdboys.

Marxist anthropologists (Bonte 1978; Rigby 1988) have described pre-capitalist Maasai society as classless, in the sense that there was no antagonistic dynamic of surplus extraction—put otherwise, social reproduction was *not* mediated by a dominant class that extracts value from another. Therefore, power and social conflicts arose from personal relationships: age-sets, gender, kinship groups, and territorial sections (*Iloshon*), rather than between economic classes. In this system, labour was managed by elders: juniors worked for their own households but also for the wider community, contributing to defence, rituals, and expansion. This meant that juniors' labour was used not just for their family's benefit, but for the survival and reproduction of the whole community. However, market integration has led to cattle taking on new meaning—as commodities to be traded or sold rather than being accumulated and valued for social, cultural, and subsistence reasons. This shift led to the emergence of classes in Maasai society as class contradictions began to emerge, with some families accumulating wealth and others becoming impoverished, and new divisions forming between owners and workers. Over time, wealthier households increasingly appropriated the labour of households unable to sustain themselves through livestock keeping alone—a trend which has been exacerbated by more recent environmental pressures (Goldman and Riosema 2013; Nkedianye et al. 2019).

The erosion of communal and social governance[79] systems which buffered inequality (Bekure et al. 1991; Grandin 1988; Salzman 1999), means that today there is marked household socioeconomic inequality[80] across Maasailand (Nkedianye et al. 2019). The transformation of land[81] and cattle into commodities has compelled pastoralists to seek ways to make their assets more productive, as sustaining a livelihood solely through pastoralism has become increasingly unviable (Hemingway et al. 2022; McCabe et al. 2010; Nkedianye et al. 2019). Reduced capacity for accumulating large herds means that many families are now primarily able to accumulate small stock, such as sheep and goats, because these animals have faster reproductive rates, are more

[79] This ranges from communal pasture access to the moral economy based on reciprocity and mutual aid (Aktipis et al. 2011; Western and Finch 1986; Western and Nightingale 2003). Lactating cows, for example, are loaned to the needy to secure milk for the family, although at the same time generating a form of social dependency.
[80] Nkedianye et al. (2019) found in their study among Maasai households across Tanzania and Kenya, that the richest 10% of households owned 38–71% of the livestock and the poorest 10% only 0.4–1.3% of the livestock.
[81] Land privatisation, and the resulting competition for access to pasture, is also identified as a driver of the shift toward capitalist cattle production (Schareika et al. 2021).

drought resilient, and can be more easily exchanged for larger livestock (Blench 2001; Davies and Bennett 2007; Little and McPeak 2014).

As economic development increases and demand for agropastoral products grows, small producers find themselves competing with larger, more cost-effective producers in the market. This competition forces them to adapt their production methods, prioritise productivity, and innovate for greater efficiency. Over time, wealthier households are able to accumulate larger herds, access more resources and opportunities, and secure better market access, while poorer pastoral households risk dispossession or are pushed into wage labour. The same logic also enables wealthier households to outcompete poorer ones in non-pastoral income-generating activities (e.g., formal employment, trade, conservation projects, farming), thereby pushing poorer pastoralists into a cycle of poverty and making it harder to change established power dynamics (Nkedianye et al. 2019). In short, small herd sizes forces many to diversify away from pastoralism, often into low-income, high-risk activities that limit opportunities for upward mobility (McPeak 2005). Labour now takes place within a context of productivity-driven, capitalist production, where the value of cattle is increasingly determined by market wages and price dynamics.

Globalisation and the liberalisation of African markets have made new technologies—such as improved pasture, exotic cattle breeds, pharmaceuticals, mobile communication, veterinary care, and artificial insemination—available to pastoralists, but for a price (Schareika et al. 2021). This means that, unlike in the past when most production inputs were accessed through communal systems or reciprocal exchange (Mwangi and Ostrom 2009; Spencer 1998), pastoralists now are only able to purchase these productivity-raising technologies with money. For example, during the 2023 drought, I observed families scrambling to buy grass from sellers in distant regions or negotiating with non-Maasai landowners on the coast or near urban centres like Nairobi for paid grazing access—expenses that few could easily afford. As a result, pastoralists are increasingly required to think about their herds and production in economic terms. They must calculate the market value of their cattle as capital (i.e. as assets that can generate profit or be sold). They must also consider the costs of production inputs (like feed, veterinary drugs, or improved breeds), and weigh these costs against potential returns or profits.

Despite all these shifts, Maasai continue to sustain reciprocal relations of care with their cattle, as discussed in Chapter 3. Maasai lifeworlds are still knotted around cattle, which continue to anchor social status, kin networks, and identity. Capitalism has not displaced cattle-as-kin so

much as layered another dimension of value upon them. Ownership of livestock still signifies wealth, status, and social capital, but now also carries the calculable worth of a market asset. Yet, and paradoxically, the act of herding cattle has been thinned out as labour is commodified, pulled away from kin, and performed for wages, especially by those who must sell their herding skills for their livelihood. In the sections that follow, I explore the narratives I encountered around this shifting terrain of hired herding labour.

"Herding is for those who didn't go to school"

Another factor contributing to the trend in herder contracts is the growing enrolment of Maasai children—especially boys—in formal education. As national policy and shifting aspirations draw more young people into secondary and post-secondary schooling (see Chapter 4), households are left with fewer children available for daily herding, increasing their reliance on hired labour. The Kenyan government has demonstrated a strong commitment to the UN Millennium Development Goals' education for all children, including those from pastoralist communities (Republic of Kenya 2012). Local administrations actively encourage, and sometimes pressure, families to enrol their children in school. Many interlocutors reported that it is considered illegal not to send children to school, with local leaders intervening if children are absent. Families also recognised the importance of schooling Maasai children, seeing this as an attempt to override their historically low enrolment and completion rates. The benefits of formal education, including literacy, numeracy, and greater civic participation are now increasingly valued among Maasai, making herding a lesser priority for both youths and their parents.

Research among pastoral groups in Kenya shows that higher education levels among household heads are associated with improved access to information, skills, and decision-making, which in turn leads to higher income levels (Elhadi et al. 2012; Kuria 2019). Maasai families are well aware of this pattern and increasingly treat education as a calculated investment in future livelihoods. Many are prepared to make this commitment even at the cost of losing children's herding labour. Since boys' education is often prioritised when resources are limited—and because boys have traditionally borne responsibility for herding—households are increasingly left without a readily available workforce. This means many households now need to hire labour from outside their kin group to manage livestock (Jablonski et al. 2020). Interview data reveals that schooling is indeed the primary justification for sourcing labour outside kin group: "Nowadays kids are in

school. They don't stay idle around the boma, so we have to hire herders who have not gone to school" (junior elder, Amboseli, CI82).

Other research in Kenya has also found a link between higher school enrolment rates and the use of hired herders (Nkedianye et al. 2020). BurnSilver (2009) further identified a correlation between household wealth and the employment of hired herders in the Amboseli ecosystem, suggesting that more affluent families strategically allocate family labour to other productive activities including prioritising their children's education. Growing social and economic disparities mean wealthier households, with greater livestock wealth, can afford hired labour, while poorer households, owning fewer animals, are more likely to provide labour themselves, sometimes at the expense of their own children's education. This dynamic contributes to a widening socio-economic gap between educated and non-educated Maasai.

As school attendance increases, fewer Maasai children are learning herding skills, and herding is increasingly viewed as an undesirable occupation—one associated with low education and demanding physical labour (Jablonski et al. 2020, 6). This is best captured by a herd owner from Amboseli who employs a young herder from Tanzania:

> We get herders from Tanzania. *Why?* Because they didn't go to school. There's no one who has gone to school who wants to be a herder. The salary is very small. People who have gone to school will look for a job equivalent to their qualifications. And those who haven't gone to school learn more about livestock keeping because they stayed at home. (junior elder, Amboseli, CI82)

This herd owner's words echo a broader sentiment I encountered in my field sites: many young Maasai men expressed little interest in working as herders, aspiring instead to university education and salaried work. A young man from the Mara, who was studying business management at a university in another county, told me: "I don't want to be a herder. My parents are illiterate, and they wanted us [their children] to change by giving us education since they never got that opportunity" (junior elder, Mara, CI125).

As discussed in the previous chapter, developing the skills and intuition necessary to be a good herder requires prolonged engagement within the environment. With young Maasai now attending school, many miss out on the critical period of immersion and mentorship traditionally provided through moranism—a central institution for transmitting ecological knowledge and herding skills. As such, there is an assumption that those who did not attend school have greater expertise in herding.

Hiring practices therefore involve minimal vetting: herders looking for work are expected to arrive equipped with the knowledge and physical endurance required for diligent herding. Many herd owners reported verifying their herders' qualifications by calling their fathers or inquiring about their fathers' clan affiliation. As one man said, "We don't teach the boys [herders]. They come with their own experience. We just show them where to go and where not to go" (junior elder, Amboseli, CI80). His herder, a 17-year-old boy from Tanzania, said that he did not need any training because "*Ayolo esiyai erematare*" [I know the work of *erematare*[82]]. "I grew up with cows so no need for formal training" (incoming moran, Amboseli, CI84). But if employers assume young herders already come equipped with knowledge, who is mentoring them? Who provides the subtle clues that "guide the novice towards meanings that lie at the heart of the world itself" (Ingold 2000, 22)? And when herders migrate from other regions in search of work, how familiar are they with the landscape (and the lions) in which they work? Who imparts knowledge about the individual personalities of the cows? While they may possess general knowledge, the fine-grained, locality-specific understandings of terrain, rainfall patterns, and wildlife populations cannot be assumed.

Galaty (1989) observed that schooling progressively alters the cognitive experiences of young Maasai, transforming the foundational knowledge upon which pastoral practices have long rested. Even in 1989, Galaty noted that both schooling and the commodification of daily life were leading to a decline in experience and motivation regarding pastoralism, which in turn affected the cognitive capacities essential for careful and productive husbandry. For instance, he found that school-educated children were less adept at conducting "rumination" to identify missing cows compared to their non-schooled peers. More recently, Jablonski et al. (2020) similarly found that schooling influences the quality of husbandry practices, contributing to the erosion of pastoral knowledge and skills over each generation. This may have implications for knowing how to guard cattle from lions in the long term.

[82]See Godfrey (2018) for an analysis of the Maa concept *erematare*, a broad term encompassing the care and management of people, land, livestock, and wildlife. Godfrey argues that erematare is the closest Maa equivalent to conservation, reflecting a non-Western ethic of environmental stewardship and management.

Relations with herds and herd owners: (un)making kin

Beyond cognitive capacities, the motivation to care for non-kin animals plays a crucial role in herding quality, as maintained by White's (1990) study among Fulani herders. Traditionally, herding labour was provided by sons within the kin group, fostering strong relational bonds between Maasai and their livestock, as discussed in Chapter 3. These connections integrate cattle into a family's lineage, shaping the family's identity and reputation. When labour was tied to kinship and reciprocal obligations, it reinforced social ties not only among people but also between humans and animals. However, as herding labour becomes commodified and abstracted from personal identity, this intimacy is difficult to replicate; for hired herders, the herd rarely becomes part of their social identity. Jablonski et al. (2020) observed that hired herders often lack the *dedication* and attentiveness characteristic of those caring for their own family's animals, defining dedication as the herder's "personal devotion to the livestock and the family that depends on them" (Jablonski et al. 2020, 6). Without immersive apprenticeship and kin-making, hired herders have limited time and opportunity to develop the bodily techniques and tacit, multisensory knowledge that arise from a sustained, intimate engagement with the environment.

Employers might try to counter this trend by offering the payment not in money but in livestock, so that good care of the herd aligns with the herder's own interests. When we were interviewing herd owners, Dennis, who employs herders to care for his own livestock, told me that a good practice is to give livestock to your herders, in addition to their salaries, "I gave my herder one cow and two shoats [this previous year]. When many are giving birth, I give him one. That will make him care for the wellbeing of the herd. But not everyone does that" (pers. Comm. January 2, 2025) Moreover, herd owners might seek to integrate herders into the household by providing food, housing, medical care, and other support, fostering a sense of familial belonging. As Dennis noted, "Building a relationship of trust between livestock owners and herder is crucial. Cattle are family. The herder must also become part of the family to take good care of the family."

However, the success of these initiatives is highly dependent on the relationship between herder and herd owner. Herding contracts often lead to exploitation, as herders are treated as socially inferior and excluded from key aspects of community life by their employers (Murphy 2015). For instance, hired herders are seldom given time off to attend ceremonies, barazas, church services, or public events. Many of them who migrate from other areas do not make time to embed themselves within their host communities, viewing the work as temporary. As one herd owner

explained, “The Tanzanian ones are good because they don’t know people here, so they don’t go anywhere. They stay and herd cows” (junior elder, Amboseli, CI80). Many prefer to hire herders from outside the community because they will not know anyone and will be less distracted by social ties or community obligations. However, this practice could be a double-edged sword: while external herders may be more focused on their work, their limited social integration can also lead to lower commitment and investment in the herd’s wellbeing over the long term. Butt (2010) highlights the importance of herders’ social networks for exchanging critical information about forage quality and quantity, which is likely more difficult for those not embedded in local social structures.

Moreover, hired herders are often given the worst treatment within the household and made to do undesirable tasks. Dennis told me, “Other livestock owners just don’t care. A herder comes, reaches home very late in the evening. There’s no water for drinking. He has to go look for drinking water. Some [livestock owners] don’t buy sugar for their chai. Herders can get annoyed.” This social marginalisation, as Murphy (2015) argues, allows herd owners to exploit them further, making it difficult for them to remain in their positions long-term or to integrate into the landscapes and animal communities they care for.

Bassett (1994) also noted the short-term nature and a high turnover of herding contracts among Fulani herders. Maasai herd owners admitted they will readily dismiss herders who make mistakes such as losing cattle or leaving them vulnerable to predators. Jablonski et al. (2020) found that while skilled and experienced herders are becoming increasingly scarce, general labour acquired through everyday pastoral practice remains widely available and therefore inexpensive. Due to the abundant supply of cheap labour and the lack of family ties, it is easy both to fire and to replace workers. As one herd owner explained,

> At times, I get one [herder] for three months, sometimes I fire them within one week. Five years is the longest time I kept a herder. During the drought, many herders run away because it’s tough. Water is very far. Grass is very far. They leave very early in the morning and come back very late at night. Not many want to do this. (junior elder, Amboseli, CI82)

As herders move from family to family and region to region seeking better employment, they often miss out on the long-term mentorship that ilmurran traditionally received. This mentorship not only passed down effective husbandry skills and ecological knowledge but also fostered a strong attachment and attunement to family livestock.

An Undesirable Profession & Poor Working Conditions

While Jablonksi et al. (2020) briefly acknowledge the undervaluation of herders' labour, I argue that this issue deserves greater emphasis as it constitutes a significant factor hindering good husbandry practices. Jablonksi et al. (2020) observed that fewer people now view herding as a "desirable profession" resulting in a lack of strong candidates entering the field. I argue this is because herding is not highly valued in contemporary Kenyan society. This undervaluation could stem from the Maasai's historical aversion to wage labour[83] (Rigby 1988), or from the perception that, in a rapidly modernising society, herding is a traditional and therefore outdated occupation. As Dennis' young neighbour, Frank—the teenage boy who had not attended *Enkipaata*—explained when asked about his post-secondary plans, "For now I have to look after the [family's] cows until I go to university in Nairobi, but this is not good work because it's what Maasai did in the past."

When I asked Frank why herding is not considered "good work," he replied: "Herding is not a profession." *Why not?* I asked. "You don't need education to do this. Herding doesn't require skills. It's not hard. It's not something you learn, it's just there." I asked him whether defending cattle from predators required learned skills, he responded: "Yeah they [herders] have to know how to kill a lion." That must require skills, I suggested. "No, it's easy. It's our culture. We faced the knife [circumcision]. We are morans. Killing a lion is easy." For Frank, herding work sits outside the category of recognised 'professional' work. It is informal, experiential, outdated, culturally inherited, not requiring a formal certification. Such labour is typically assigned to those without the credentials to pursue what he sees as more valuable opportunities. By contrast, 'professional' work is understood as requiring formal, scarcity-based training, with skills gained through schooling and validated by official qualifications.

Such views shape how herders see themselves in relation to others in their community. Herders in the Mara, for instance, often expressed resentment towards safari drivers—often fellow Maasai—who are regarded as educated, English-speaking professionals with degrees in tourism and the ability to drive large manual vehicles. In contrast, herding is seen as a skill acquired informally by Maasai children through daily pastoral routines and is often considered low-skilled labour for those who did not pursue or succeed in school. BurnSilver (2009) similarly found that

[83] It has also been noted in other pastoral communities that waged labour is regarded as degrading work (Bassett 1994; Turner 1999).

herding[84] is perceived as a lower-skilled, less remunerative occupation compared to professions such as teaching, game scouting, or government work, which require "higher skills," including formal education and literacy. Moreover, herding offers little upward mobility; very few hired herders have the opportunity to rise to the status of their employers.

In reality, working conditions for hired herders are extremely demanding and require significant endurance and skill. Herders often endure gruelling hours, working both day and night with minimal provisions for food and basic comforts. They spend long days with the animals, walking and standing for over eight hours under the hot sun or pouring rain, often alone and far from villages. Life-threatening hazards—such as snakes, elephants, and predators—are a constant risk. As one older, experienced herder said, "I have been a herder for 27 years. I faced a lot of challenges: being chased by animals, working in the rain, standing the whole day. A lion even attacked me once" (senior elder, Mara, CI118). This demanding schedule, combined with the responsibility of nighttime livestock protection, frequently leads to sleep deprivation. Despite these challenges, compensation for this arduous work is notably low, with monthly wages ranging from 5,000 to 10,000 Kenyan shillings (approximately £30 to £60), with most herders earning at the lower end of this pay scale. Some livestock owners gift animals—usually shoats—to herders but this practice varies and depends heavily on the patron-herder relationship.

Many herders dwell in makeshift tents constructed from sticks and plastic tarps, often sleeping on dilapidated mattresses—if they have any at all. They typically eat only two meals per day, and few carry food or water while grazing cattle. Their diet primarily consists of milk and *ugali* (cornmeal porridge), and they often lack comfortable clothing and footwear. My assistant revealed that some livestock owners fail to provide adequate food or shelter, forcing herders to sleep outdoors. Some owners believe that providing comfortable shelter may cause herders to sleep too soundly, potentially compromising their ability to protect the herd from predators at night. As one herder revealed, "We cannot sleep comfortably; we must always be alert. Any slight noise, we have to wake and check. Last month, lions jumped inside the *enkang*, and I had to chase them away" (junior elder, Mara, CI115). Herders also mentioned that essential equipment, such as flashlights and rain boots, is often not provided despite being necessary for the job.

[84] Interestingly, BurnSilver highlights that herding labour is not be confused with livestock trading, as the latter is seen as requiring "substantial experience" (2009, 181).

Another herder working in the Mara said, "We [herders] should be benefitting from tourism. You can find a safari driver being paid 100,000 Ksh but herders who sacrifice their lives and have to graze at night for the tourists' enjoyment are paid 5 to 10,000 Ksh. Safari drivers ask herders where they last spotted lions, but we do not get any money by helping them" (junior elder, Mara, CI112). Many tourists do not want to see livestock on their safari, hence many conservancies and parks restrict conservancy access during high tourism season, pushing herders to graze illegally at night or risk grazing secretly in closed grazing blocks, where there are higher chances of encountering lions. "From July to December," he added "we are told not to graze in the conservancy to make space for the tourists who come see the wildebeest to give them enough time with the wildlife. We are forced to risk our lives and the cattle's lives by grazing at night," he added. Interestingly, the manager of this conservancy informed me that this decision was voted for by the landowners in the conservancy. The herders who work for these landowners do not get to vote on these matters, but they are the ones who interact with conservancy rules through their labour. They are caught between following the rules of the conservancy and the demands of their employers (who are also landowners within those conservancies).

Power Dynamics & Pastoral Fetishism

Bradburd's (1990) research among Komachi pastoralists in Iran and Murphy's (2015) research among Uguumur pastoralists in Mongolia both explore the power dynamics, inequality, and domination embedded in these contracted relationships. Bradburd (1990) found that herding contracts were designed to prevent hired herders from accessing female livestock, which are necessary for building their own herds, thereby alienating them from the means of production. This arrangement kept herders dependent on their employers and prevented them from becoming independent herd owners. With no kin ties and therefore involvement in the local moral economy through which to negotiate better terms, hired herders were limited in their bargaining power.

Similarly, Murphy (2015) observed that contract-based labour works with traditional patronage systems—defined by kin and clan-based networks, mutual obligations, and non-monetary and social payments—to reinforce power structures and create new hierarchies of worthiness (who is seen as 'deserving'). Wealthy households which accumulated wealth since Mongolia's decollectivisation (the breakup of collective farms) in the early 1990s and neoliberal policies (i.e. market-driven labour, privatisation, and decentralisation of central government), now

dominate pastoral life by controlling the livelihoods of hired herders. They use discourses about work—ideas about who is a 'deserving' or 'undeserving' labourer, 'lazy' or 'hardworking'— to justify harsh treatment of employees. Similarly, Maasai employers often framed herders' precarious working and living conditions as a natural consequence of their employment status. When I commented on the rough conditions of herders to livestock owners, they often shrugged it off and responded: "They are used to it." Or "This is not so bad; they live much worse when they migrate to seasonal bomas!"—effectively normalising and excusing their hardship. These relationships are seen as acceptable, and even 'natural,' because they extend the traditional senior-junior hierarchy that already exists in pastoral society, where age and gender determine authority and respect (*enkanyit*). For example, it is taboo for young Maasai herders to challenge their employers, who are typically their elders. Moreover, for many herders, submission to employers is necessary to access and remain within the pastoral economy. Meeting their expectations often entails risking personal safety, for example by grazing cattle at night or in restricted areas to keep

Figure 9 Typical living arrangement of herders. Photo taken in the Maasai Mara.

the owners' livestock healthy and secure their own employment. As one herder in the Mara put it: "We are forced to risk our lives and our cattle by grazing [illegally] at night because landowners voted to give space to tourists. I need this job, so I make sure they are fat" (junior elder, Mara, CI112).

In short, research demonstrates that by separating labour from the livestock wealth it produces, contract-based herding systems legitimise vast inequalities, reinforce domination, limit social mobility, and maintain the authority and control of herd owners over land and livestock. These disparities emerge within Kenya's Maasai communities and between Maasai in Kenya and Tanzania. Yet, the unequal workings of contractual relationships are often obscured by commodity fetishism[85], which sustains and normalises the social relations of production that gave rise to them in the first place (Kayatekin and Charusheela 2004). Cattle wealth is attributed to the owner's personal or professional success rather than produced by the herder's labour. On the other hand, this herding labour is perceived by many as 'unskilled' cultural work that any Maasai should naturally know how to do. Even dangerous practices—such as protecting livestock from predators or having to spear a lion—are reframed as easy, innate aspects of being Maasai, rather than as learned, specialist skills. In this way, the embodied knowledge of herders is made invisible or devalued, and the herd owner's material success is not attributed to his employees' labour.

Murphy (2015) terms this inversion "pastoral commodity fetishism," adapting Marx's concept to the context of livestock production. It suggests that the social relationships and labour behind livestock production become hidden: animals and their products appear as if they are naturally connected to wealthy patrons, rather than recognised as the result of hired herders' physical work. The true source of wealth is thus detached from labour and instead associated with abstract, personal qualities such as merit, fate, or destiny—qualities projected onto the herd owner's persona rather than attributed to the actual work of his herder(s). This creates a widening separation between the demanding labour of herding and the accumulation of livestock wealth. Herd owners draw on herders' labour to increase the value of their herds, which can multiply annually if conditions allow, yet herders themselves are rarely paid enough to acquire the very livestock they tend. Thus, labour in this context is not merely about completing practical tasks for

[85] Commodity fetishism is the process by which social relationships and human labour behind goods are hidden, making it seem as if value inherently comes from the commodities themselves. This illusion supports and maintains the capitalist system by obscuring the reality of exploitation and inequality. It makes the economic system seem natural and neutral, rather than the result of social relations and class dynamics.

the household or producing goods for the market; it also produces people's identities and power relationships within pastoral society.

The result is growing inequalities and uneven market integration. As Bradburd (1990) and Murphy (2015) show, hired-herding contracts rarely lead to the creation of independent or client households over the long term. In the Maasai context, contracts are designed to maintain hierarchies, manifesting in low pay, precarious employment situations, difficult living conditions, and exploitative power dynamics. In the words of one herder from Loita Hills working in the Mara: "I am paid 5,000 Ksh [per month]. I cannot even buy an *entare*. How am I supposed to grow my herd?" (junior elder, Mara, CI113). Another herder, like many others, mentioned issues with receiving timely payments, "Owners sometimes delay paying you. They wait until market day, so we have to wait to get our money." (junior elder, Mara, CI115). As Murphy (2015) noted, these herders are often driven by the dream of someday reaching independence, that is, owning their own herds to a self-sufficient level. However, few succeed in their goals of independence: "the likelihood of success is simply too limited given the deep reserves of potential labour. Overall, contracts and contractual relations are structured and strategized so as to minimise the potential for altering social inequalities" (Murphy 2015, 19). This leads to their alienation from both the products of their labour (the livestock they tend) and their role as producers. Just like the herder from Loita expressed, the rate of pay is not sufficient to grow his own family's herd. At an average yearly pay of 60,000 Ksh, it is barely enough to purchase one cow annually (prices ranging from 30,000 Ksh to 120,000 Ksh, depending on breed and season). It is dependent on his employer whether an animal will be given to him, though no herders interviewed reported being given substantial number of animals for them to become self-sufficient (and small stock are more easily given than cattle). Any livestock they receive is just enough for survival, not for building wealth.

Interestingly, as Schareika et al. (2021, 63) note, these herders are often celebrated as Maasai "culture heroes who have preserved a real love for the bush and cattle." They keep the image of the herder in a red shuka alive—this is demonstrated by some conservancies asking herders to wear shukas. However, this symbolic praise can obscure the underlying power dynamics and social hierarchies at play. In my own research, I found that herders were often reluctant to voice complaints about their difficult working and living conditions, as enduring hardship is considered an inherent part of the herder's role. Expressing dissatisfactions could be perceived as a sign of weakness or as undermining their masculinity and standing as Maasai. However, after

spending time with them, underlying feelings of complacency, jealousy, and frustration emerged. Herders spoke of being overworked, tired, and hungry, and tensions with game scouts frequently arose in conversation. Herders frequently contrasted their earnings and social standing with those of safari drivers, who earn up to ten times more monthly and enjoy greater respect and recognition.

These dynamics illustrate shifting Maasai masculinities. Credentialed masculinity is emerging alongside—and often above—the older warrior-herder ideal. For young men like Frank, herding is no longer counted as a profession; it is dismissed as requiring neither schooling nor specialised skills. Yet cattle themselves remain a potent signifier of masculine status, with herd size and breed quality associated with male power (Maghimbi 2024). This is because cattle endure as markers of wealth since they translate well into contemporary Kenyan visions of success. What shifts is the labour that underwrites that wealth: the daily work of moving, guarding, and knowing animals and the land. What was once central to masculine becoming is increasingly relegated to those without credentials. Meanwhile, the labour of herding, once a cornerstone of masculine identity, becomes marginalised as 'unskilled' and antiquated. In a world where large herds are now rarely accumulated through pastoralism alone (McCabe et al. 2010), the route to masculine achievement is imagined through degrees and salaries, not through the tending of cattle on the open range.

Lion killing, herding, and other hallmarks of warriorhood persist as prideful markers of Maasainess—often narrated in the timeless register of the ethnographic present. While such cultural continuity is deeply valued (Woodhouse and McCabe 2018), these markers are reframed as innate to being Maasai—effortless inheritances rather than skills developed through training and practice—and are rarely enacted in everyday life. Young men like Frank affirm the symbolic capital of warrior traditions and identity once central to Maasai way of life, while discounting the labour of men who continue to sustain pastoralism in their daily practice. In this way, the labour of caring for herds and sustaining pastoral lifeways is increasingly delegated by more affluent Maasai to less privileged men, reinforcing both the devaluation of herding skill and the social hierarchies that structure contemporary pastoralism.

The Bottom Line: Effects on Herding Quality?

The widespread perception of herding as low-skilled labour further undermines herders' motivation and their capacity to fully engage with their responsibilities. Existing research among

Fulani pastoralists has also observed this. Turner (1999) and Bassett (1994) found that factors such as excessive demands, poor pay, and low status of compromised herding quality. Overworked or underpaid herders, according to Turner, exhibited reduced diligence, leading to declines in livestock care. Turner (1999, 271) defines the quality of labour investment as the "herder's knowledge of his livestock, their feeding behaviour, and rangeland biogeography," as well as their attentiveness to the task—a framework aligning closely with my analysis in Chapter 6. Herding quality is strongly shaped by social factors, including labour availability (the ratio of herders to livestock), remuneration, and the relational dynamics between herders and livestock owners (*Ibid.*).

In Turner's study, households with greater herding labour—specifically, more men of working age—were more likely to choose challenging but potentially more productive grazing destinations. In contrast, families with fewer available herders tended to limit herd movement and productivity, likely in an effort to ease the burden on their limited labour force. Furthermore, herds managed by herders with cattle owned in the herd had better productivity and higher diligence rankings. Several factors may explain these patterns: herders may be more motivated if they own more cattle within the herd (as noted by White 1990); they may also work harder if they expect future rewards, such as cattle or support from the herd patriarch; and poorer herders might be less focused on herding because they must divide their attention among other activities to meet their basic needs.

Bassett (1994, 149) similarly found that "poor working conditions, low incomes, and weak commitment to herd owners, [leads] most herders [to] not devote much care to their work." He observed that frustrated hired herders would sometimes seek revenge against poorly paying employers by deliberately allowing cattle to scatter and cause crop damage—costs that fall on the herd owner. Some owners also reported that their herders had intentionally let animals stray, left them unattended in the bush, or, in some cases, even engaged in cattle theft. Bassett interprets these behaviours as "everyday forms of resistance" (drawing on Scott 1987), representing attempts by hired herders to mitigate the precarious and exploitative nature of their employment and working relationship with herd owners.

My observations indicate that many contracted herders are so exhausted they sometimes fall asleep while on duty, allowing cattle to scatter or go missing. The sight of a herder dozing in the shade of an acacia tree became a familiar one during my daily drives with Dennis in search of

lions. When we stopped to warn them of lions nearby, they often explained that they had not received enough sleep, having spent much of the night dealing with disturbances in the boma, or that they felt exhausted due to the heat. Although it was beyond the scope of my study, future research could examine how the terms and conditions of contracted herding affect the quality of herding among Maasai—particularly in comparison to arrangements based on kinship ties.

Interestingly, both Turner and Bassett observe that changes in herding quality can have adverse effects on the environment. When less labour (or less *attentive* labour) is invested in herding, livestock are less likely to be moved as frequently or as strategically as required. Such restricted herd mobility can cause overgrazing in certain areas, thereby intensifying environmental stress. As the chairman of a grazing committee in the Amboseli ecosystem explained, outsourcing herding work beyond the kin group can weaken customary mechanisms designed to prevent overgrazing: "Back then, it was the cow owners that cared for their herds, not employed herders. They could see when the grass was bad; they could see the height and quality of the grass, and decide to change area." Employed herders may not always share such observations with employers, making some areas more vulnerable to overgrazing. Beyond degrading grass and soil quality, inattentive herding can also increase livestock losses to predation, which decreases community tolerance for lions and may ultimately stimulate retaliatory lion killings.

Socio-economic shifts that diminish the availability of, or compensation for, herding labour can therefore exacerbate both social and ecological problems. Turner emphasises that improving pastoral systems requires directly addressing the material challenges herders face, especially those relating to labour and remuneration. Bassett (1994) further underscores that these challenges are embedded in the labour process and the broader relations of production. In this sense, strategies to enhance herders' well-being are inseparable from efforts to improve the ecological health of the rangeland.

Strategies to Prevent *Aimalmal*: Herding Best Practices

Participating directly in herding alongside Maasai pastoralists has provided valuable insights into the socio-economic factors underlying livestock predation. Building on Turner's (1999) suggestion to improve herding quality—and thereby reduce predation—by addressing the material conditions of herders, as well as Bassett's (1994) call for solutions tackling the challenges faced by salaried herders, this section explores two interconnected dimensions: remuneration and

labour demands. The latter includes both the workload per head of cattle and the pressures placed on hired herders by patrons (i.e. pressure to transgress rules).

This section also extends Jablonski et al.'s (2020, 2) work on Maasai herders in Amboseli, which identifies traditional livestock husbandry practices as crucial for lion conservation by preventing cycles of human-wildlife conflict "that reduce tolerance and lead to lion killing." Their recommended best practices—such as knowing one's herd, maintaining consistent morning and evening routines, and ensuring herd proximity and adequate forage—are foundational to effective herding, as demonstrated in the previous chapter. However, Jablonski et al. (2020) do not link these practices to herders' material conditions. I therefore integrate Turner's emphasis on material conditions with Jablonski et al.'s findings on husbandry, to explore strategies that prevent *ailmamal* and reduce lion predation over the long term. I contend that improving herders' material conditions is essential to enabling the consistent enactment of these best practices. The following section outlines how this can be achieved.

Improving Herders' Status Through Better Compensation & Working Conditions

Since poor pay and low social status can negatively affect herding practices (Bassett 1994; Bradburd 1990; Murphy 2015; Turner 1999), one way to improve herding quality and reduce depredation attacks is to valorise this form of labour. Murphy's (2015) concept of "hierarchies of worthiness" refers to the social valuation or judgment of individuals' status, legitimacy, or deservingness within local hierarchies—essentially, how people are ranked or deemed 'worthy' or 'unworthy' of certain roles. These hierarchies are socially constructed frameworks that determine who is considered valuable, trustworthy, or entitled to particular forms of authority, respect, or resources in the local social and political landscape. Although herders might be seen as 'culture heroes' for sustaining the idealised image of Maasai pastoralism, they are simultaneously deemed as deserving of their social condition and thus expected to endure harsh living and working environments because of their role.

Improving herders' material conditions—through better salaries and living conditions—can help shift perceptions of what they deserve by enhancing their wellbeing and, in turn, their social status. Remunerating herders enough to afford the very livestock they tend would reduce their alienation from their means of production, allowing them to sustain themselves and eventually build up their own herd. When asked about fair wages, herders in the Mara suggested

an average of 14,500 Ksh per month, while those in Amboseli proposed a lower average of 8,750 Ksh. Across both sites, the current average salary is approximately 5,000 Ksh, with pay generally increasing alongside herd size and time spent working for the same herd owner. As one herder explained, the ideal salary should allow him to "at least buy a shoat after covering school fees and basic expenses" (junior elder, Mara, CI113). The price of a shoat varies between 4,000 to 12,000 Ksh depending on the breed, age, size and time of year.

Since social status in Maasai society remains closely tied to livestock wealth, enabling herders to afford their means of production could improve their social standing. This could be achieved, for instance, by highlighting the cattle losses linked to poorly paid and undervalued hired herders (as an incentive for better pay), while fostering broader conversations about the value of pastoralism as a core element of Maasai way of life. Such shifts in perception could help reframe herding from 'cheap labour' performed by uneducated men into a respected profession requiring specialised knowledge and skills. With fairer pay and better working conditions, herders could not only accumulate livestock and wealth but also pursue herding as a viable path to upward social mobility—enhancing both the profession's status and its recognition as a foundation for economic and social advancement.

Number of Cows per Herder

Turner (1999) identified a link between the demands placed on herders and the quality of herding, finding that labour shortages in cattle-poor households can result in less attentive husbandry. My research extends this observation to cattle-rich households: when not enough herders are hired relative to herd size, even upper-income herd owners experience diminished herding quality. As illustrated in the opening vignette of this chapter, I often observed single herders responsible for herds exceeding 100 cattle, sometimes reaching up to 250. This is frequently a cost-saving measure, as employers are expected to provide housing, food, and clothing for each herder, making additional hires expensive[86].

Such high cattle-to-herder ratios hinder the practice of effective herding techniques like *enkibooroto* discussed in the previous chapter. When herders are overstretched, it becomes

[86] Even middle- and upper-income families may not have the liquidity due to mistrust of the banking system in Kenya. Consequently, many families invest their surplus income in livestock or other types of assets, such as land and build-to-rent housing or commercial property (Nkedianye et al. 2019).

difficult to prevent the herd from dispersing, increasing the risk of cattle loss and predation, and reducing overall herd management quality. Herders interviewed suggested that 100 cattle per herder is manageable, with younger herders caring for about 50 and experienced herders managing up to 150. They emphasised that the optimal ratio depends on factors such as the herder's age and experience, as well as seasonal variations and rainfall. As one outgoing moran from the Mara explained, "When there is grass, one herder can look after 200 cows. But when there is not much grass, cows spread so you need 2 to 3 people for 200 cows" (outgoing Moran, Mara, CI120).

The composition of the herding workforce—especially age and experience—is as important as the overall availability of labour. In many pastoral systems, labour shortages are often addressed by drawing on all available household members, which can mean assigning herding responsibilities to children or less experienced youth. However, as discussed in Chapter 6, the age of the herder has implications for both herding quality and vulnerability to predation: younger herders may lack the skills to respond to threats, and lions may take advantage when children are responsible. In Amboseli, it remains common for children to herd livestock, either as a cost-saving measure or to give hired herders a break. During playback studies conducted with Dennis in December 2024 around Amboseli National Park, we received near-daily reports of lion predation attacks. Upon investigating these incidents, we frequently found that school-going children were responsible for the livestock. This was largely because it was school holiday season, and many herd owners had given their employed herders time off—both to allow them to rest and as a cost-saving measure.

Even during routine drives searching for lions, we often encountered unaccompanied herds. Concerned, we would search for the herder, only to find young children sleeping or playing football some distance away from the animals. Notably, we were in these areas specifically because lions had been sighted earlier in the day, raising questions about why young herders had brought cattle into such risky locations. On one occasion, we asked two boys, aged eight and ten, who were resting under a tree, why they had brought their cattle to that particular area— especially as Dennis noted the grass was insufficient and the area was known to be dangerous. The boys explained that their parents had not specified where to take the cattle, resulting in poor grazing choices and increased risk. As Dennis noted, an experienced herder would have avoided such exposed, degraded ground.

By contrast, conservancies in the Mara have implemented strict regulations prohibiting child labour in herding, making this less of an issue at my Mara field site. Conservation organisations, such as the Mara Predator Conservation Program (MPCP 2018), have echoed these findings, recommending against child herders to reduce predation risk.

Pressures to Graze: Following the Park / Conservancy Rules

Another factor contributing to aimalmal is the challenge of adhering to grazing rules set by grazing committees, parks, and conservancies. As one herder explained, a good herder does "not take cows where they are not allowed. We are told not to graze there [by conservancy rangers] because there are lions, but some still go graze there anyway and their cows get attacked. That is a bad herder" (outgoing Moran, Mara, CI118). Both my conversations with herders and data[87] from conservancies in the Mara and Lion Guardians in Amboseli indicate that most attacks occur while cattle are grazing—often because herders are in areas not officially open for grazing (where lions are present), graze at night when predation risk is highest, or lose track of cattle. As one herder working in the Mara explained, "Attacks mostly happen inside the game reserve when herders graze at night." (junior elder, Mara, CI111). When asked what compels herders to graze at night, he responded:

> When there is not enough grass, that's when we are forced to graze at night. The [livestock] owner tells us to graze at night. We usually bring five herds together. We have five herders in each direction because it's very risky. I want to keep my job. My children need my support, so when my boss tells me to bring the cows at night, I will do it. We need to take care of these cows. So, when you see a cow isn't getting enough feed, even if the owner did not tell us to take the cows, we will be forced to take them at night. There is a fine. If you are arrested the owner must pay 5,000 Ksh. (junior elder, Mara, CI111).

In short, herders breach grazing rules due to limited grass availability—either because they are restricted from accessing conservancy land, or because permitted areas lack what they consider sufficient quality forage. To please herd owners and ensure cattle are well-fed, herders risk grazing in off-limits sections with ample grass. Interestingly, there seems to be an incongruence between what conservancies consider 'enough' grass and what the herders and livestock owners consider sufficient. As one Maasai conservancy manager in the Mara explained:

[87]Internal reporting data were provided by Lemek and Oloisukut conservancies in the Mara. Additionally, conflict incident reports were shared by Lion Guardians in Amboseli.

> Herders are stubborn. They don't want to force their cows to eat the less palatable grass. Cows are selective eaters, so they need to be told what to eat. Maasai care about their cows getting fat, so they want them to feed on the best grass. Herders will say: *There is no more grass left in this block*, while there is still plenty of grass to feed on, it's just not the tender grass cows love. There are over 100 types of grasses, and they must all be fed on, even though they may not be the cows' favorite. (junior elder, Mara, CI128)

Herders, who must navigate these restrictions on a daily basis, are caught between meeting the demands of herd owners and complying with regulations—a tension that can place them in challenging and occasionally hazardous circumstances.

Although parks and conservancies have the authority to manage grazing patterns through rotational systems and set grazing hours, the responsibility for hiring and managing herders lies with livestock owners. This limits protected area managers' ability to enforce grazing rules, especially when herd owners are also landowners and stakeholders within these PAs. Their main recourse is to issue fines when herders transgress rules, but at 5,000 Ksh, many owners consider the penalty worthwhile if it means their cattle gain enough weight to offset the cost at market. On one patrol, I witnessed rangers arrest a herder for grazing illegally outside permitted hours. The herder told them, "Even if you arrested me, my cows have had enough feed now and my father will pay the 5,000 Ksh fine," implying that the benefit of well-fed cattle outweighed the cost of the penalty. Hired herders, who shoulder the risks of rule-breaking without directly sharing in the gains because they do not own the means of production, are in particularly vulnerable positions. Without collective bargaining power and limited oversight from the PAs in the hiring process, herders' work conditions are unlikely to improve.

Conclusion

Kin-based herding systems have traditionally linked those who do the work with those who own the cattle, fostering an intimate bond between herders, the community of animals, and the local environment they inhabit. These bonds shaped identity, status, and emotional wellbeing within pastoralist communities. However, the integration of cattle markets into the capitalist economy, alongside the growing importance of formal education, new land tenure arrangements, and the need for livelihood diversification, has driven a shift toward contractual herding labour. This shift has weakened the intimate human-animal relationships and disrupted the social and productive ties between herders and livestock. As a result, herder motivation and diligence can

diminish, especially when personal or familial benefit is lost (White 1990). Contractual arrangements have also opened the door to exploitation, low social status, and poor remuneration, all of which negatively affect herding practices and deepen class differentiation (Bassett 1994; Turner 1999). Drawing on Nancy Fraser's metaphor of "cannibal capitalism," in which capital cannibalises the very capacities for care and social reproduction on which it depends, these shifts render herding work invisible (quite literally when herders are asked to hide from tourists) and devalue it as a form of caring labour, "sucking up" the time and energy needed to sustain careful relations with cattle and the environment.

While Schareika et al. (2021) draw a clear distinction between "cattle logic" and "capital logic," I align with Galaty's (2021) view that these logics often coexist and blend in practice. Cattle may be valued simultaneously as commodities and as kin—bought and sold for profit, but also exchanged as gifts, loaned, inherited, and valued for their affective, social, and subsistence significance. Cattle continue to create and maintain relationships between people in contemporary Maasai society, with capitalist market logics overlaying these everyday relations of care, exchange, and becoming-with between herders and cattle. This syncretism underscores the complexity of pastoralist economies, where economic rationality and social obligations are deeply intertwined.

Nevertheless, the gradual erosion of Maasai husbandry practices is cause for concern, as evidence suggests that strong customary herding supports coexistence with wildlife, sustains extensive land tenure systems, and promotes both biodiversity conservation and drought resilience (Groom and Western 2013; Hobbs et al. 2008). The loss of age-old husbandry practices can also affect Maasai's relationship with predators: herder negligence and ineffective practices can increase cattle losses and reduce tolerance to predators over time (Jablonski et al. 2020). While predation is inevitable when cattle and predators share the same habitat, my time spent following herd(er)s has taught me that certain mistakes can make livestock more vulnerable to predation, highlighting the far-reaching consequences of eroding husbandry knowledge for both ecological sustainability and Maasai wellbeing.

Re-embedding herding labour within local systems of value (or 'worthiness') could reduce herder negligence and subsequently decrease predation. This can be supported by improving material conditions through better remuneration and working environments, while also fostering a renewed sense of pride among herders in the essential and skilled work they perform. Interestingly, many herders in the Mara expressed a preference for employment via conservancies, citing hopes

for permanent contracts, uniform treatment, and timely payment. As one herder explained, “The conservancy is a big employer. Once the conservancy employs you, you will be on a permanent basis and all herders will be treated the same” (junior elder, Mara, CI119). Another herder said, “I would prefer getting my salary from the conservancy because they may not delay paying you” (junior elder, Mara, CI116). Herders valued uniform treatment and timely pay. They also viewed conservancies as legitimate and respected organisations, placing them on par with other wildlife-related labourers such as rangers and game scouts.

In my Amboseli field sites, conservancies were not yet operational, so this was not discussed. Nevertheless, herders there also emphasised the desire for salary uniformity. As one herder remarked, “Now there is a big disparity between salaries. One herder can be paid 10,000 Ksh and another 5,000 Ksh. It would be better if we were paid the same” (outgoing moran, Amboseli, CI71). The current lack of a single employer in both field sites makes collective bargaining for better conditions difficult, as experiences range from positive to exploitative.

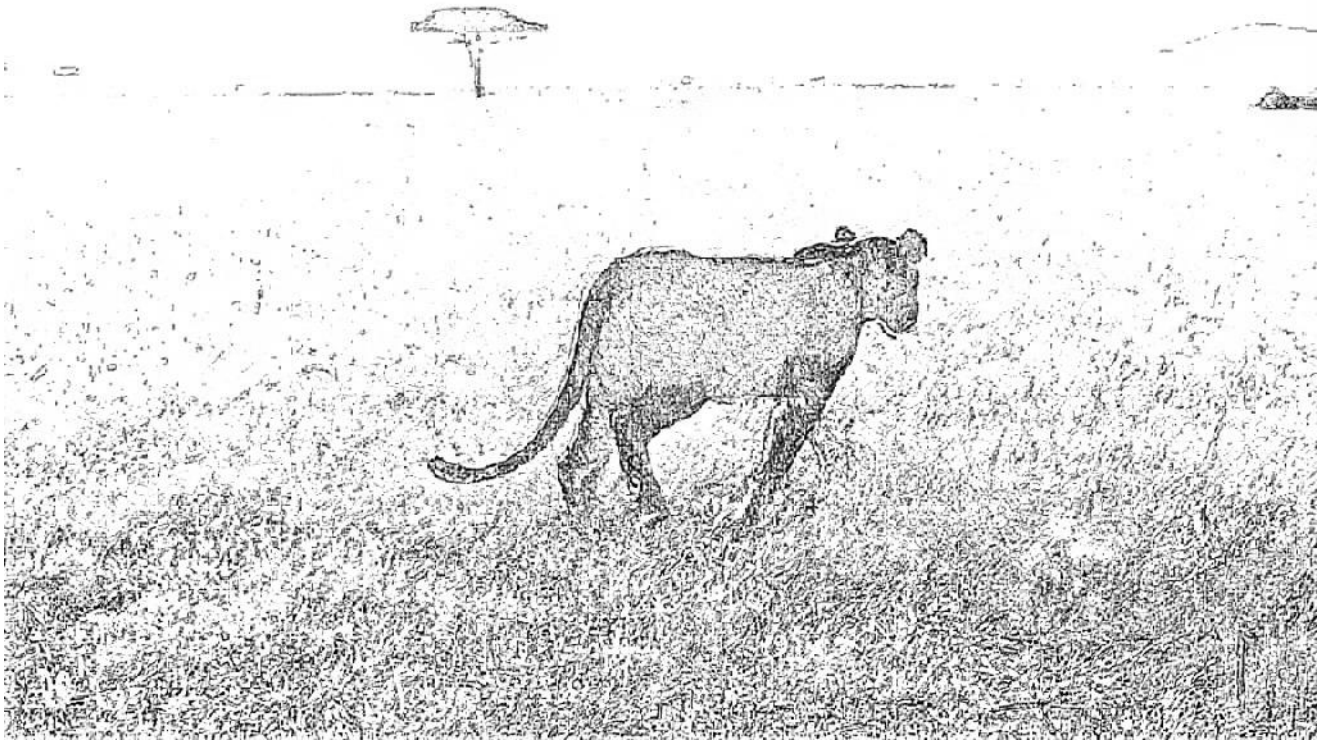
The lack of long-term commitments, combined with minimal vetting and training, further exacerbates disparities among herders by creating gaps in knowledge and skill transfer. Traditionally, knowledge, skills, and status have been transmitted through mentorship, age-sets, and kin-based networks. Supporting intergenerational mentorship, recognising the emotional and social bonds between herders and livestock, and fostering collective forms of labour organisation that reflect local values can help address these gaps and ensure continuity. Initiatives such as husbandry training, where older generations and experienced livestock owners share best practices and ecological knowledge with both waged herders and school-going youth, could offer a promising way to reduce depredation and raise awareness to these often-invisible social relationships behind livestock production. Recognising the need for such efforts, the Mara Predator Conservation Programme offered two herders’ training sessions in 2024 (MPCP 2024), and Lion Guardians established the Master herder programme launched in 2020 (Jablonski et al. 2022), though these initiatives could be more widespread and grassroots driven.

Conservation stakeholders and grazing committees could work together to legitimise herding as a respected career path and sensitise communities to the value of long-term herder retention. Such efforts should be grounded in a recognition of the cultural, emotional, and relational dimensions of herding, not just its economic utility. Future studies could examine how these initiatives affect both herders’ wellbeing and livestock predation rates.

Finally, the 'hidden' impacts of working alongside wildlife on impoverished communities have been well documented, including effects on physical health and mental wellbeing (Barua et al. 2013; Dixon et al. 2009). These researchers have sought to draw attention to these less visible impacts because existing mitigation strategies primarily target the obvious consequences of human-wildlife conflict, such as livestock loss. However, as I have demonstrated, many individuals entangled in this conflict *do not actually own the livestock* and therefore do not benefit from compensation schemes and other forms of support. These mitigation strategies often fail to address the hidden impacts on herders and other employed workers themselves. So, expanding on this scholarship of hidden impacts, I propose it is time to focus also on to the 'hidden' *drivers* of predation (rather than impacts)—this could prove more effective in reducing conflict over the long term, as it would address the root causes rather than merely the symptoms of lion attacks.

PART V

ON LIONS



Chapter 8: Interpreting the Lions' Point of View

For the stockbreeder as for the hunter, ~~wolves~~ [lions] and men are engaged in a dynamic interrelationship. Each protagonist is regarded as an actor in its own right whose behaviors, perceptions and practices act on the other and evolve in contact with the other.

— Nicolas Lescureux (2006)

After a year of fieldwork getting to know how people think and feel about lions, Dennis and I began our ethological studies of lions. It was finally time to get their point of view: how they respond to the presence of people, how they experience and react to them, along with the subtle ways they negotiate a shared landscape. We wanted to get into the minds of these animals. This was more than just observing behaviour—it was an invitation to consider lions as participants in the relationship, not merely passive objects of study only represented through human cognition. It was time to let the lions show us their side of the story.

Shifting from ethnography to ethology felt, at first, like stepping into an entirely different practice. But in truth, both require the same commitments: meticulous observation, immersion in another being's lifeworld, and a willingness to engage in dialogue—if not through language, then through signs (think Kohn[88]). And, most importantly, my ethnographic work did not end when the ethological began; in fact, some of the most interesting stories and anecdotes came from collaborations that took place during this component—including the story involving the bathing herder from the previous chapter.

Studying how lions respond to humans is challenging, not least because observing and accessing them in the wild is no easy feat. To overcome these difficulties, Dennis and I relied on the help and support of a broad network of stakeholders: herders, community members, safari guides, conservationists, and rangers. Over time, we became known as the team looking for lions, and people began contacting us with news of sightings. Most importantly, this collective search for lions opened new channels of conversation and collaboration across community, tourism, and conservation spheres. As an anthropologist, lion studies also created a knot from which to observe

[88] Drawing on Charles Sanders Peirce's triadic semiology, Kohn argues that *iconic* signs (that share likenesses with what they stand for) and *indexical* signs (that are in a relation of spatial or temporal contiguity with what they represent) have to be brought into the anthropological agenda because icons and indexes are the signs that nonhuman organisms use to represent the world and communicate between life-forms.

and experience how people from different backgrounds and with different agendas interact with lions.

I was now sitting in a car, driving around in the bush. I was no longer sitting in someone's living room or *enkang* where lions were topics of conversation. I was finally in the bush, searching for the animal itself, in flesh and bones. This shift opened new vantage points from which to engage with and observe people-lion interactions: on how conservationists move through their days, how herders negotiate a 'lioned' landscape, and how game drivers trade sightings as forms of bush currency. I was seeing lions, lioning[89]. I was finally penetrating the lion's lifeworld.

In his critique of Kohn's (2013) book, *How Forests Think*, Descola (2014, 272) contends that Kohn relies too heavily on what his Runa hosts think about animal behaviour and should have complemented this with "a real investigation of how nonhuman life forms actually deal with iconic and indexical signs." Descola further suggests that Kohn could have followed the lead of a new generation of scientists bridging human ethnology and animal ethology, to study how reciprocal interpretations of behavioural and environmental signs shape the coevolving knowledge of humans and animals. As an example, Descola points to Lescureux's (2006) work with Kyrgyz stockbreeders and wolves, which integrates ethnological and ethological perspectives. Lescureux examines *how* the wolf's behaviour is affected by human practices, and conversely, *how* the predator's behaviour exerts an effect on human perceptions and actions. He finds that certain wolf behaviours are directly tied to human practices, demonstrating the reciprocal and mutually transformative nature of human-wolf relations.

My intent here is to join this generation of "young scientists" who develop innovative ways to weave together animal ethology with human ethnography. This feels timely: recent assessments show that interdisciplinarity in human-lion conflict research remains low, indicating a need for research that combines and integrates both human and animal perspectives by drawing on methods from both the social and biological sciences (Montgomery et al. 2018). There is a growing body of literature showing that integrating social science into conservation can improve conservation outcomes (Bennett et al. 2017; Massarella et al. 2021; Reyers and Bennett 2025). This further emphasises the importance of approaches that work with, rather than separate, the intertwined

[89] Here I am taking inspiration from Tim Ingold's (2013, 20) proposal of thinking about creatures in their grammatical form, to reveal how "every animate being is fundamentally a *going on* in the world."

relationships between people and nature by integrating social and natural sciences in both conservation science and practice.

Most studies on lion depredation of livestock focus only on predation's final act—the death stage[90] (Rouviere and Montgomery 2025). Yet, as Rouviere and Montgomery (2025) argue, effective interventions to limit livestock deaths require understanding the *whole* predation process. Considering these points above regarding a need for more holistic studies, this research is doubly valuable: it considers the earlier stages of predation through playbacks, exploring how lions respond to people and livestock before any attack—and it does so by combining tools of both the social and natural sciences.

While I could sit and talk with Maasai pastoralists about their views on and experiences with lions, I could not converse with lions in the same way to ask them how they perceive people in their environment. Moreover, prohibiting direct observations of herd(er)s interacting with lions were obvious safety concerns. Confronted with the challenge of studying living beings whose experiences must be interpreted by other means, I turned to experimental tools to explore how they might perceive their world—and us within it. Audio playbacks were chosen for this study because playback experiments directly test the behavioural responses of animals to specific acoustic cues, a method proven effective in carnivore research (Durant 2000). Playbacks have been used to help us build an understanding of how animals perceive the world. For instance, Benson-Amram et al. (2018) show how playbacks can be used to get a better understanding of animal cognition (i.e. ability to recognise individual conspecifics; ability to quantify and assess numerical advantage). Research using the playback method found that elephants, and potentially other cognitively advanced animal species, have the ability to identify threats associated with humans through subtle voice characteristics (McComb et al. 2014). Other studies used playbacks to understand how animals perceive risks from predators (Durant 2000; Knowlton and Graham 2010). Building on these studies, playbacks could allow us to test lions' responses to Maasai- and cattle-associated sounds (e.g., Maasai voices, war cries, cattle bells, herder whistles) which could be useful to better understand how lions respond to Maasai and whether they associate risk with their presence in their proximity.

[90] Following Liman and Dill's (1990) five stages in the predation process: i) encounter, ii) interaction, iii) attack, iv) capture, and v) death. At each stage, different events could either advance the process to the next stage or end the predation event altogether.

Guiding our playback design were these research questions: How do lions perceive different forms of human-associated sounds in their environment? Do lions differentiate between sounds that signal risk (war cries) versus potential foraging opportunities (cattle bells)? Do lions respond to people and cattle in the way Maasai think they do: unfearful and unbothered? Is there a difference in how lions respond to playbacks in areas where they were more recently hunted, in line with Maasai perceptions that reduced hunting is making lions less fearful of people and livestock? How can new insights from lions' behavioural responses to human cues inform more effective strategies for human–lion coexistence and conservation?

Audio playbacks allowed us to investigate how lions respond to livestock- and human-associated sounds, thereby enabling an assessment of whether lions' avoidance of sounds associated with human activity (i.e. cattle grazing; hunting war cries) is associated with past experience of hunting by humans. The study was informed by Maasai interlocutors, who reported that some lions are less shy and less easily disturbed by human presence, and potentially more likely to be attracted to livestock as a result of the decline in lion hunting.

Field Sites & Methodology

Lion observation studies were conducted in various locations within and around protected areas (national parks and private conservancies) in the Mara and Amboseli ecosystems. These sites offer contrasting yet complementary landscapes for lion research: both harbour a dense wildlife population living alongside Maasai pastoral communities with long-standing lion-hunting traditions, which have been scrutinised for their potential role in lion population declines (Broekhuis et al. 2017; Frank et al. 2006; Hazzah et al. 2009; Hazzah et al. 2014; Packer and Kissui n.d.). These locations were specifically chosen based on Ontiri et al.'s (2019) findings which demonstrate that, due to differences in climate, wealth, and access to compensation, Amboseli and the Mara exhibit distinct patterns of lion killing. Notably, instances of lion killing by spear in Amboseli are more frequent than in the Mara, making the two interesting sites to compare.

Counting lions presents notable challenges due to their low population density, nocturnal habits, cryptic coloration, and tendency to avoid humans. Nevertheless, Kenya's lion population was estimated at approximately 2,589 individuals in 2021 (KWS and WRTI 2021). Within the Maasai Mara ecosystem, lion density is estimated at 16.7 lions per 100 square kilometres (MPCP

2024), whereas in the Amboseli ecosystem, density is approximately 7 lions per 100 square kilometres (Lion Guardians 2023).

Mara Ecosystem

Within the Mara ecosystem, I conducted audio playbacks experiments in four conservancies: Oloisukut, Lemek, Mara North, and Olare-Motorogi (OMC). These conservancies were selected for their proximity to my ethnographic field sites, former Oloirien and Kimintet group ranches in Trans-Mara (Siria section), and the former Koyaki Group Ranch (Purko section), which Broekhuis et al.'s (2017) identify as conflict hotspots. Each conservancy supports its own resident lion prides and operates independently, with distinct policies regarding human-lion interactions and conflict response.

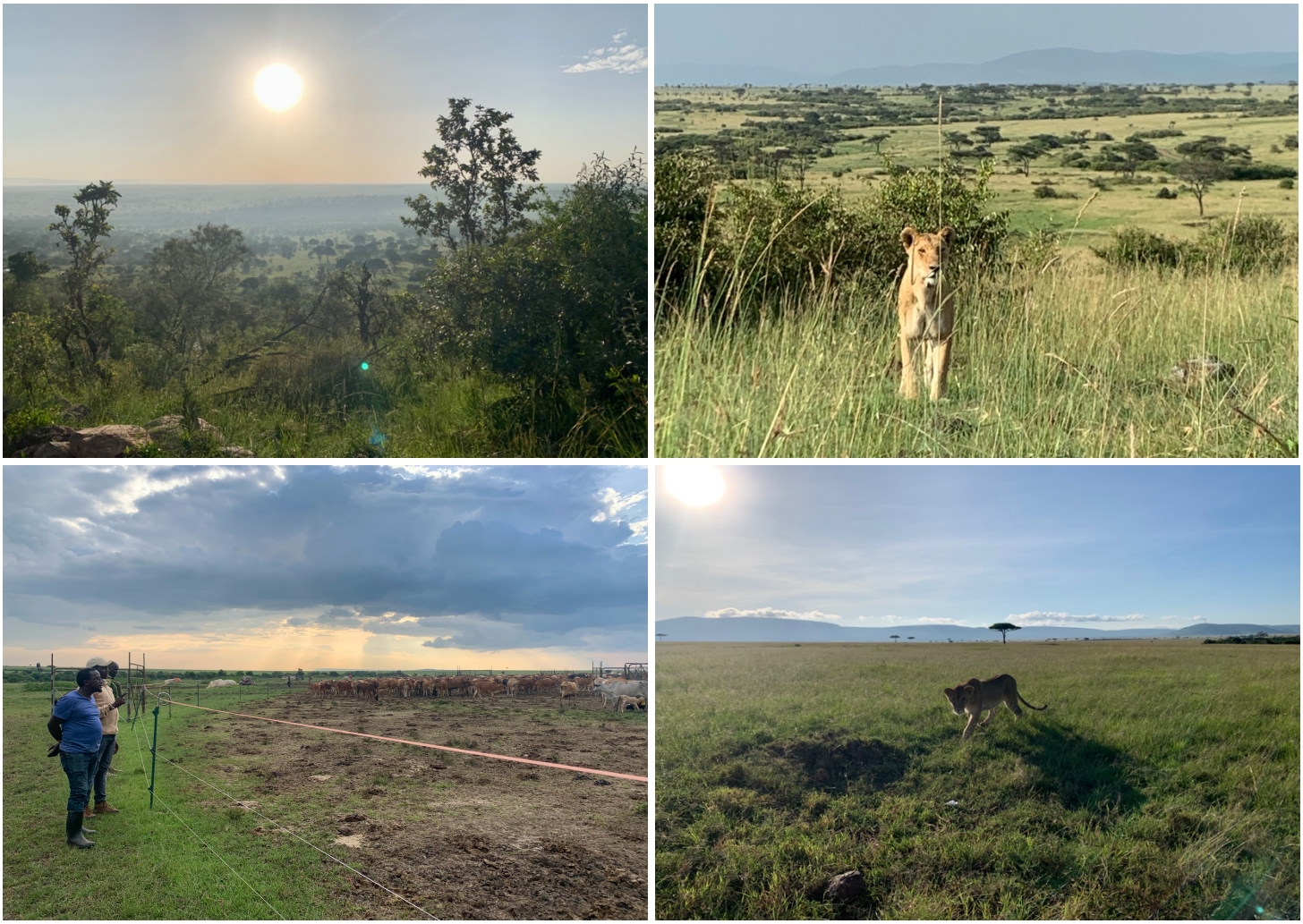


Figure 10 Views from various conservancies in the Maasai Mara. The top left photo was taken in Oloisukut Conservancy and the bottom left at Mara North, both in December 2023. The top right photo was taken in OMC and the bottom right from Lemek, both in May 2024.

Oloisukut Conservancy, located within the former Kimintet Group Ranch, covers approximately 23,000 acres[91]. Oloisukut borders Mara North Conservancy along the Oloololo Escarpment and features bushy, hilly terrain. The conservancy is home to a resident lion pride known as Pusinkariak; one female, Komeyan, was collared by MPCP during the research period. Oloisukut lies near a human-lion conflict hotspot in the Trans-Mara Kawai area (MPCP 2017). According to Oloisukut's internal records of reported predation incidents from 2018 to 2024, there is an average of three lion predation incidents on livestock per month. These figures reflect only reported attacks, but as community members receive compensation for livestock losses, there is an incentive to report incidents. Notably, 58.5% of lion predation incidents during reporting period occurred during the day. Herders in Oloisukut Conservancy are not allowed to carry spears.

Lemek Conservancy is situated within the former Koyaki Group Ranch and covers approximately 17,400 acres. The terrain is relatively flat, with scattered thickets throughout. The conservancy has implemented a grazing policy that aims to maintain a maximum stocking rate of one cow per acre, which suggests a cap of about 17,400 cattle; however, management estimated the number of cattle grazing inside the conservancy between 3,500 and 5,000 at the time of research. This indicates that the conservancy is currently operating below its intended carrying capacity, with potential for increased stocking over time as management policies take full effect. Lemek is home to a single resident lion pride known locally as the Lemek pride. Unlike some neighboring conservancies, Lemek does not have a compensation program for livestock losses, resulting in underreporting of predation incidents. However, between November 2023 and January 2024, a dedicated ranger collected data on human-wildlife conflict, recording an average of 7.3 fatal lion predation incidents per month during this period. Only 18 livestock owners grazing inside the conservancy were interviewed for this survey, limiting representativeness, and did not capture the time of day for attacks. Livestock herders in Lemek are permitted to carry spears but may only use them in self-defence.

Mara North Conservancy is the largest conservancy in the Maasai Mara, covering approximately 70,300 acres. Its terrain is predominantly open and flat, and it supports an estimated 16,000–17,000 head of cattle under a managed grazing system. The conservancy is home to three resident lion prides — the River pride, the Acacia pride, and the Offbeat pride — and occasionally receives visits from the Marsh pride from the Maasai Mara National Reserve. According to my

[91] Data sourced from the Maasai Mara Wildlife Conservancies Association, received July 2024.

informants, the Offbeat pride, and particularly the Acacia pride, are known to prey on livestock within the conservancy. During fieldwork, I observed that herders carried spears, suggesting they are permitted, however, for safety reasons, the conservancy rangers informed me that they are not allowed to drive lions away once a kill has occurred. Herders are allowed, however, to defend a cow from an attacking lion if it is alive.

Olare Motorogi Conservancy (OMC) lies adjacent to Mara North Conservancy and borders the Maasai Mara National Reserve. It was formed in 2006 through the merger of two separate conservancies, Olare Orok and Motorogi, and today covers approximately 35,000 acres. OMC supports five resident lion prides — Engoyanai, Iseketa, Hammerkop, Moniko, and Oldikdik — and occasionally hosts the Topi pride from the Maasai Mara National Reserve. At the time of this study, one lion from the Engoyanai pride was collared by the Mara Predator Conservation Programme (MPCP). According to the conservancy manager, predation is relatively low, with only two to three lion attacks on livestock per month and few cases of lion killings in recent years. Among the resident prides, the Iseketa pride is reported to predate on livestock more frequently than the others. In OMC, herders are discouraged — though not formally prohibited — from carrying spears. Grazing agreements vary between the two constituent areas: Olare members have agreed to a stocking density of 1.3 cattle per acre for six months of the year, whereas Motorogi members maintain 0.6 cattle per acre year-round.

Amboseli Ecosystem

Research in the Amboseli ecosystem was carried out within Amboseli National Park (ANP) and the former Orgulului/Ololorashi (OOGR) and Kimana group ranches, which surround the park. At the time of the research, ANP was under the full jurisdiction of the KWS, but as of July 2025, management has been transferred to a phased co-management model shared with Kajiado county government[92].

OOGR was subdivided following the Community Land Act of 2016, leading to the establishment of several community-owned and -managed wildlife conservancies as part of the land subdivision process (Santini 2025). Four new community-owned and -managed wildlife conservancies were established in OOGR (Kitenden B, Ole Narika, Ilaingarunyoni, and Taisere

[92] President William Ruto's cabinet ratified a decision on July 29, 2025, to transfer the management of Amboseli National Park to the Kajiado County Government under a phased co-management model (Kenyan Cabinet 2025).

conservancies), joining OOGR's older established conservancies, Kitenden and Kitirua. In Kimana, studies were conducted within Kimana Sanctuary. Since lions frequently move between the park, conservancies and community lands depending on the seasonal rainfall, research encompassed all these areas.

Figure 11 Scenes from Amboseli National Park. The top two photos were taken in June 2024, and the bottom two in December 2024 after the short rains.

The KWS had limited information about the prides in the Amboseli ecosystem compared to better-resourced private conservancies like those in the Maasai Mara. The conservation NGO Lion Guardians estimates approximately eight prides within Amboseli National Park, many of which seasonally traverse community lands outside the park boundaries. Pastoralists have had a special agreement with ANP management that allows them to graze their livestock inside the park

to access water and salt licks. Consequently, lions often encounter livestock and people both within and outside the park. To comply with park regulations, herders do not carry spears inside the park. Instead, herders I encountered typically leave their spears in the grass near the park boundary to retrieve them when they return home.

Sounds

Three distinct sounds were tested in the playback experiments: a Crested Francolin territorial call (used as the control), Cowbells (experimental), and Maasai War Cries (experimental). The territorial call of Crested Francolin was chosen because it calls at a volume that is comparable to Maasai war cries and cow bells and is a neutral call from the perspective of interspecific interactions (alarm calls, for example might prompt a lion response). The first experimental sound, Maasai herders with livestock, was chosen to examine lion responses to sounds associated with cattle, which might indicate potential foraging opportunities. The second experimental sound, war cries, or the sound made by Maasai warriors when hunting lions, was used to explore whether lions show less fear of hunting sounds over time since last hunted. The reason for having two sites—the Maasai Mara, where lion hunting has ceased multiple generations ago, and Amboseli, which has a more recent history of hunting—is to see whether avoidance is particularly marked in areas where they were recently hunted. The findings allowed for a comparison between Maasai knowledge and understanding of lions (that they are becoming bolder and not easily disturbed) with observed lion behaviour in these playback studies. Moreover, these experiments also enabled us to test whether lions discriminate between Maasai actively hunting, or when they are just grazing cattle.

Lion Guardians in Amboseli has recently developed a mock hunt intervention undertaken by Maasai warriors to chase problematic lions away after a predation incident. During these mock hunts, local Maasai men dressed in red shukas run towards the lions, scaring them with war cries and thunder flashes. In order to test the effectiveness of this intervention in decreasing the boldness of lions to approach people and livestock, and increasing the fear response in lions to avoid people, I added the sound of a thunderflash over the war cries sound to mimic Lion Guardians' mock hunts.

To record the sounds of war cries, locally known as aiserr and typically performed during aimanya—a ritualistic act carried out by ilmurran before spearing a lion—I gathered a group of

young men of moran age to perform the cries. The aimanya involves yelping aiserr and confidently advancing as a group to scare and annoy the lion being targeted. The ilmurran were asked to replicate the yelps as accurately as possible while remaining stationary, without actually hunting or killing a lion. The sound of a thunderflash was obtained by setting off and recording an actual explosion (similar to a firecracker). Cowbell sounds were captured amidst large herds of Maasai livestock walking and grazing. Crested francolin calls were opportunistically recorded in the wild. All sounds were recorded using a Røde NTG2 shotgun microphone and edited using Audacity to produce playback clips approximately 30 seconds in length. We aimed to conduct eight to ten playback sessions of each sound at every field site.

Looking for Lions

Conducting playback experiments is a challenging task. I had to obtain multiple permissions, from national to local authorities, and engage various stakeholders such as park management and conservancies, who often prioritise tourism revenue over research—so it was necessary to be clear about the benefits of my research. Once permissions were secured, the hard work of finding lions began. It's surprisingly difficult to locate these elusive animals! Fortunately, herders, rangers, and game drivers provided invaluable tips on recent sightings.

Accessing the lions also presented logistical hurdles. Although robust, Land Cruisers proved limited in navigating difficult terrain, with deep mud, dense thorny acacia, and thick thickets often blocking our progress. Several experiments were cancelled because, although lions were visible, we could not safely reach them. Even after finding and accessing lions, patience was crucial. There were times when I had to wait hours alone with the animals, only for them to move to inaccessible areas before the experiment could begin. Unpredictable factors further complicated the research. What do you do if a tourist vehicle approaches halfway through an experiment? What about a herder with his cattle? Ethically, the experiment must be halted, and the herder informed of the lions' presence. And what if you find a lion feeding on livestock? Should the experiment still proceed? While we tried to control as many variables as possible, working with wild animals in their natural environment often defies the laboratory valued in scientific research. This reminded me of Liboiron's (2021) research team dissecting fish guts looking for plastic, grappling with how to handle statistical outliers representing once-living beings—highlighting the complexity and

messiness inherent in ecological research. While I did not include these voided experiments[93] in my statistical models, I incorporated this observational data into my analysis as a reminder that ecological research must account for complexity that cannot always be neatly quantified.

To cope with this unpredictability and maximise our chances of sighting and accessing lions, we began our surveys at dawn between 06:00 and 07:00, often remaining in the vehicle until dusk to take advantage of lion activity in the afternoon and evening. We carried out experiments in the morning (07:00–11:00) and afternoon (14:00–18:00), avoiding the lions' lethargic midday period and — ensuring the experimental sounds fell within time periods during which such sounds could naturally occur.

Sighting Lions

When lions were sighted, Dennis and I would turn off the vehicle and discuss the best location to position the speaker. Once agreed, we placed the speaker behind a natural cover, such as tall grass or a shrub, to avoid it standing out. We aimed to position the speaker approximately 30-40 meters from the lion, adjusting based on landscape features. We would then drive to another location to create a triangle between the lions, the speaker and our vehicle. We also aimed to position the car around 30-40 meters from the lions. Since lions often rest in thickets or dense bush, we had to balance maintaining visibility with minimising disturbance. Lions in the Mara and Amboseli are accustomed to people and vehicles, making this distance appropriate to avoid disturbing them. In summary, sounds were played as far from the lions as possible while remaining audible enough to elicit a measurable response.

After the speaker and vehicle were positioned, we agreed on the focal individual for the trial—typically an older female, as she leads the pride. Dennis, as the driver, needed this information beforehand to track the correct lion if it moved. The experiment began by filming for five minutes prior to playback. At the five-minute mark, the chosen sound was broadcast via a Turtlebox speaker at a peak sound pressure level of 80 dB measured at one meter, approximate to the volume of a natural human conversation. Sound pressure levels were verified with a RadioShack decibel meter. Each playback lasted 30 seconds and was played once.

[93] Six playback experiments were initiated in the Mara, though data from these could not be used, along with five in Amboseli. Data loss or unusable results arose from various factors, the most common being difficulties accessing lion locations due to their movements, technical malfunctions of equipment (i.e. speakers, vehicles, or camcorders), and disruptions caused by herd(er)s or tourists on game drives, among other challenges.

Video recording continued for at least 10 minutes post-playback to capture immediate lion reactions, including reaction latency, glances toward the speaker, and movement toward or away from it. The focal subject was followed for a total of 30 minutes after the playback to document all behaviour. We endeavoured to keep the entire pride within the video frame to observe social interactions, with pre-playback observations serving as secondary controls. Video data were supplemented by written behavioural records using an ethogram recorded every 30 seconds.

For every sighting, a sequential sighting number; time of first observation; exact GPS coordinates of the initial lion location (obtained by following or driving to the spot later if necessary); date; identity of the individual (when known) or distinctive features; pride size; and group composition by sex and approximate age were recorded. During the experiment, we noted the focal lion's head orientation, gaze direction relative to the speaker, body posture, and behaviour (e.g., grooming, sitting, lying head up, hunting). GPS coordinates of the focal lion's position were recorded every five minutes by approaching once the lions had moved sufficiently far to prevent disturbance.

All observations were conducted to minimise disturbance and encourage natural behaviour, acknowledging that ethologists' bodies can never be erased from their field observations (Despret 2013). All observations were conducted from within a stationary vehicle, which acted as a hide, with observers remaining quiet and movements kept to a minimum. Approaches to lions were made slowly and indirectly (e.g. angled or zig-zag paths) if video range (>400 mm equivalent) was not immediately possible. We paused when lions fixed their gaze on the vehicle until they relaxed. Additional caution was taken when lions were close to roads, interacting with other carnivores, or resting, in order to prevent disturbance and ensure that they remained settled. To ensure that the lions did not habituate to the playback, we did not play the same sound to the lions within a minimum one-week period. The maximum number of recordings of the same type —though always using multiple exemplars to minimise pseudoreplication —played to the same lions was three times (Kroodsma et al. 2001).

Statistical Analysis of Playback Data

Statistical analyses of data recorded on ethograms were conducted in Rstudio using Mann-Whitney U tests to compare responses between playback sound types within each site, and between sites for a given sound type. This non-parametric test was selected because the data did not meet

assumptions of normality and involved small sample sizes. Two behavioural response variables were analysed across the two field sites: i) movement away from the stimulus (metres) and ii) duration spent looking towards the stimulus (seconds).

Results

Significant within-site effects

As expected, birdcalls elicited minimal movement and a short time spent looking at the speaker in both locations, consistent with their role as a controlled sound (Figs. 9a and 10a). In contrast, Cowbells and War Cries provoked significantly larger distance movements and longer looking durations, especially in Amboseli (Figs. 9b,c and 10b,c 2,). Both Cowbells (Mann Whitney U test = 3.5, $p \approx 0.0016$) and War Cries (Mann Whitney U test = 1.5, $p \approx 0.0018$) prompted significantly longer looking durations compared to Birdcalls, but did not differ significantly from each other (Table 2). Overall, Mara lions showed stronger flight distance and attention responses to War Cries than to Birdcalls (Figs. 9 and 10). They did not move significantly farther away in response to Cowbells than to Birdcalls. Lions did show higher attention levels to both Cowbells and War Cries relative to Birdcalls, with Cowbells and War Cries producing broadly similar effects.

In Amboseli, Cowbells prompted significantly greater movement distances than Birdcalls at both 5 minutes (Mann Whitney U test = 0, $p \approx 0.00031$) and 15 minutes (Mann Whitney U test = 4.5, $p \approx 0.0016$), and War Cries also elicited significantly more movement than Birdcalls (Mann Whitney U test = 0, $p \leq 0.0008$ at both time points). No significant differences in movement were detected between Cowbells and War Cries. For time spent looking at the speaker, Cowbells (Mann Whitney U test = 5.5, $p \approx 0.003$ at 5 minutes; Mann Whitney U test = 3, $p \approx 0.0013$ at 15 minutes) and War Cries (Mann Whitney U test = 5.5, $p \approx 0.0071$ at 5 minutes; Mann Whitney U test = 5, $p \approx 0.0058$ at 15 minutes) both generated significantly longer looking durations compared to Birdcalls, with no significant differences between Cowbells and War Cries. Overall, Cowbells and War Cries produced similarly strong behavioural reactions compared to Birdcalls.

Significant between-site effects

When comparing responses to the same sound between Mara and Amboseli, lions in Amboseli, at both 5 minutes and 15 minutes after the playback, moved significantly further away from the sounds source than those in Mara for both Cowbells (Mann Whitney U test = 67.5, $p = 0.0186$ at 5 minutes; Mann Whitney U test = 64, $p = 0.0400$ at 15 minutes) and War Cries (Mann Whitney U test = 45, $p = 0.0105$ at 5 minutes; Mann Whitney U test = 43, $p = 0.02145$ at 15 minutes). In the Mara, lions moved an average of 40 meters within five minutes after hearing cowbells and 19 meters after war cries. In Amboseli, lions moved significantly farther: an average of 119 meters five minutes after Cowbells and 78 meters after War Cries (Figs. 9b,c). In contrast, no significant differences in looking duration were found between sites for either sound type (Figs. 10b,c). In the Mara, lions spent an average of 173 seconds looking at the speaker five minutes after hearing cowbells, and 163 seconds after war cries. In Amboseli, the average looking time was 143 seconds following cowbells and 175 seconds after war cries.

These results indicate that while both Cowbells and War Cries elicit stronger movement responses in Amboseli than in Mara, vigilance behaviours (time spent looking towards the source) are similar across locations, suggesting site-specific sensitivity in movement but not in visual attention.

Table 1 Experimental Design

Site	Call Type	Number of Playbacks	Number of prides tested
Mara	Cowbells	9	6
Mara	War Cries	7	4
Mara	Birdcalls	8	5
Amboseli	Cowbells	9	5
Amboseli	War Cries	7	6
Amboseli	Birdcalls	8	6

Figure 12 Boxplots for Flight Distance (a. before playback; b. 5 min after playback; and c. 15 min after playback)

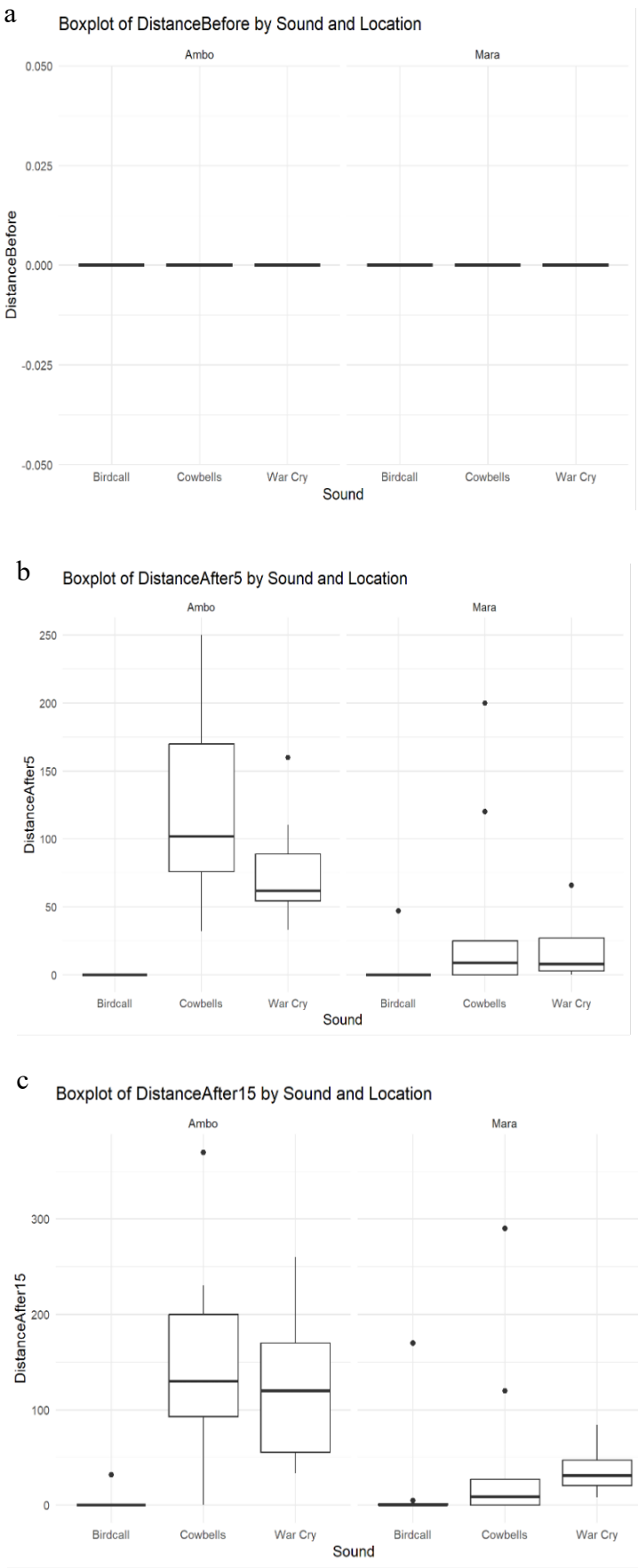
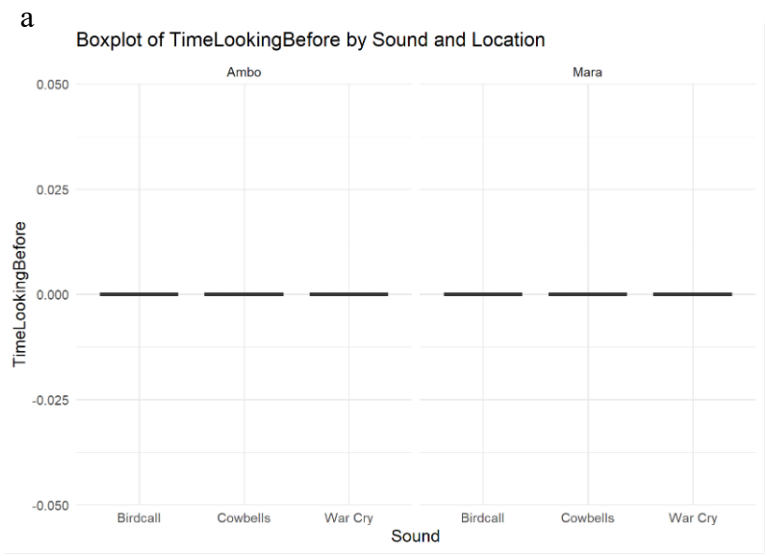
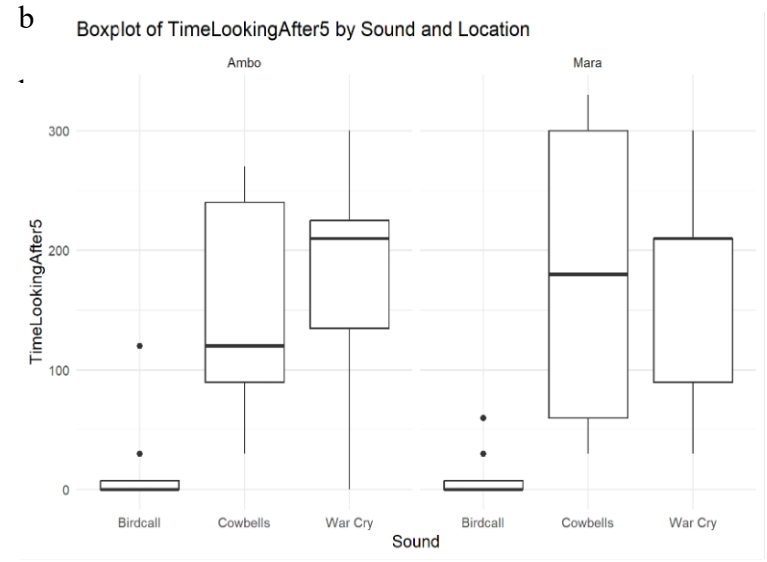
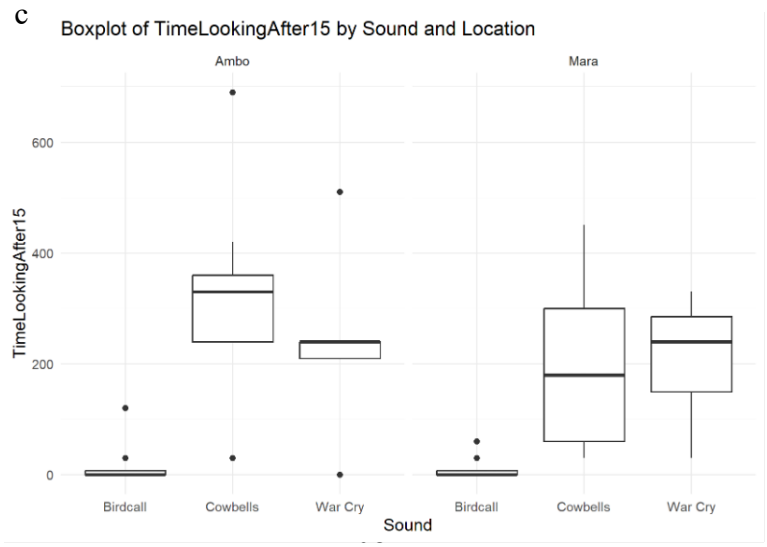


Figure 13 Boxplots for Time Looking at Speaker (a. before playback; b. 5 min after playback; and c. 15 min after playback)







Discussion

Results demonstrate that the type of auditory stimulus plays a crucial role in shaping lion behaviour. All lions, regardless of location, consistently looked toward the speaker when experimental sounds were played, confirming that these sounds reliably captured their attention. However, a clear divergence emerged in movement responses: lions in Amboseli moved significantly farther away from cowbells and war cries than lions in the Mara. This pattern aligns with my ethnographic data and with Ontiri et al.'s (2019) study, which suggests that lions in Amboseli have faced more frequent and recent hunting pressure from pastoralists than those in the Mara, which may have instilled fear of human presence in lions. Maasai interlocutors from both field sites noted that lions have become bolder and more willing to take risks as a result of the decline in lion hunting (see Chapter 4 and 5). However, exposure to both more recent hunting activities and mock hunts conducted by Lion Guardians may influence Amboseli lions' tendency to move further away, suggesting that lions in the ecosystem with recent hunting exposure are more likely to flee in response to Maasai-associated sounds, reflecting heightened sensitivity to perceived risk.

These experiments demonstrate a specific response to Maasai, as I did not observe these responses to the noise of my vehicle or to sounds made by tourists in their vehicles. I was able to drive up to 30m to the lions. Game vehicles, especially in the Mara, often come even closer —at times aggressively and within as little as 5 meters of lions—without eliciting much movement. While off roading in Amboseli National Park is not allowed, I have seen my fair share of tourist vehicles breaking the rules for a good tip. Though I did not play tourism-associated sounds to lions, my direct observations of their low response to the physical presence of tourists contrast greatly with the marked responses observed to pastoralist sounds in playback experiments. Even though both groups are human, these different responses suggest that lions distinguish between different types of people, associating only pastoralists with danger and threat.

Interestingly, although Amboseli lions moved further for each experimental sound, vigilance behaviour—measured by the time lions spent looking toward the sound source—was similar across both sites. This suggests that while the propensity to flee varies, once the disturbance stimulus is detected, lions in both ecosystems allocate comparable attention to it. Another notable finding is the lack of significant behavioural difference between responses to cowbells and war cries within each field site. Lions hear a cowbell sound (which could suggest domestic cows—

potential prey or food) and respond similarly to the sound of war cries (a sign of humans defending themselves or hunting), which poses a risk for lions. Rather than treating cowbells as an opportunity for food, lions seem to interpret this sound as a potential risk—just like they do with war cries. This implies that lions are not reacting because they think they will get food, but rather because they perceive danger; in other words, they associate danger with any noise generated by the Maasai community, consistent with general animal responses to risk cues. Such generalised wariness toward human-associated sounds may serve as an adaptive strategy in landscapes where humans present potential dangers. However, it is important to stress that this cautious response does not imply that lions are not attracted by the possibility of a meal; rather, it indicates that the sound signals a higher chance of human presence and threat, outweighing any foraging gain they might get from livestock.

From a human-wildlife conflict perspective, these site-specific behaviours have important implications. In Amboseli, people can be reasonably confident that lions will retreat upon hearing sounds like cowbells, potentially reducing risks to people and livestock. Conversely, in the Mara, lions tend to stay put, which must pose an additional risk to people and their livestock during such encounters. Herders' have observed that attacks are more likely to occur when livestock approach within 100 meters of lions, which aligns with established knowledge of lion hunting strategies (see Chapter 6). Although lions cannot outrun their prey, they can out-accelerate them, necessitating a close approach to ensure a successful kill before the prey reaches full speed. As a result, lions typically initiate charges at distances under 50 meters (Orsdol 1984). Hence, these differences matter in flight distance: a lion that moves away by over 100 meters upon hearing cattle and herders represents a considerably lower risk than one that stays put or only moves a short distance.

According to my interlocutors, lions are typically deterred from attacking livestock when adult herders are nearby. Findings support this, showing that cattle benefit from close human supervision along with the use of loud bells, which act as an additional deterrent against predation. Lions in both field sites oriented their gaze toward the speaker upon hearing experimental sounds, suggesting that they inspected the source before deciding on their next action. This behaviour implies that noise alone may not suffice to fully deter lions from attacking livestock and that visual presence of a herder may strengthen the deterrent effect. This corroborates the findings of Valeix et al. (2012), who observed that lions are more likely to target unattended livestock and Ogada et al.'s (2003) findings that herds under close supervision and prevented from scattering are less

likely to fall prey to predators. The fact that lions in both field sites spent time looking at the speaker for experimental sounds could suggest they are looking for a herder, again stressing the importance of close supervision. These findings also underscore the importance of employing trained and experienced herders to minimise attacks on livestock, particularly as lions may become bolder.

From my own observations while conducting these experiments in the Mara, lions there appear less shy and neophobic than those in Amboseli. In several instances in Lemek, Mara North, and OMC, lions inspected—and at times even played with—the speaker upon hearing cowbells and war cries. For example, in Lemek, a lioness grabbed the speaker, which was hiding behind thickets, brought it to her two cubs, who gnawed on it. We were eventually able to retrieve the speaker, and to protect it from further damage, we built a bespoke metal cage, painted green. In an experiment with the same pride five months later, they again attempted to grab the speaker, this time protected by the cage, following playback of war cries—though the cage made it more difficult. In contrast, my observations suggest that Amboseli lions are generally more wary, showing shyness and increased caution.

I recall one male lion with a distinct dark patch behind one of his front legs. According to KWS rangers, this lion had a reputation for feeding on livestock near the park's boundary at Kimana gate, which matched several attacks reported by local residents. Dennis and I invested considerable effort attempting a playback experiment to observe how he would respond to our sounds, but he proved elusive. Dennis believed the lion's refusal to be seen reflected his awareness that feeding on livestock put him at risk. One day, rangers alerted us to a sighting near Kimana gate. We hurried to the location and saw him travelling outside the park, moving through dense bush. We followed his trail slowly, hoping he would eventually rest. But this individual evaded us for over an hour, vanishing into the thicket and reappearing intermittently—as if playing a game of hide and seek. We eventually lost his trail, and as a final attempt, we drove into an open area, placed the speaker on top of the car, and played the cowbell sound at high volume in hopes of drawing him back into view. I didn't think this was going to work. Unexpectedly, the lion emerged from a bush about 300 meters away and scanned the direction of the sound, as if searching for cattle. We tried to approach but he disappeared again, and we never succeeded in conducting the playback. What I learned that day is that lions, which may appear more wary to cattle bells during playback studies, do not necessarily lack associations between cattle sounds and food. Rather, their

caution seems more calculated: they may carefully observe and wait for an opportunity, such as the absence of a herder, before attacking livestock.

Context-specific discriminatory abilities, such as those observed here, could be strongly influenced by social learning. Research has shown that lion avoidance of humans is most likely learned, either through direct experience or socially by observing the behaviour of other lions (Griffin 2004). Lions might perceive their environment in terms of potential threats, placing Maasai in a different category of threat to tourist—a learned behaviour transmitted to other pride members. I recall another instance outside of ANP, when we conducted war cries playbacks on two young consorting lions. They fled their location rapidly in the opposite direction upon hearing the sound. The Lion Guardian accompanying us, who helped locate these lions, explained "The mother of the female frequently hunted livestock inside bomas. People targeted her mother when she was a cub." He added that the young female was often chased as a cub because people targeted her mother. This observation parallels Maasai understandings that lions pass information to their offsprings and mating partners.

Similar socially transmitted discriminatory skills have been documented in other species. Research in ANP shows that elephants can distinguish human age, sex, and even ethnic groups through vocal cues, and socially share this information within their groups. They use this ability to assess threats associated with different humans. McComb et al. (2014) found that elephants respond differently to human groups which pose different levels of danger. Elephants in their studies responded defensively to Maasai voices—perceived as higher threat—compared to Kamba voices, demonstrating an ability to assess predatory risk. These responses varied by the speaker's sex and age, with female and child voices eliciting fewer defensive behaviours. They write that a "cognitively advanced social mammal can use language and sex cues in human voices as a basis for assessing predatory threat" (McComb et al. 2014, 5434). Such findings suggest that if lions employ comparable discriminatory strategies, it would support local observations that lions might exploit moments when young boys herd livestock or react differently to men's and women's voices. Interlocutors also noted other sensory clues used by lions to factor into their threat assessment, such as recognising the scent of ilmurran (distinguished by *osientu* [sage] leaves, known as "Maasai perfume" traditionally rubbed on them), and being able to see a red shuka. As McComb et al. (2014) conclude, such adaptive cognitive abilities are crucial for survival given humans' role as apex predators.

People and lions in Maasailand have had the opportunity to observe one another and to develop strategies to live together, generally avoiding the establishment of conflictual encounters. Research shows that lions adapt to human presence through a learning process. For instance, lions practice spatiotemporal segregation to share space with humans, minimising their encounters unless food scarcity or habitat fragmentation forces riskier behaviour (Mills et al. 2023; Oriol-Cotterrill et al. 2015b). Additionally, lions adapt their hunting strategies to reduce retaliation, preferentially targeting ungraded or vulnerable cattle when opportunities arise (Weise et al. 2025). Studies on other large carnivores reveal similar patterns, where animals navigate landscapes to avoid risks posed by humans, displaying behaviours like hiding, moving away, reducing foraging in risky areas and even reducing aggression towards people (Ordiz et al. 2013; Ordiz et al 2019; Oriol-Cotterill et al. 2015b; Suraci et al. 2019; Swenson 1999; Valeix et al. 2012; Zedrosser et al. 2011).

Landscapes of fear represents the spatially explicit variation in perceived predation risk across a prey animal's habitat, conceptualised as a three-dimensional landscape with peaks and valleys corresponding to areas of higher and lower predation risk or fear levels (Laundré et al. 2010). Oriol-Cotterill et al. (2015b) extend this framework to human-predator relations—termed "landscape of coexistence"—where humans act as predators, and lions show "general avoidance of high-risk areas on a land-use scale and also respond reactively to actual human locations and human activity levels on a small scale" (Oriol-Cotterill et al. 2015b, 6). Lions subjected to hunting may respond by adopting strategies to reduce exposure to humans by modifying their habitat use, for instance, creating "landscapes of coexistence," where human-caused mortality risk is low (Oriol-Cotterill et al. 2015b). By contrast, where lions are not subject to hunting by humans, they may construct their niches differently, potentially increasing spatial overlap with humans. In summary, although lions generally avoid humans, they take calculated risks when hunting livestock, minimising exposure by selectively targeting prey—particularly when natural food is scarce or habitats are fragmented.

With this research, I specifically aimed to determine if there was a difference in how lions responded to playback sounds in areas where they had been hunted more recently, in line with Maasai observations that reduced hunting has made lions less fearful of people and livestock. In turn, this understanding could enhance conservation strategies which reduce predation and build tolerance in the long term. Findings show that the reduction in fear aligns with what my Maasai

interlocutors said about changes in lion behaviour. While findings suggest that Amboseli lions maintain a greater flight distance after hearing Maasai-associated sounds, it is difficult to directly link this to recent hunting or to mock hunts conducted by Lion Guardians. Moreover, the degree to which this fear response is maintained in Amboseli by the Lion Guardians' approach is unclear. Consequently, this research raises new questions and avenues for future exploration: Are the lions in Amboseli responding to recent instances of hunting, or does the Lion Guardians' recent use of mock hunts effectively sustain lions' wariness? Additionally, do lions differentiate between human sounds that signal active hunting and those that do not, or do all human sounds elicit similar reactions? Using this research's data as a baseline, it would be interesting to implement the mock hunt approach in the Mara to test whether flight distance would increase.

Nevertheless, these new insights reveal the nuanced ways in which local ecological and social factors shape lion responses to auditory cues, opening avenues for interventions that enhance safety for both people and lions. The findings highlight the need for context-specific approaches to managing human-lion interactions. Given that lions' behaviour is shaped by past human encounters, the Lion Guardians' use of mock hunts shows promising potential. Boonman-Berson et al. (2016) demonstrate with black bears in Colorado that wildlife managers must communicate using the 'problem' animal's language—through various sensory signs—to encourage animals to avoid humans, a concept they term "common-sensing." This approach invites wildlife managers to think like (or rather, *think with*) the animals they manage, engaging with the full spectrum of their sensory perceptions (Hurn 2012). And who better to think with wildlife than the people who share space with them? As such, these kinds of interventions can fulfil a sense of participation, autonomy, and justice among communities living with predators—motivations often driving retaliatory killings, as discussed in Chapter 5. Such approaches, rooted in situated knowledges and local practices, offer non-lethal, locally relevant pathways to justice that could reduce the need for lethal responses. These represent essential tools in the pursuit of conservation strategies that benefits both lions and people.

Recent research argues that effective human–lion coexistence strategies should focus their thinking on *coadaptation*, recognising that animals have the capacity to adjust to human presence, not just the other way around (Brakes et al. 2019; Pooley et al. 2017). *Co*adaptation foregrounds mutual adjustments and learning how to accommodate one another. Further work could explore non-lethal interventions as a way of 'teaching' lions to fear people and their cattle, thereby adapting

their behaviour to human presence. Studies show animals can lose antipredator behaviours if they live without predators for several generations (Griffin et al. 2000); therefore, antipredator and aversive conditioning[94] in lions could make them more wary of people and livestock, particularly in areas where they have not been hunted for some time.

There is increasing interest in this area, known by some as Conservation Behaviour (Van Dooren 2023), with strong support for the idea that antipredator training—through social learning, individual learning, or the use of different stimuli—may effectively improve animals' ability to cope with predators (in the case of lions, humans are their predators) (Griffin et al. 2000). Animals learn about their environment in ways that enhance their survival by reducing the probability of themselves or their kin being killed—reflecting an interplay between natural selection and the accumulation of experiences during their lifetime (Domjan and Galef 1983). For instance, animals can learn to adjust their levels of vigilance in areas with high predation pressure (Hunter and Skinner 1998). Trained animals can serve as role models for others, including their offspring and other adults, who can learn antipredator behaviour by watching and copying — a process known as cultural or social transmission (Griffin et al. 2000). Consequently, training just a few individuals can start a chain reaction that benefits many more animals by promoting predator avoidance across generations.

Research shown that using safe but realistic frightening stimuli paired with a signal (i.e. human presence and sound) can modify animal behaviour (Griffin et al. 2000). The Lion Guardians employ this approach by conducting mock hunts—Maasai warriors use traditional war cries, loud noises, and visual presence to mimic hunting without causing harm. In this setup, the Maasai warriors act as model predators (conditioned stimulus), combined with frightening stimuli such as thunder flash sounds and war cries (unconditioned stimulus), to teach lions caution and fear of humans and livestock. These mock hunts generate a fear response that helps lions associate human presence or sounds with danger, thereby creating 'landscapes of coexistence.' Through social transmission, trained lions can also pass on this wariness to pride members, amplifying the effect.

Most attempts to condition animals to recognise predators in controlled conditions show that learning occurs after just one or two exposures to the paired conditioned and unconditioned

[94] Aversive conditioning is an active deterrence method whereby a punishment is delivered to targeted individuals in response to an unwanted behaviour. The individual learns to associate the punishment with the undesired behaviour, leading to the eventual cessation of that behavior (Pavlov 1927).

stimuli. A similar intervention around Hwange National Park, Zimbabwe, the Long Shields Community Guardians Program, uses trained locals to intercept and chase collared lions that approach within ~2 km of a household. These chases, often on foot and supplemented by horns and loud noises, have shown some success in reducing livestock depredation, though efforts must be consistent and sustained (Loveridge 2015; Petracca et al. 2019). Authors recommend prioritising young lions for such interventions (Petracca et al. 2019). Similar interventions on other carnivores have also shown some success in curbing recalcitrant behaviour (Mazur 2010; Smith et al. 2020; Stenhouse 1983; Zanni et al. 2023).

Developing non-lethal means to instil fear of humans in lions could also help manage problem individuals. Many Maasai interlocutors expressed frustration that they cannot remove such lions from the ecosystem, which, they argue, allow these behaviours to be passed down to other individuals. Stander (1990) identified specific lions that repeatedly preyed on livestock, while others did not exhibit such behaviour, supporting the Maasai's view that not all lions are problematic and that such bad behaviours are developed socially or through past experiences of successfully predating on livestock. While Woodroffe and Frank (2005, 498) suggest that selective hunting of stock-killing lions could help curb the spread of "such damaging behaviour through the population," non-lethal alternatives also warrant consideration. Although there is some evidence that culling problem predators may be effective in reducing livestock loss if the correct individuals are targeted (Bangs et al. 2006; Bradley et al. 2015; Harper et al. 2008), such problem animal control risks being misused and co-opted by various actors, leading to unsustainable offtakes (Chapron and Treves 2016). Hence, more research is needed to examine individual behaviours of predators (to recognise individuality, or "personality") (Linnell et al. 1999) and to assess whether non-lethal aversive conditioning can deter especially problematic lions from attacking livestock.

Conclusion

This research demonstrates that the ways in which lions react to humans are shaped by their past experiences interacting with people. This invites us to re-think lion conservation approaches and how we might foster more tolerance between people and lions. What this suggests is, while hunting bans aim to reduce conflict, they may inadvertently increase it by encouraging bolder lion behaviour. This raises an important ethical question: at whose expense are we protecting lions?

Rather than imposing one-sided protections, adaptive measures that foster mutual avoidance and landscapes of coexistence between humans and lions are essential.

The methods I employ here—behavioural experiments informed by and integrated with anthropological practice—not only illuminate the reciprocal relationships that shape shared landscapes but also provide a tangible way to include nonhuman needs and interests in conservation decision-making. While engaging with large carnivore—especially alongside human subjects—is challenging, costly, and time-consuming, this integrated approach may offer more accurate and suitable insights into how humans and carnivores live with and adapt to each other. I hope my methodological approach contributes to resolving the ongoing debate regarding the best methods to study both human and nonhuman actors together (Toncheva and Fletcher 2022). Most studies focus primarily on ethnographic observations of humans interacting with nonhumans (*Ibid.*), but some argue for cooperation between the natural and social sciences and advocate for appropriate methods to investigate each species (and their interaction) simultaneously (Barua and Sinha 2019; Hodgetts and Lorimer 2015). Relying on ethnographic methodologies to study nonhumans risks portraying animals through human interpretations rather than capturing their lived realities (Madden 2014). I believe that integrating ethnography and ethology can, at least partially, help 'democratise' agency beyond the human subjects in conservation decision-making (Toncheva and Fletcher 2022).

In Kenya, as mobility for people and wildlife decreases due to pastoral land enclosure, climate change, and shifting lifestyles, both must adjust their ecosystem use to thrive. Although conservation efforts have increasingly embraced a people-and-nature paradigm that integrates human and wildlife management into a holistic strategy, interventions to mitigate conflict between people and lions often overlook local and animal agency, relying instead on compensation for property damage. This approach can undermine institutions and practices developed over time to manage such conflicts, while also dismissing animals' agency and ability to change behaviour.

A better approach might be to foster coadaptation between people and lions by identifying ways to reconfigure their behaviours and, in turn, how they interact. Indeed, animals have been shown capable of adapting to new contexts and modifying their behaviours when faced with change (Edelblutte et al. 2022; Griffin et al. 2017). Moreover, they are shown able to reflect cognitively by "remembering the past and planning for the future" (Kaplan, 2016, 201). Building on this, previous research has considered wild animals as active participants in conservation

management through their relationships with humans, their conspecifics, and other species (Boonman-Berson et al. 2016; Brakes et al. 2021; Edelblutte et al. 2022; Evans and Adams 2018). In this light, both people and animals function as agents "whose behaviors, perceptions and practices act on the other and evolve in contact with the other" (Lescureux 2006, 472). Shifting the focus from conflict to *co*adaptation thus highlights this co-constitutive relationship and underscores the need for mutual adjustments to changing environmental and social realities.

Table 2 Time looking at speaker after playback

Legend: * = $p < 0.05$; ** = $p < 0.01$

Call Type Comparison	Time Point	Site	P value	Significance
Birdcall vs Cowbells	5 min	Mara	0.00157	**
Birdcall vs War Cry	5 min	Mara	0.00178	**
Cowbells vs War Cry	5 min	Mara	1.000	
Birdcall vs Cowbells	15 min	Mara	0.00158	**
Birdcall vs War Cry	15 min	Mara	0.001867	**
Cowbells vs War Cry	15 min	Mara	0.6316	
Birdcall vs Cowbells	5 min	Amboseli	0.003036	**
Birdcall vs War Cry	5 min	Amboseli	0.007165	**
Cowbells vs War Cry	5 min	Amboseli	0.5581	
Birdcall vs Cowbells	15 min	Amboseli	0.001342	**
Birdcall vs War Cry	15 min	Amboseli	0.005808	**
Cowbells vs War Cry	15 min	Amboseli	0.219	
Cowbells Mara vs Ambo	5 min	Between sites	0.593	
War Cry Mara vs Ambo	5 min	Between sites	0.7433	
Cowbells Mara vs Ambo	15 min	Between sites	0.2135	
War Cry Mara vs Ambo	15 min	Between sites	0.8456	

Table 3 Distance moved after playback

Legend: * = p < 0.05; ** = p < 0.01

Call Type Comparison	Time Point	Site	P value	Significance
Birdcall vs Cowbells	5 min	Mara	0.1026	
Birdcall vs War Cry	5 min	Mara	0.0237	*
Cowbells vs War Cry	5 min	Mara	0.747	
Birdcall vs Cowbells	15 min	Mara	0.2154	
Birdcall vs War Cry	15 min	Mara	0.01428	*
Cowbells vs War Cry	15 min	Mara	0.1822	
Birdcall vs Cowbells	5 min	Amboseli	0.0003102	**
Birdcall vs War Cry	5 min	Amboseli	0.0005566	**
Cowbells vs War Cry	5 min	Amboseli	0.266	
Birdcall vs Cowbells	15 min	Amboseli	0.001624	**
Birdcall vs War Cry	15 min	Amboseli	0.0007946	**
Cowbells vs War Cry	15 min	Amboseli	0.7106	
Cowbells Mara vs Ambo	5 min	Between sites	0.0186	*
War Cry Mara vs Ambo	5 min	Between sites	0.01052	*
Cowbells Mara vs Ambo	15 min	Between sites	0.04004	*
War Cry Mara vs Ambo	15 min	Between sites	0.02145	*

Conclusion

We are required to think about people and animals as connected in a single experience, which they are living through together, and in which they jointly constitute their identities. This obliges us to consider the manner in which the two communicate with each other, the manner in which they keep faith with each other — not that they act based on shared assumptions, but that they respond to each other through the consequences of their actions, and their responses are part of the consequences.

—Vinciane Despret (2015)

This thesis set out to explore how the ban on hunting has affected Maasai pastoralists and lions, as well as the dynamic relationship between them. To understand this human–animal dynamic holistically, I bring anthropological knowledge of Maasai practices and experiences with lions in dialogue with ethological research of lion behavioural ecology. Central to this work is the recognition that conservation must treat people as integral parts of ecosystems, rather than external to them, and animals as social agents with individuality and adaptability. In this conclusion, I want to end by reflecting on avenues for developing socially-just, ethically responsible conservation approaches that meaningfully integrate local ecological knowledge and animal behaviour. In doing so, I consider this research's contributions to the study of Kenya's Maasai pastoralists, to lion behavioural ecology, and to the disciplines of anthropology and conservation science more broadly.

I began the ethnographic chapters in Part II by attending to Maasai-cow relations, foregrounding how intertwined subjectivities between pastoralists and their cattle shape everyday life and ecological engagement. While thinking through the writing of this thesis in the field, it became clear that central to the entanglement between Maasai and lions are the animals Maasai live alongside, care for, labour with, and protect from predators. In my pocket notebook I scribbled: "The story of lion hunting begins with cows." At the time, I was reading Govindrajan's (2018) book, *Animal Intimacies*, whose concept of multispecies relatedness resonated with my field site. I felt that Maasai-cattle relationships are much more than economic resources or cultural symbols—they are more aligned with kindred relations. By starting with these intimate relations through the lens of kinship, I lay the foundation for understanding how Maasai and their livestock navigate shared spaces with lions, and how these more-than-human connections set the scene for broader discussions of predation, coexistence, and coadaptation.

In Part III, I showed that Maasai have observed how the cessation of lion hunting has altered their relationship with lions, shifting the balance of fear and boldness among predators. I draw on Gibson's (1979) theory of affordances and Ingold's (2000) concept of relationality to reveal how Maasai and lions continuously perceive and respond to the possibilities for action that their social and physical environment offers. Their choices and actions generate evolving socialities that blur fixed boundaries between nature and culture. In this way, changes to one side of this relational dynamic inevitably bring changes to the other. I demonstrate that the transformations in the Maasai material and social realities have brought about new ways of relating with lions and reconfigured Maasai masculinity and identity. Importantly, this change is understood by Maasai as reciprocal—they too have observed a change in how lions relate back to them. I frame this dynamic as Maasai becoming-with-lions. Lions are no longer 'taught' to associate livestock predation with risk, reconfiguring their behaviours and their interactions with humans and cattle into new patterns of engagement. Although *olamayio*, or ritualised lion hunts, might be declining, occasional retaliatory hunts persist, motivated by various, entangled motivations—from attempts to teach lions to fear Maasai (or to teach them *how* to behave around Maasai) to gaining conservationists' attention or advancing a political agenda. I focused the discussion on the *intents* behind lion hunts, as most analyses on human-wildlife conflict tend to focus on *causes*, suggesting that understanding hunting motivations requires attending to both cause and intent. For example, while livestock predation might be the cause, the intent behind a hunt can range from removing a 'problematic' lion to seeking justice for perceived conservation failures. This more comprehensive understanding provides a stronger foundation for designing conflict resolution strategies that acknowledge local nuances and complexities.

In Part IV, I shifted the focus to those who spend their days venturing into the bush—the lions' habitats—to better understand how herd(er)s navigate lion encounters and how depredation attacks occur. Following herders was a deeply rewarding experience, revealing the embodied, multispecies labour integral to herding. I demonstrate that Maasai herding is an intuitive practice, involving interspecies communication. Outlining the intricacies of herds and herders at work was essential to show how this complex, more-than-human labour is imperilled in a fast-paced neoliberal environment that undervalues the deep ecological knowledge and enduring bonds between human and animal, which take lifetimes to cultivate. Without sufficient support, herders face increased pressures to resort to *aimalmal.* This erosion of herding knowledge and practices

puts livestock at greater risk of predation, potentially diminishing community tolerance toward lions and unsettling the conditions for coexistence.

In Part V, I finally turn my attention to lions themselves. The ethnographic chapters leading up to this point prepare the foundation for this section. The stories, conversations, and encounters with my Maasai interlocutors shaped the design and unfolding of the playback experiments, guiding me through the landscape and helping me find lions. Together, through these collaborative engagements, we observed how lions respond to the presence of Maasai herd(er)s. The findings show that, in areas where hunting was most recent and frequent, lions exhibit longer flight distances to Maasai-associated sounds (both cowbells and war cries). The reduction in fear resonates with Maasai observations on lions' shifting behaviour, underscoring the indispensable value of LEK. These insights on lion behavioural ecology hold potential to inform 'conservation behaviour' interventions for reducing conflictual encounters. I close this section by exploring the idea of coadaptation—conservation thinking that situates people and lions as mutual agents, adapting to one another to share space—as a promising pathway for doing conservation.

Finally, by documenting how Maasai pastoralists' knowledge and practices both respond to and shape lion behaviour in the wake of hunting bans, this research demonstrates that effective conservation hinges on the *reciprocal and dynamic* interactions between human communities and nonhuman actors. In keeping with ecological thinking, this thesis demonstrates that relational chains linking all organisms in an environment are simultaneously biological and social (or *biosocial*). Hence, to grasp complex conservation challenges, it is essential to attend not only to individual species or actors but to the manifold relationships that interweave them, revealing a world where boundaries between nature and culture are dissolved.

Contributions to Knowledge

This research makes methodological and empirical contributions across anthropology, zoology, and conservation science. Its unique strength lies in its innovative transdisciplinary approach, which bridges these fields cohesively and combines them into a comprehensive, integrated whole to provide a more holistic and nuanced understanding of Maasai-lion relations, and, more broadly people-predator interactions (especially large carnivores).

Methodologically, the project pioneers a unique synthesis of ethnographic immersion with experimental ethology, revealing new dimensions in the study of human-animal relations in the

context of conservation. Research on human–predator relations within the context of HWC typically draws on social sciences and humanities to examine people's perceptions, attitudes, and knowledge of animals, or relies on STEM[95] disciplines to investigate predator responses to humans using methods such as telemetry, playbacks, scat surveys, and camera traps (Krauss et al. 2025; Montgomery et al. 2018). Consequently, people and predators are often studied separately (Pooley et al. 2017), or with one methodology risking being coopted (Chua et al. 2020). Scholarship using comparable approaches to explore human-predator interactions includes Lescureux's (2006; 2007[96]) work with wolves and herders in Kyrgyzstan, Boonman-Berson et al.'s (2016) study on human-black bear cohabitation in the United States, and Toncheva and Fletcher's (2022) research involving bears and hunters in Bulgaria.[97] These studies similarly employ an ethno-ethological method (Brunois 2005; Lestel et al. 2006), which integrates knowledge of animal behaviour with ethnographic engagements to explore shared human-animal communities. However, these studies are still too reliant on what their interlocutors—whether ecologists or fellow human cohabitants—say about animal behaviour. The present research pushed this scholarship further by directly engaging with the predator's cognition and behaviour. By having the same research team conducting both ethnographic and ethologic fieldwork, observations and experiences could be processed more seamlessly than if data had been collected separately, at different times or locations. These new insights into lions' minds were then applied alongside ideas from the field of conservation behaviour to identify ways to better improve their conservation. There are reasons why scholars before me have been hesitant to undertake such an approach; as Toncheva and Fletcher (2022; 907) note, it is difficult to study large carnivores in the wild, "like bears [or lions], which are reticent, roam widely, and hence difficult to observe directly." Moreover, such research requires a team that has knowledge and expertise spanning both social and natural sciences (Van Dooren 2013).

This research contributes to the methodological debate on how to conduct research on human-nonhuman relations (Barua and Sinha 2019; Descola 2014; Hodgetts and Lorimer 2015;

[95] Disciplines including biology, wildlife management, and environmental science.
[96] Also see Lescureux's work with other authors, including Lescureux and Linnell (2010) and Lescureux, Garde and Meuret (2018).
[97] It is also worth noting Brian Schuh's (2024) research on cheetahs' reactions to domesticated animals in the Maasai Mara, which combined sound playback experiments with surveys of Maasai attitudes towards cheetahs. However, Schuh's study differs from mine in its methodological approach: insights into human perspectives were gathered via surveys and interviews conducted by trained research assistants, rather than through ethnographic fieldwork.

Madden 2014; Toncheva and Fletcher 2022). While some rely heavily on ethnographic accounts and observations from their human interlocutors regarding nonhumans, this approach remains one step removed from direct, experimental studies of animal cognition and behaviour—an issue echoing traditional anthropology's anthropocentrism. I follow Descola's (2014) suggestion that future research on how humans and animals reciprocally interpret behavioural and environmental signs should integrate ethnography with animal ethology, cognition, and perception.

By weaving together social and natural sciences, this research advances an integrative research approach that responds to the growing calls within academia—and conservation specifically—to transcend disciplinary silos and collaboratively address complex ecological and social challenges (Montgomery et al. 2018; Nature 2015; Rylance 2015; White and Ward 2015). Conservation problems are complex and multifaceted, demanding multidimensional perspectives that bring together distinct approaches to generate more comprehensive understandings and solutions (Montgomery et al. 2018). The approach developed in this research can equip future researchers and conservation practitioners with a practical example others can apply to engage multispecies worlds in all their complexity.

Empirically, the thesis provides new ethnographic insights into Maasai lion hunting practices, moranism, and the ongoing configurations of Maasai identity. It draws attention to the shifting political economic context of herding livelihoods in Maasailand, specifically in relations to the shift towards herding contracts and their consequence on herding practices. The research also deepens our understanding of Maasai approaches to lion management and how these intersect historically and contemporarily with conservation interventions—particularly the hunting ban, PAs and PES—documenting both adaptations and continuations. The existing anthropological literature on Maasai-lion relations is largely unconcerned with lion behaviour, or does not engage with Maasai cattle as lively agents (Goldman et al. 2010; Goldman et al. 2013; Hazzah 2006; Hazzah et al. 2009; Hazzah et al. 2017). This research foregrounds both cattle and lions as active, dynamic participants in these relationships, thereby providing new depth in the co-constitutive relationships and worldings of people, cattle, and lions within Kenya's Maasailand. This research position responds directly to call within anthropology to move the discipline beyond the human (Ingold 2013; Kohn 2013; Kirksey and Helmreich 2010; Tsing 2013).

This research challenges conservation studies on human-predator conflict by advancing alternative, holistic theoretical framings of HWC in three ways. First, it offers an analysis that goes

beyond solely looking at the negative impacts of conflict, responding to calls for alternative conceptualisations of human-predator encounters more focused on drivers (Fletcher and Toncheva 2021; Margulies and Karanth 2018; Pooley et al. 2017). I set out early on to avoid conflict-oriented framings, steered away from a narrow focus on the negative impacts of lions on people, and moved beyond simply documenting people's attitudes towards wildlife. I presented their experiences and their interactions, placing them within broader social, political, and historical contexts. By doing so, this study provides an example of how to do conservation research in a way that brings both people and wildlife into the same frame. It reflects how human and nonhuman actors become engaged in reciprocal relationships, adaptively (re)learning to relate to one another; where changes in the behaviour of one lead to changes in the behaviour of the other. Finally, by recognising that humans and animals are engaged in an ongoing, dynamic negotiation of space, resources, and meaning, this research makes the case that people and the wildlife we wish to conserve should not be studied separately.

Another way this research challenges conservation studies is its questioning of whose expertise counts and what forms of knowledge are considered legitimate. The findings demonstrate that Maasai develop a keen awareness of lion behavioural ecology through direct experience interacting with them, with many of their observations aligning with established literature. For instance, Maasai attentively recognise that lion behaviour is dynamic and responsive to the shifting practices and presences of people and livestock. Their observations provide a nuanced sense of how lions' personalities, genders, and exposures to fear shape future encounters. This information into how people know and interact with lions in their ecosystem should be harnessed by conservation actors to inform their interventions. Local ecological knowledge and practices can contribute to maintaining biodiversity and fostering healthy human-animal relations. This helps shift conservation discourse toward greater inclusion and partnership with Indigenous and rural communities, responding to calls to decolonise conservation practice and science (Aini and West 2018; Chua et al. 2020; Dawson and Longo 2023). Beyond human expertise, I join other scholars in considering animals' knowledge and know how as expertise, too, able to influence and participate in conservation and management outcome (Ampumuza and Driessen 2020; Boonman-Berson et al. 2016; Brakes et al. 2021; Edelblutte et al. 2022; Jepson et al. 2011; Macdonald 2016; Marzluff and Swift 2017).

This research also challenges the persistent separation of nature and culture in Western modernity—a division that continues to shape conservation thought and practice (de Silva and Srinivasan 2019; Barua 2014a,b; Jepson et al. 2011; Lorimer, 2010a,b). In foregrounding human-animal relationships that resist easy categorisation (Latour 1991), it unsettles notions of animals as passive objects or resources under human control, occupying existing environments and devoid of influence on human lives. Instead, this work complicates this utilitarian representation of animals by attending to the kindred relations between Maasai and their cattle, tracing practices of cross-species communication and collaboration, while also engaging seriously with lion agency, directly investigating how they adapt their behaviours to rapidly changing environments and consider how their histories, preferences, and behaviours might inform their conservation. Nonhuman beings in my field sites, then, emerge not as static elements within an environment but as active, relational agents capable of being affected and influence human social life. At the same time, people are approached as cohabitants, mutually shaping and being shaped by a more-than-human worldings.

Theoretically, the findings make an important clarification to the concept of coexistence. Carter and Linnell's (2016) influential definition[98] of coexistence acknowledges the importance of dynamism in human-carnivore relations, but leaves animal agency unexplored. Coexistence thinking should more clearly acknowledge animals' ability to show us what they need, how they can adapt, and in what ways they can inform their own conservation. Coexistence, then, can be understood as *coadaptation*: a process in which animals, like humans, mutually learn to adapt to each other and to a changing world. I call for coexistence thinking to explicitly acknowledge and integrate animal agency.

Ultimately, this research invites an ethic of attentiveness: how might we learn to be attentive to diverse ways of life—recognising the many forms of knowledge cultivated by Indigenous peoples and wildlife themselves—to inform more inclusive and responsive conservation?

[98] Carter and Linnell (2016) define coexistence as "a 'dynamic but sustainable state in which humans and large carnivores co-adapt to living in shared landscapes where human interactions with carnivores are governed by effective institutions that ensure long-term carnivore population persistence, social legitimacy, and tolerable levels of risk'." (Carter and Linnell 2016, 575).

Implications

This research matters because it highlights the value of closely collaborating with local communities—attending seriously to their knowledge, concerns, and lived experiences of cohabiting with wildlife—alongside incorporating animal behaviour, to produce a richer and more accurate understanding of human-wildlife dynamics. Foremost, it provides empirical support for the inclusion of local communities whose experiences of living alongside wildlife hold ecological knowledge invaluable for conservation management. Research shows that when local people are meaningfully included in conservation decision-making, ecological outcomes are better achieved (Adams 2017; Ocholla et al. 2016; Woodhouse et al. 2022). Moreover, such collaboration can validate local perceptions like the Maasai's fears that lions are becoming bolder, provide a sense of (epistemic) justice (Martin et al. 2016; Massarella et al. 2020), and move these concerns into the realm of scientific inquiry and policy consideration. Findings also point to the need for conservation interventions to recognise animals as agents whose learned behaviours and choices shape—and are influenced by—conservation interventions. In doing so, this research provides pathways toward more socially and ecologically attuned conservation interventions which are grounded in attention to these multilayered relationships.

Grounding this call for inclusive, relational conservation science and practice is a moral imperative to rethink conservation itself. I join other scholars (Celermajer et al. 2020; Cochrane 2018) in urging those governing conservation spaces to recognise their ethical responsibility to consider nonhumans in decision-making and to understand humans as deeply embedded within complex networks of relationships. While some may call this a multispecies ethic (Celermajer et al. 2020; Cochrane 2018), I believe this moral imperative is best understood through Donald's (2012) concept of *ethical relationality*—"an ecological understanding of human relationality that does not deny difference, but rather seeks to understand more deeply how our different histories and experiences position us in relation to each other." Rooted in responsibilities and connections that bind all beings, this ethic demands the *unlearning* of colonial logics that marginalise Indigenous knowledges and portray Indigenous and settler peoples as occupying separate realities. From the outset, I sought to resist framing Maasai knowledge of lions as mere cultural symbolism layered over an independent, objective scientific reality. I hope this thesis demonstrates how non-Western ways of knowing, being, and relating in the world are rich epistemologies that deserve more than superficial acknowledgement. Guided by this moral framework, conservation can

transcend technical management of natural resources and become a practice of just, reciprocal relations with all forms of life.

The research carries important policy and management implications. Coexistence, or coadaptation, has become increasingly essential in shared landscapes where recovering predator populations pose challenges to expanding local communities. Although the population of African lions continues to decline (Bauer et al. 2016), the success of conservation initiatives in Kenya's Maasai Mara and Amboseli ecosystems has resulted in population growth there since the early 21st century (Hazzah et al. 2014; MPCP 2024). This increase means lions are now more likely to encounter people in areas where they still occur, as space for both the growing human and lion populations becomes limited (Ikanda and Packer 2008), potentially increasing negative interactions. To address this, it is essential to foster coexistence between people and predators, without compromising pastoralists' livelihoods which, as demonstrated here, carry profound importance to the Maasai. Possible approaches to delineating 'social boundaries' between humans and lions include aversion conditioning to establish 'landscapes of fear'—or rather, 'landscapes of coexistence' (Oriol-Cotterill et al. 2015)—utilising non-lethal means (Laudré et al. 2010), or selectively removing problematic individuals where necessary (Woodroffe and Frank 2005). It could be argued that spearing a lion prolongs the animal's suffering and is therefore unethical, while humane killing—though difficult to enact—might be viewed as a necessary and more ethical dimension of conservation, especially given that problematic lions often eventually face the spear. Hence, humane killing should be prioritised within management frameworks that balance animal welfare with the protection of human livelihoods. Such strategies also call for conservationists, particularly those focused on animal rights, to acknowledge the necessity of some management interventions to secure long-term coexistence, while considering ethical frameworks recognising wildlife rights.

Maasai pastoralists have developed effective tactics to deter lions from their herds, honed through centuries of culturally embedded practices, although their ability to continue these has shifted with changing social and environmental contexts. The Lion Guardians' in Amboseli leverage Maasai knowledge of lions through their mock hunts, where former Maasai warriors are employed to chase lions following depredation incidents. This represents a good example of a culturally relevant intervention that builds on multispecies relationships and local ecological knowledge to prevent future predation events. While it is difficult to attribute the increased fear of

Maasai-associated sounds in Amboseli lions directly to Lion Guardians' intervention, findings suggest that such stimuli could have an effect in keeping lions away from people and livestock. This research could provide a baseline for a similar mock hunt intervention in the Mara to test whether a fear response can be instilled in the lions there. If successful in keeping people and cattle safe, these strategies could be extended beyond Maasailand, to areas like Gir Forest facing increasing lion visits (Banerjee et al. 2013). Since my interlocutors expressed frustration over their inability to hunt lions and enact their own justice following attacks, I maintain that collaborating with communities to develop solutions could help restore their sense of agency and stewardship. When people can immediately address their own problems through participatory means, they may become more tolerant of predators (Naughton-Treves and Treves 2005; Bangs et al. 2006).

It is, however, important to consider the ethical dimensions of interventions that modify animal behaviour to achieve conservation and management goals. Van Dooren (2023) highlights several ethical issues potentially raised by behaviour-based management approaches, including animal welfare, interference with animals' 'natural' behaviours, potential unintended impacts on non-target species, and consequences for local human communities. These challenges necessitate ongoing reflection and negotiation of values to balance conservation objectives with respect for more-than-human agency and wellbeing. Ultimately, the ethics of wildlife management rest with Kenya and its people, they must negotiate their own way to manage wildlife in a manner that balances their needs with those of their nonhuman cohabitants. This study aims to contribute to charting a new path forward.

Limitations and Areas for Future Research

I acknowledge that my insights are deeply rooted in the local contexts; thus, findings may not be directly extrapolated to other communities or ecological situations. Although an "anthropology-beyond-the-human" is meant to deal with any set of life-forms anywhere, the analysis presented here is focused on a specific set of interactions between particular organisms within the unique ecological and social landscape of the East African savannah. The Maasai's environment and cultural context are distinct, and ecological features that are uncommon elsewhere. Nevertheless, I hope that some insights offered here may inspire or inform interdisciplinary and transdisciplinary more-than-human research in other contexts.

Moreover, the inherently partial nature ethnographic data and always unfinished nature of our research subjects (Bhiel and Locke 2017) means that many facets of multispecies interactions—particularly those subtle and ephemeral—may remain underrepresented or obscured. Complex, fleeting interspecies communications or moments of mutual attunement that slip under the anthropologist's gaze underscore the selective aperture of ethnographic observation. As a non-Maasai and non-Kenyan researcher, I am also aware that my positionality inevitably shapes the research process; there are nuances, local subtleties, and embodied knowledges that may elude my understanding or articulation. Consequently, the recorded narratives and observations form only a fragment of the fuller, lived more-than-human reality, illustrating how ethnographic knowledge is always partial, mediated, and contingent. This partiality also reflects ongoing tensions in anthropology's grappling with representing 'the other,' whether human or nonhuman, and calls for continued methodological innovation and epistemological humility in multispecies research.

This study acknowledges the limits of its collaboration, particularly around the extent to which research questions were shaped through dialogue with Maasai participants. While research questions were initially developed prior to fieldwork, this predetermined direction influenced the overall scope of the project. However, over the course of ethnographic engagement, these questions were adapted to incorporate new insights from ongoing interactions. There nevertheless remains scope for deeper collaboration, especially in defining research priorities together from the outset.

In terms of my ethological component, the number of observed individuals and specific situations may not represent wider population or species' behaviours. Additionally, natural variability in research sites (such as habitat type, group composition, and external influences) can complicate comparisons. Short-term studies may also miss long-term behavioural adaptations and ecological changes. Future research could conduct longer-term behavioural observations of lions to better capture seasonal, interannual, and ecological variations in lion behaviour and their adaptive responses to human and livestock presence.

Given the logistical and financial challenges inherent to studying lions in their natural habitat, along with the impossibility of fully 'knowing' from the lion's perspective, my research necessarily engaged more extensively with human participants than with lions themselves. This focus may understandably be seen as privileging the human perspectives, which could lead to certain (power) imbalances in understanding multi-species relations. However, some degree of

anthropocentrism is perhaps inevitable, as it is impossible to fully think from a lion's perspective (Toncheva and Fletcher 2022). In light of these challenges, I urge institutions supporting interdisciplinary research and collaboration to better account for the complexity, higher economic burden, and longer time periods required to ensure they have the resources needed to conduct true interdisciplinarity.

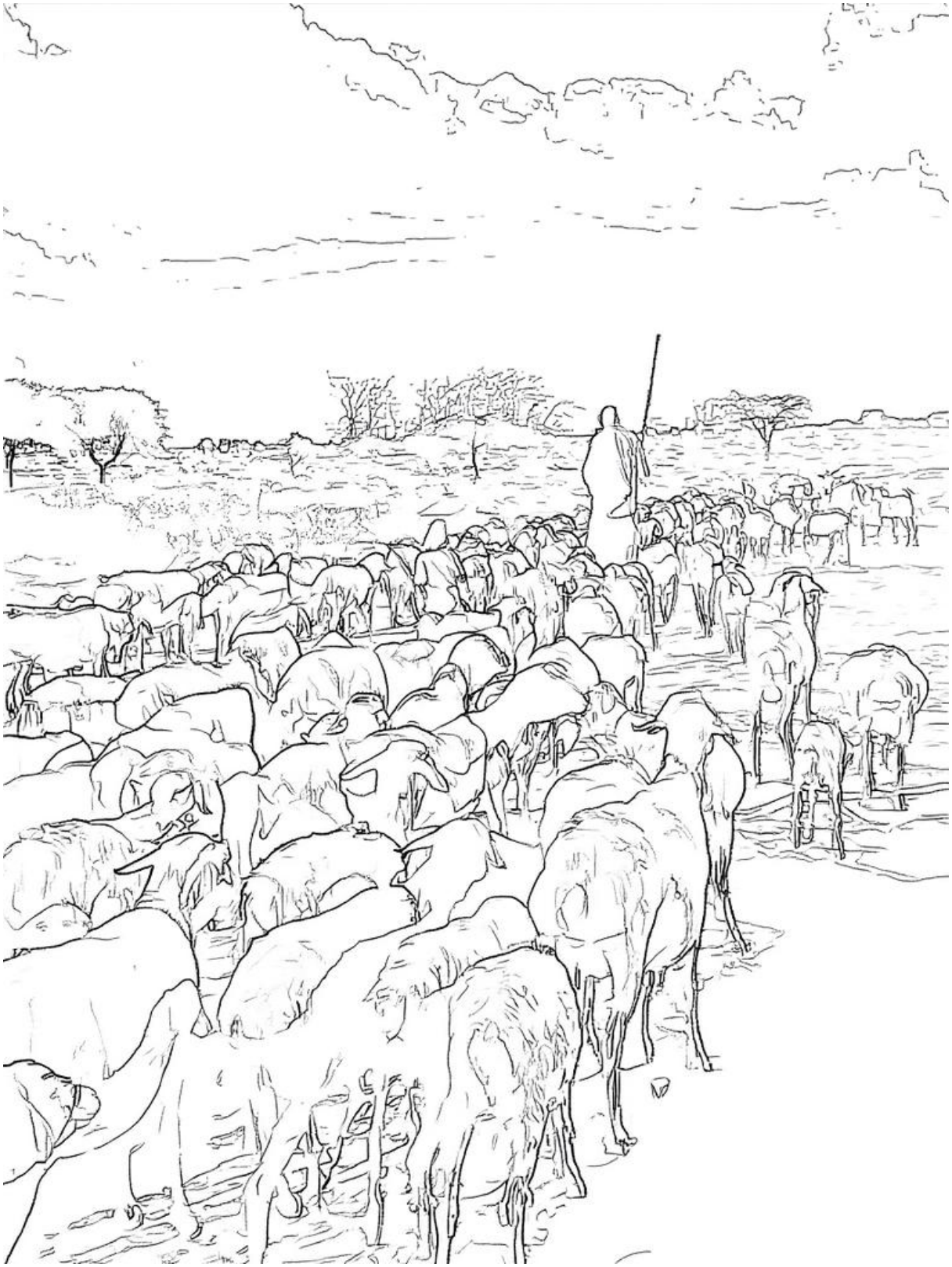
Since this project involved integrating ethnographic and ethological data, a process that poses inherent difficulties. Differences in epistemologies, units of analysis, and scales of observation across disciplines complicate efforts to produce fully coherent, unified interpretations. Balancing these diverse approaches requires ongoing negotiation that may limit the seamless integration of insights. There is definitely still room to develop and refine methods for better integrating ethnographic, ecological, and behavioural data, addressing epistemological challenges and fostering genuine epistemic pluralism. Many of us have been trained in a system that divides nature from culture, we have these dichotomies so ingrained in us, thus it can be difficult to step out of the two camps to imagine ways of putting the 'ecological/natural dimensions' and the 'human dimensions' into dialogue in a meaningful way. Hence, examples like this project are valuable in demonstrating how holistic, transdisciplinary research can move from exception to norm.

Future research could build on this study's focus on lion responses to human-associated playback sounds to better clarify the drivers of their wariness. While findings indicate that lions in Amboseli maintain greater flight distances after hearing Maasai-associated sounds, it remains unclear whether this behaviour is primarily a response to recent hunting pressure or to deterrent practices such as the Lion Guardians' mock hunts. Further research should more directly evaluate the effectiveness of this intervention in preventing livestock depredation (see Petracca et al. 2019 for example), alongside other non-lethal deterrence strategies, to assess their potential for replication in other ecosystems with similar predator dynamics. Findings from this study can serve as a baseline for trialling mock hunt interventions in the Mara providing an opportunity to test whether a comparable fear response can be fostered in lions there. Additionally, future research should explore whether lions distinguish between different types of human sounds—those indicating active hunting versus non-threatening human presence—and how these distinctions influence their behaviour. Understanding these nuances could improve the design of aversion conditioning interventions intended to reduce predation and foster long-term coexistence.

Further research could also explore how individual lion personalities influence conservation planning. For example, studies show that bold, exploratory individuals often tolerate noise, human activity, and other disturbances better than others (Found and St. Clair 2016; Greggor et al. 2016; Honda et al. 2018; Merrick and Koprowski 2017). Integrating data on personality traits and behavioural responses to humans could help identify susceptible individuals for targeted management (Riley et al. 2014).

Final Thoughts

Finally, this thesis reveals how people, cows, and lions attune to one another and co-create modes of relating in 'hybrid communities' (Lestel et al. 2016)—a vital lesson for staying with the trouble of a rapidly fragmenting, crowded, and drying savannah. This shared becoming challenges historically dominant conservation paradigms by questioning whose knowledge matters in conservation decision-making, urging a meaningful embrace of LEK alongside perspectives of nonhuman others. It underscores the urgent imperative to protect and nurture wild beings, ensuring their survival and flourishing, while honouring the wellbeing of the human communities who share these landscapes. This thesis invites social scientists to embrace imaginative, transdisciplinary approaches that decentre the human (even though it might feel uncomfortable and foreign), and urges natural scientists to recognise nonhuman beings as social actors in their own right (even though it might introduce uncertainty and complexity). I hope this passionate immersion into the entangled lives of Maasai, their cattle, and lions opens new horizons of understandings, relationships, and accountabilities. It compels us to rethink our relations with the nonhuman others that inhabit our lives —whether in our field sites, our workplaces, or our everyday encounters—and to ask: how can we open ourselves to recognising the many ways in which they perceive and relate to us, engage in mutual knowing, and co-construct the spaces in which we all strive to live and thrive?



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Appendices

Appendix 1: Semi-Structured Interview Questions for Maasai Participants

Guiding questions for Elders	— How many cows do you own? — Have your cattle ever been attacked or killed by wildlife? [if yes, ask which animals] — Have wildlife attacks on cows changed in the past years? — Which animal is the most dangerous for the safety of your cows? — Are there a lot of lions near the village? — How do you feel about lions? What about people in your family? And the people in the vilagge? — What happens when a lion comes near the village? — How would you describe your relationship with lions? — Can you tell me about some conservation interventions around the village? How do you feel about them? — Do you think conservation measures affected lions' movements? — Would you say that there were more lion attacks when you were young? — How would you describe your village's relationship with conservation actors? — Is lion-hunting still practiced here? — Have you ever heard of people poisoning lions in your village or other villages? — If young Maasai men cannot hunt lions anymore, how do they achieve *ilmuran* status?
Guiding questions for *Ilmuran*	— How many cows do you own? — Have your cattle ever been attacked or killed by wildlife? [if yes, ask which animals] — Which animal is the most dangerous for your cows? — Are there a lot of lions near the village? — How do you feel about lions? What about people in your family? And the people in the village? — What happens when a lion comes near the village? — What kind of strategies do *Ilmuran* use to keep lions away? — How would you describe your relationship with lions? — Can you tell me about some conservation interventions around the village? How do you feel about them? — Do you think conservation measures affected lions' movements? — How would you describe your village's relationship with conservation actors? — Is lion-hunting still practiced here?

	— Have you ever heard of people poisoning lions in your village or other villages? — If you cannot hunt lions anymore, how do you achieve *ilmuran* status?
Guiding questions for women	— Talk to me about your family. How many children do you have? — What kind of activities do you do around the village? — How would you describe your relationship to wildlife in the Mara? — Are there any animals that you fear? — How do you feel about lions? What about people in your family? And the people in the village? — What happens when a lion comes near the village? — Can you tell me any stories about lions?

Appendix 2: Semi-Structured Interview Questions for Conservation Practitioners

Guiding questions:

- Tell me about the on-going project in this region. (i.e. start date, funding source, project aim, time until completion)
- How would you say the project is faring?
- How do you think the people in this region perceive your organisation's presence in their communities?
- How do you get along with the villagers?
- How would you describe the way people in this community live with wildlife?
- How many human-wildlife conflict incidents have been reported this past year?
- How does your organisation/project influenced human-wildlife conflict in this region?

Appendix 3: Semi-Structured Interview Questions for Herders

Guiding questions:

- The last time you saw a lion, what did it do? Was it a female or a male lion? What time of the year was it?
- What do you do when you encounter lions?
- How does a lion behave when it sees cows?
- How do cows behave when they come across/smell a lion?
- What makes a good herder?
- How many cows should a herder care for?
- How would you describe your relationship with the livestock owner?
- Are you happy with this employment?

Appendix 4: Age-Sets Names and Dates

Age-set names	Important Dates	Representation in this thesis
Irmiponyi	Enkipaata 2023	Incoming ilmurran
Ilkiramat (aka. Nyangulo)	Euonoto 2022	Outgoing ilmurran
Ilmerishi (aka. Irkiruju)	Eunoto circa 2009-2010	Junior elders between 30-50 years
Ilkisaruni or Irkeleani	Eunoto circa 1990s	Senior elders between the age 50-70 years
Ilkitoip	Eunoto circa 1978	Senior elders between the age 70-80 years
Iseuri	Eunoto circa 1960s	Retired elders between the age of 80-90 years. Very few remain alive.