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Cattle and colonialism: an animal-centred history of southern Africa, 1652-1980s

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Introduction

> As a historian, trying to piece together the whole picture, these traces of wolf voices, so lifelessly recorded in archival documents, still haunt me. I can never feel I have done justice to [them] without having tried to comprehend what these voices said.[1] – Brett Walker

> At moments when stuck, or struggling over a passage or concept, I would stop and ask: 'What would you say if an elephant were standing right in front of you listening? What would you say that is honest and would not make you feel ashamed?' [2]– Gay Bradshaw

> By incorporating your tongue we [cattle], the foundation, the mute, are pulled into existence, into the spotlight of human thought. There, once acknowledged, we become real. But as we face the threshold of history we realize that outside language we are still nothing. You only hear the foundation when you can teach it to speak. I can only point to my absence, hoping that in this failure of properly portraying me a hole would appear in the world, through which a cow could enter. That's what this is.[3] – Laura Gustafsson and Terike Haapoja

[1] B. Walker, *The Lost Wolves of Japan* (Seattle: University of Washington Press, 2009), 29.
[2] G. Bradshaw, *Elephants on the Edge: What Animals Teach Us about Humanity* (New Haven: Yale University Press, 2009), xix.
[3] L. Gustafsson and T. Haapoja, 'History According to Cattle', in L. Gustafsson and T. Haapoja (eds.), *History According to Cattle* (New York: Punctum books, 2015), 3.

Introduction

The discipline of history is conventionally about humans. History really means human history.[4] But, if animals also forge and experience history, then history is also about animals. This historical investigation rests on the premise that conscious, sentient life is not exclusive to humans, that across the animal world consciousness is distributed in different degrees, not different kinds.[5] Animals are feeling, conscious subjects. Animals too have felt, internal, qualitative experiences of life. And, so, this history is a bit different. It abandons the anthropocentric view that humans are the exclusive site of value, of what is interesting, of what is important. It shifts the primary focus from humans onto animals. It is a *cattle-centred history of southern Africa*.

Part of recognising animals as subjects, this thesis argues, includes weaving their experiences into the narrative – perceiving, regarding, and depicting them as beings who have subjective, felt experiences. More particularly, the project is focused on major impacts of colonialism on southern African cattle's experiences from the seventeenth to the late twentieth century. Its primary question is: what were some of the major impacts of colonialism on the lives and experiences of cattle in southern Africa?

This thesis' introduction comprises five main parts. It opens by responding to the question 'why a cattle history?' and in doing so presents four primary rationales which underpin and contextualise this historical investigation. Second, it conducts a historiographical investigation into animal histories generally, and focuses on animal histories that treat themes of colonialism and imperialism, literature on animals as labourers, and histories that present animals as subjects. Third, there is a substantive theoretical engagement with the

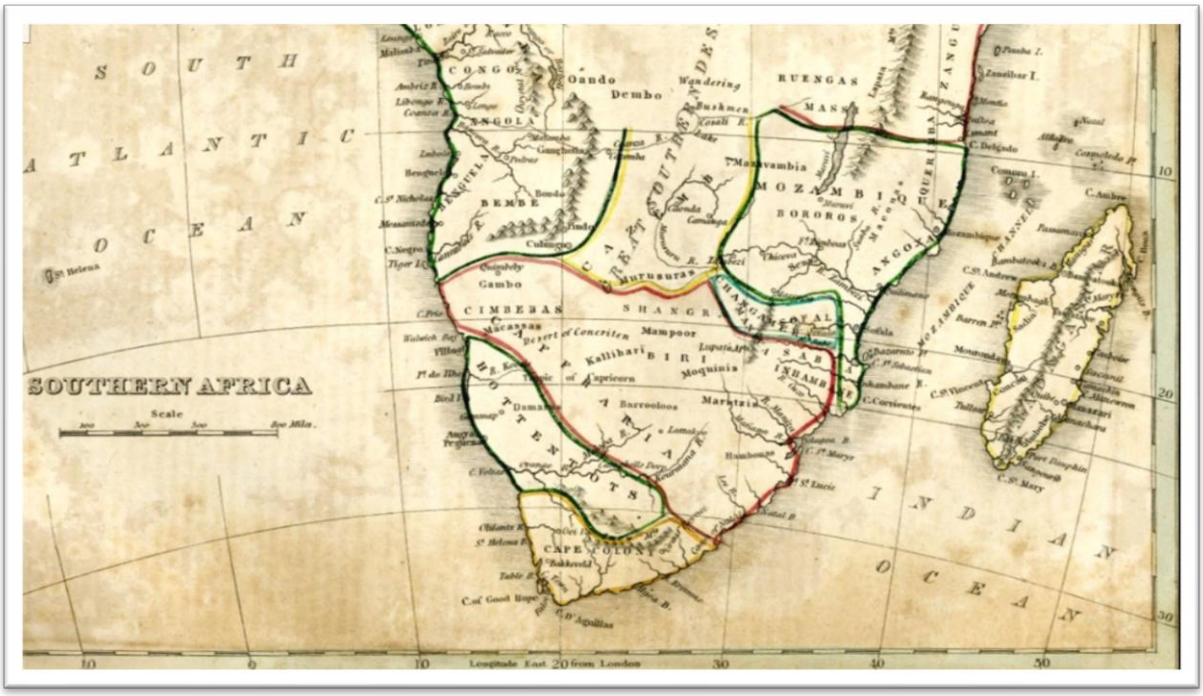
[4] Y. Harari, *Sapiens: A Brief History of Humankind* (London: Vintage Books, 2014), 1. On page 1, Yuval Harari writes: 'About 70,000 years ago, organisms belonging to the species Homo sapiens started to form even more elaborate structures called cultures. The subsequent development of these human cultures is called history.'

[5] P. Low, 'The Cambridge Declaration on Consciousness.' 7 July 2012, J. Panksepp, D. Reiss, D. Edelman, B. van Swinderen, P. Low, and C. Koch (eds.), 2012, https://fcmconference.org/img/CambridgeDeclarationOnConsciousness.pdf., accessed 13 January 2013; J. Panksepp, 'Affective Consciousness: Core Emotional Feelings in Animals and Humans', *Consciousness and Cognition* 14, 1 (2005), 30–80; D. DeGrazia, 'Sentience and Consciousness as Bases for Attributing Interests and Moral Status: Considering the Evidence and Speculating Slightly Beyond', in L. Johnson, A. Fenton, and A. Shriver (eds.), *Neuroethics and Nonhuman Animals* (Cham: Springer, 2020), 17–31.

concept of animal agency, which motivates for a distinctive conceptualisation of animal agency for historical research. Fourth, the project's methodological approach is described. Finally, the thesis' research questions and overviews of the remaining chapters are presented.

Recognising that animals have minds and experiences, the thesis aims to produce a cattle-centred history of southern Africa, based on a methodology of centring cattle in their own right, and weaving into the narrative plausible, scientifically informed descriptions of major shifts in their experiences. Southern Africa here comprises the current six southernmost nation states in Africa, namely Lesotho, Eswatini (formerly Swaziland), South Africa, Namibia, Botswana, and Zimbabwe. In turn, the following three maps depict the region before regional colonialism, during colonialism, and at present. The map below is from circa 1835 and depicts the southern African region before the 1884 Berlin Conference.

Image I.1. Map of southern Africa, circa 1835



Source: T. Bradford, 'Southern Africa, circa 1835', *Afriterra, The Cartographic Free Library*, http://catalog.afriterra.org/viewMap.cmd?number=2286, accessed 4 February 2019.

The second map, Image I.2, depicts southern Africa in 1946. Although it was produced to indicate the sources of labour for the Chamber of Mines' labour recruitment agencies, it does

clearly indicate colonial territorial boundaries in the mid-twentieth century. The Union of South Africa, South West Africa, Swaziland, Basutoland, the Bechuanaland Protectorate, and Southern Rhodesia are depicted.

Image I.2. Map of southern Africa, 1946

Source: A. Stead (contributor), 'Map of southern Africa, 1946', *University of Cape Town Digital Collections*, https://digitalcollections.lib.uct.ac.za/collection/islandora-30052, accessed 19 January 2019.

Image I.3. Map of southern Africa, 2021

Source: Google Maps, 'Map of Southern Africa', *Google Maps*, 2021. Google.com/maps, accessed 21 February 2021.

Rationales

There are four motivations for this animal history, and each provides context to it. The first is that colonialism has largely been conceptualised as an exclusively human-impacting affair. The second rationale concerns the central place that humans have had in southern African cattle herds before colonialism. The third motivation is the way that an animal-centred history of colonialism connects interestingly to contemporary interests in decolonisation. The fourth rationale is that on the basis that animals are sentient, their subjective experiences deserve inclusion in historical scholarship.

The colonial expansion into the interior of southern Africa from the mid-seventeenth century has been a predominant theme in social science and humanities studies of the region. Scholars are accustomed to thinking about colonialism as a human affair; humans colonise and humans are colonised. Almost all scholarship on colonialism is in one way or another about its impact on humans. That has been the core orientation in studies on colonialism. But humans in southern Africa were not the only ones impacted by colonialism. Myriad animals, including cattle, were dramatically impacted, also.[6]

The term colony, 'colonie', emerged in about 1384 in the Wycliffe Bible, and signified a Roman settlement.[7] The term colonialism emerged in 1853 and its meaning, system of colonial rule, became more prominent from 1884, when European powers divided up the African continent among European nation states at the Berlin Conference.[8] The Stanford Encyclopedia of Philosophy defines colonialism as 'a broad concept that refers to the project of European political domination from the sixteenth to the twentieth centuries that ended with the national liberation movements of the 1960s.'[9] In all three editions of Ania Loomba's influential *Colonialism/Post-colonialism* (1998, 2005, and 2015), the definition of colonialism remains identical:

> the conquest and control of other people's land and goods. But colonialism in this sense is not merely the expansion of various European powers into Asia, Africa or the Americas from the sixteenth century onwards; it has been a recurrent and widespread feature of human history.[10]

[6] M. Glover, 'A Cattle-Centred History of Southern Africa?', in J-B. Gewald, M. Spierenburg, and H. Wels (eds.), *Nature Conservation in Southern Africa Morality and Marginality: Towards Sentient Conservation* (Leiden: Brill, 2018), 33, 43.
[7] R. Barnhart, *The Barnhart Dictionary of Etymology* (New York: The H.W Wilson Company, 1988), 190.
[8] *Ibid*.
[9] M. Kohn and K. Reddy, 'Colonialism', in E. Zalta (ed.), *The Stanford Encyclopedia of Philosophy* (Metaphysics Research Lab, Stanford University, 2017), https://plato.stanford.edu/archives/fall2017/entries/colonialism/, 26 June 2019.
[10] A. Loomba, *Colonialism/Postcolonialism* (London: Routledge, 1998), 2; A. Loomba, *Colonialism/Postcolonialism* (New York: Routledge, 2005), 3; A. Loomba, *Colonialism/Postcolonialism* (London: Routledge, 2015), 20. Outside of military institutions, British public schools, and, strangely, academic writing and some newspapers, it is often impolite to refer to people by their surnames only. Thus, in-text, I have opted to refer to scholars by their full names. For a fuller justification see D. Benatar, 'Why Don't Academics Address Each Other Politely?', *Times Higher Education*, 31 January 2019, https://www.timeshighereducation.com/opinion/why-dont-academics-address-each-other-politely, accessed 27 April 2021.

What these two definitions have in common is that they understand colonialism from a human-centred paradigm. In the first, colonialism ended with human nation state liberation movements from the 1960s, and in the stipulation that colonialism is about 'people's land and goods', the second is explicitly human exclusive. But countless sentient animals too inhabited the land taken via colonial conquest and became subject to pervasive colonial laws, processes, and institutions. This thesis specifically explores how cattle were impacted by colonialism. A wider conception of colonialism, a multi-species conception, enables one to explore impacts of colonialism on animals, also.

Second, cattle have a long history in southern Africa, and they share it with humans. Cattle are historically central to the lives of southern Africans.[11] Cattle radically transformed the lives and societies of southern Africans. And so, southern Africans are central to the lives of cattle. Cattle and sheep and people have coevolved over around two millennia in southern Africa.[12] Across the region and beyond, the lives of cattle and humans were interwoven and connected in myriad ways.[13] Cattle were producers and resources in these relationships. Milk was taken from lactating cows' udders, the females, and calves and, rarely, more ceremonially, cattle flesh was eaten by human groups.[14]

[11] M. Hall, 'The Role of Cattle in Southern African Agropastoral Societies: More than Bones Alone Can Tell', *Goodwin Series* 5 (1986), 83–87; A. Kuper, 'Traditions of Kinship, Marriage and Bridewealth in Southern Africa', *Anthropology Southern Africa* 39, 4 (2016), 267–80; Boonzaier, E., C. Malherbe, P. Berens, and A. Smith., *The Cape Herders: A History of the Khoikhoi of Southern Africa* (Cape Town: David Philip, 1996); F. Lander and T. Russell, 'The Archaeological Evidence for the Appearance of Pastoralism and Farming in Southern Africa', *PLOS ONE* 13, 6 (2018), 1–21; J-B. Gewald, *Herero Heroes: A Socio-Political History of the Herero of Namibia, 1890 - 1923* (Oxford: James Currey, 1999); A. Smith, *African Herders: Emergence of Pastoral Traditions African Archaeology Series* (Walnut Creek: AltaMira Press, 2005). And see Chapter One.

[12] K. Sadr, 'The First Herders at the Cape of Good Hope', *African Archaeological Review* 15, 2 (1998), 101–32; M. Hall, *The Changing Past: Farmers, Kings and Traders in Southern Africa, 200-1860* (Cape Town: David Philip, 1987).

[13] M. Herskovits, 'The Cattle Complex in East Africa', *American Anthropologist* 28, 1 (1926), 230–72; E. Evans-Pritchard, 'The Sacrificial Role of Cattle Among the Nuer', *Africa* 23, 3 (1953), 181–98; R. Mtetwa, 'Myth or Reality: The Cattle Complex in South East Africa, with Special Reference to Rhodesia', *Zambezia* 6, 1 (1978), 23–35; E. Kreike, 'De-Globalisation and Deforestation in Colonial Africa: Closed Markets, the Cattle Complex, and Environmental Change in North-Central Namibia, 1890–1990', *Journal of Southern African Studies* 35, 1 (2009), 81–98.

[14] T. Stapleton, '"They No Longer Care for Their Chiefs": Another Look at the Xhosa Cattle-Killing of 1856-1857', *The International Journal of African Historical Studies* 24, 2 (1991), 384; K. Sadr, 'A Short History of Early Herding in Southern Africa', in M. Bollig, M. Schnegg, and H-P. Wotzka (eds.), *Pastoralism in Africa: Past, Present and Future* (New York: Berghahn, 2013), 172–78.

Cattle were considered capital, economic items that held value and could be exchanged. A chief's patronage relationships, his following – that is, *his power* – was premised upon controlling cattle.[15] Chiefs loaned cattle to humans lower down the political order, such as sub-chiefs and men wanting to marry. Cattle possession enabled centralised political systems. Cattle radically transformed political and spiritual systems. Wars and raids were conducted for possession of cattle, for what cattle signified in the social and economic worlds of southern Africans.[16]

In this way, cattle were intimately related to the political and economic orders of many southern African societies. A herdsman in Lesotho later characterised the relationship between many cattle and southern Africans quite vividly,

> if we should run out of all animals it is a very bad thing. It means our entire way of life is finished. Now that would be to destroy our culture and all that is proper for us…They are terribly important. They are the most important thing.[17]

In summary, cattle were the very beings upon which pastoral and cattle-keeping economies, wealth, power, influence, and chieftaincies were based. Since cattle were predictably available to humans, it was convenient for humans to include cattle in a range of ceremonies at different life stages.[18] *Lobola*, the exchange of goods including cattle as bride wealth, shows quite how involved cattle were in the reproduction of human social and familial bonds.[19] Especially from the eleventh century, cattle have been at the core of the economic, political and social worlds of many southern Africans.[20] The next chapter discusses how cattle became embedded into the lives of southern Africans, especially from the eleventh century.

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[15] Kuper, 'Traditions of Kinship, Marriage and Bridewealth in Southern Africa', 273.
[16] R. King, 'Cattle, Raiding and Disorder in Southern African History', *Africa* 87, 3 (2017), 607–609, 614–615, 618–624.
[17] J. Ferguson, 'The Bovine Mystique: Power, Property and Livestock in Rural Lesotho', *Man* 20, 4 (1985), 652.
[18] A. Kuper, *Wives for Cattle: Bridewealth and Marriage in Southern Africa* (London: Routledge & Kegan Paul Books, 1982), 11.
[19] H. Marwewe and G. Mamabolo, *Shall Labolo Live or Die? Two Opposing Viewpoints on the Passage of Cattle Gifts in Bantu Marriage* (Cape Town: The African Bookman, 1945).
[20] R. Jimenez, '"Slow Revolution" in Southern Africa: Household Biosocial Reproduction and Regional Entanglements in the History of Cattle-Keeping among Nguni-Speakers, Ninth to Thirteenth Century CE', *The Journal of African History* 61, 2 (2020), 150, 160, 175; Kuper, *Wives for Cattle: Bridewealth and Marriage in Southern Africa*, 11; Kuper, 'Traditions of Kinship, Marriage and Bridewealth in Southern Africa', 273.

More deeply, like humans, animals are sentient and experience the world. Sentience is the capacity for affective states, to experience feelings, negative and positive valences, to feel pain and pleasure.[21] This is the third major motivation for writing an animal-centred history. In 2012 prominent neuroscientists signed the Cambridge Declaration on Consciousness, which stated that:

> The absence of a neocortex does not appear to preclude an organism from experiencing affective states. Convergent evidence indicates that non-human animals have the neuroanatomical, neurochemical, and neurophysiological substrates of conscious states along with the capacity to exhibit intentional behaviors. Consequently, the weight of evidence indicates that humans are not unique in possessing the neurological substrates that generate consciousness. Nonhuman animals, including all mammals and birds, and many other creatures, including octopuses, also possess these neurological substrates.[22]

Especially since this declaration, and owing to compelling and diverse evidence of animal sentience, denials of sentience for birds, fish, mammals, and reptiles are implausible.[23] It *feels* like something to be an animal. Animals have interior, qualitative, *felt* experiences of life. The core reason animals are interesting in their own right, the core reason that animals matter intrinsically, is that animals are sentient.[24] Animals perceive, have beliefs about, and sensory experiences of the world; animals act in response to the world.[25] Cattle, like all mammals, birds, and fish, have neurological correlates for consciousness.[26] Towards the end of this chapter, I return to the significance of animals' minds in the theoretical discussion of animal agency.

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[21] DeGrazia, 'Sentience and Consciousness', 17–18.
[22] Low, 'The Cambridge Declaration on Consciousness', 2012.
[23] DeGrazia, 'Sentience and Consciousness', 18–28.
[24] P. Cavalieri, *The Animal Question: Why Nonhuman Animals Deserve Human Rights* (New York: Oxford University Press, 2001); M. Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership* (Cambridge: Harvard University Press, 2006); S. Donaldson and W. Kymlicka, *Zoopolis: A Political Theory of Animal Rights* (New York: Oxford University Press, 2011).
[25] H-J. Glock, 'Agency, Intelligence and Reasons in Animals', *Philosophy* 94, 4 (2019), 1, 4–7, 20, 23–24.
[26] L. Marino and K. Allen, 'The Psychology of Cows', *Animal Behavior and Cognition* 4, 4 (2017), 474–98; Panksepp, 'Affective Consciousness'; J. Balcombe, *What a Fish Knows: The Inner Lives of Our Underwater Cousins* (New York: Farrar, Straus and Giroux, 2016); T. Birkhead, *Bird Sense: What It's Like to Be a Bird* (London: Bloomsbury Publishing, 2012); C. Brown, 'Fish Pain: An Inconvenient Truth', *Animal Sentience: An Interdisciplinary Journal on Animal Feeling* 1, 3 (2016), 1–5.

The fourth motivation connects to extant decolonisation debates' exclusion of animals, and the implicit assumption that animals were not also impacted by colonisation. In South Africa and other former colonies, and also in the United States, the United Kingdom and parts of Europe, debates about decolonisation have recently resurfaced. Themes in debates about decolonisation include epistemological concerns about local epistemologies versus so-called Western-centric epistemologies, the Africanisation of universities, the demographic profiles of university staff and the professoriate, African-centred curricula, decolonising museums, free education, the role of statues and monuments, and identity politics.[27]

One core assumption underpinning these debates is that decolonisation – and therefore, *implicitly*, colonisation – is an exclusively human phenomenon. Animals do not feature in decolonisation debates. Animals' striking absence gave me pause, and I wondered what effects colonialism had on animals. I wondered whether colonialism in southern Africa really affected humans but not animals. Stirred by this question, this thesis endeavours to present a sustained history of colonialism in southern Africa by analysing colonialism's impact on the lives and experiences of cattle. In doing so, it aims to contribute to debates about decolonisation by exploring whether animals were impacted by colonialism. The aim is to

[27] A. Mbembe, 'Future Knowledges and Their Implications for the Decolonisation Project', in J. Jansen (ed.), *Decolonisation in Universities: The Politics of Knowledge* (Johannesburg: Wits University Press, 2019), 239–54; A. Phiri and D. Mupotsa, 'On Decolonising Teaching Practices, Not Just the Syllabus', *The Conversation*, 15 July 2020, http://theconversation.com/on-decolonising-teaching-practices-not-just-the-syllabus-137280, accessed 15 July 2020.; B. Banerjee, J. Rodriguez, and S. Dar, 'Beyond Name Changes and Pulling down Statues – How to Decolonise Business Schools', *The Conversation*, 13 July 2020, http://theconversation.com/beyond-name-changes-and-pulling-down-statues-how-to-decolonise-business-schools-142394, accessed 13 July 2020; K. Dotson, 'On the Way to Decolonization in a Settler Colony: Re-Introducing Black Feminist Identity Politics', *AlterNative: An International Journal of Indigenous Peoples* 14, 3 (2018), 190–99; R. Albertus, 'Decolonisation of Institutional Structures in South African Universities: A Critical Perspective', *Cogent Social Sciences* 5, 1 (2019), 1–14; A. Chaudhuri, 'The Real Meaning of Rhodes Must Fall | Amit Chaudhuri', *The Guardian*, 16 March 2016, http://www.theguardian.com/uk-news/2016/mar/16/the-real-meaning-of-rhodes-must-fall, accessed 16 March 2019; Ministry of Foreign Affairs, 'Four-Year Study to Be Conducted into Decolonisation of the Dutch East Indies', *Government of the Netherlands*, 27 February 2017, https://www.government.nl/latest/news/2017/02/27/four-year-study-to-be-conducted-into-decolonisation-of-the-dutch-east-indies, accessed 30 March 2017; J. Bogué, 'Decolonising Dutch Museums: Stolen Heritage to Be Returned? (blog)', *DutchReview*, 26 October 2020, https://dutchreview.com/culture/decolonising-dutch-museums/, accessed 29 October 2020; A. Elliott-Cooper, '"Free, Decolonised Education"—A Lesson from the South African Student Struggle', in J. Arday and H. Mirza (eds.), *Dismantling Race in Higher Education: Racism, Whiteness and Decolonising the Academy* (Cham: Springer International Publishing, 2018), 289–96; L. Chube, 'Botswana: "Decolonise, Africanise Education"', *allAfrica.com*, 21 May 2019, https://allafrica.com/stories/201905220711.html, accessed 1 June 2019.

move debates about colonialism, and implicitly decolonisation, beyond that standard human-centred paradigm.

Having outlined the rationales for this project, and indicated why cattle in southern Africa are investigated, this chapter turns to a historiographical discussion of animal histories generally, animal histories and colonialism, animals in labour history, and animal histories that regard animals as subjects. Each empirical, historical chapter of this thesis opens with a cursory, chapter-specific historiography. The present aim is to locate the thesis as a whole within the broader animal historiography.

Animals in histories

The broader literature within which this project is situated is wide and diverse. In the last three decades, a diverse cohort of historians have written what might be called animal histories. Animal histories here refers to histories that feature animals as core themes or lenses through which historical change is perceived and described. Animal history started to become more prominent after Ritvo Harriet published *The Animal Estate: The English and Other Creatures in Victorian England* in 1987.[28] Since then, the field of animal history has become increasingly established, evidenced by workshops, conferences, special issues, monographs, edited volumes, and many scholars self-identifying as animal historians.[29] Animal histories have proliferated across the globe. There are animal histories of China, Japan, Russia, the Caribbean, Hawaii, Latin America, Burma, and Mexico, to name a few.[30] Much of the scholarship that has informed the rise of animal history comes from cultural and

[28] H. Ritvo, *The Animal Estate: The English and Other Creatures in the Victorian Age* (Cambridge: Harvard University Press, 1987).
[29] A. Skabelund, 'Animals and Imperialism: Recent Historiographical Trends', *History Compass* 11, 10 (2013), 801; J. Specht, 'Animal History after Its Triumph: Unexpected Animals, Evolutionary Approaches, and the Animal Lens', *History Compass* 14, 7 (2016), 326.
[30] M. Elvin, *The Retreat of the Elephants: An Environmental History of China* (New Haven: Yale University Press, 2006); R. Paddle, *The Last Tasmanian Tiger: The History and Extinction of the Thylacine* (Cambridge: Cambridge University Press, 2002); A. Skabelund, *Empire of Dogs: Canines, Japan, and the Making of the Modern Imperial World* (New York: Cornell University Press, 2011); J. Costlow and A. Nelson (eds.), *Other Animals: Beyond the Human in Russian Culture and History* (Pittsburgh: University of Pittsburgh Press, 2010); E. Melville, *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (Cambridge: Cambridge University Press, 1994); J. Fischer, *Cattle Colonialism: An Environmental History of the Conquest of California and Hawai'i* (Chapel Hill: University of North Carolina Press, 2015); J. McNeill, *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620–1914* (Cambridge: Cambridge University Press, 2010).

environmental history, and both fields have produced works that link animals and imperialism or animals and colonialism.[31] A wide range of themes and topics like breeding, zoos, modernisation, domestication, conservation, and hunting have been studied with some connections to a broader scholarship on animals and imperialism.[32]

Treating the theme of extinction, *The Last Tasmanian Tiger: The History and Extinction of the Thylacine* (2002) traces the extinction of *thylacine* (1936) and argues that human agency and nineteenth century scientific prejudices, as well as competition with farmers, eradicated the species.[33] Mark Elvin's *The Retreat of the Elephants: An Environmental History of China* (2006), traces the movement and habitations of elephants, and so uses elephants as a lens to gain new perspectives and insights into China's modernisation.[34] Aaron Skabelund examined how dog breeding and dog keeping practices and ideas spread in Japan via imperial influence.[35]

Mosquito Empires: Ecology and War in the Greater Caribbean, 1620–1914 (2010) shows how mosquitos and Yellow Fever definitively shaped imperial projects in the Caribbean, revealing that small insects could determine the probabilities of various imperial enterprises.[36] Mahesh Rangarajan has written sensitively about lion histories in the Gir forest and argues that different political regimes differently impacted the numbers and habitats of lions in India. Regarding how to interface with humans in these forests, he argued that lions in the forests most likely conferred insights intergenerationally.[37] John Fischer's *Cattle Colonialism: An Environmental History of the Conquest of California and Hawai'i* (2015) uses an environmental

[31] Skabelund, 'Animals and Imperialism', 801.
[32] M. Derry, *Bred for Perfection: Shorthorn Cattle, Collies, and Arabian Horses Since 1800* (Baltimore: Johns Hopkins University Press, 2003); E. Hart, 'From Field to Plate: The Colonial Livestock Trade and the Development of an American Economic Culture', *The William and Mary Quarterly* 73, 1 (2016), 107–140; T. Kaarlenkaski, '"Machine Milking Is More Manly than Hand Milking": Multispecies Agencies and Gendered Practices in Finnish Cattle Tending from the 1950s to the 1970s', *Animal Studies Journal* 7, 2 (2018), 76–102; N. Rothfels, *Savages and Beasts: The Birth of the Modern Zoo* (Baltimore: Johns Hopkins University Press, 2002); I. Miller, *The Nature of the Beasts: Empire and Exhibition at the Tokyo Imperial Zoo* (Berkley: University of California Press, 2013); A. Isenberg, *The Destruction of the Bison: An Environmental History, 1750-1920* (Cambridge: Cambridge University Press, 2001); J. Buhs, *The Fire Ant Wars: Nature, Science, and Public Policy in Twentieth-Century America* (Chicago: University of Chicago Press, 2004); J. Clutton-Brock, *A Natural History of Domesticated Mammals* (Cambridge: Cambridge University Press, 1999).
[33] Paddle, *The Last Tasmanian Tiger: The History and Extinction of the Thylacine*.
[34] Elvin, *The Retreat of the Elephants*.
[35] Skabelund, *Empire of Dogs*.
[36] McNeill, *Mosquito Empires*.
[37] M. Rangarajan, 'Animals with Rich Histories: The Case of the Lions of Gir Forest, Gujarat, India', *History and Theory* 52, 4 (2013), 109–27.

history approach, with cattle as an overarching theme, to show how the control of cattle trades enabled colonialism to take root, and also explores the cultural, environmental and economic effects surrounding this trade.[38] However, the living, feeling cattle are entirely absent from the analysis. *A Plague of Sheep: Environmental Consequences of the Conquest of Mexico* (1994) presents a view of the conquest of Mexico as ecological imperialism, in which 'weeds, seeds, and disease' were key aspects of this conquest.[39] Sheep feature as carriers of disease and hence are disparagingly regarded as a plague. Often in animal histories such as these, the animals themselves are either largely absent or feature as abstractions. By contrast, my approach aims to shift animals from the object to the subject category and explore their historical experiences. This is the core difference between my approach and most animal histories.

There are also animal histories in southern Africa.[40] In an important historiographical discussion of animals in African history, Sandra Swart notes that in Africa animals have been included for 'several academic "generations"' in socio-environmental genres, literary studies, and among historians.[41] Some considered animals as subjects and agents but among historians animals have mostly featured as objects and abstractions. *Canis Africanis: A Dog History of Southern Africa* (2008), an edited volume, uses dogs as a theme to explore social and cultural history, and includes research on colonial control of dogs, Greyhound racing, representations of dogs in fiction, breeding, taxation, and registration.[42] There is also a relatively large literature which examines capitalist development, state and other interventions in rural and urban agriculture in southern African colonies, and in which the colonial control of cattle is variously explored.[43] This thesis expands on such scholarship by

[38] Fischer, *Cattle Colonialism*.
[39] Melville, *A Plague of Sheep*, 1.
[40] G. Mazarire, 'The Burrowed Earth: Rodents in Zimbabwe's Environmental History', *Critical African Studies* 8, 2 (2016), 109–35; I. Dande and S. Swart, 'History, Politics and Dogs in Zimbabwean Literature, c. 1975–2015', *Tydskrif Vir Letterkunde* 55, 3 (2018), 152–73.
[41] S. Swart, 'Animals in African History', in *Oxford Research Encyclopedia of African History* (Oxford University Press, 2019), 5; N. Jacobs, 'The Great Bophuthatswana Donkey Massacre: Discourse on the Ass and the Politics of Class and Grass', *American Historical Review* 106, 2 (2001), 485–507; N. Jacobs, *Birders of Africa: History of a Network* (London: Yale University Press, 2016); D. Wylie, *Death and Compassion: The Elephant in Southern African Literature* (Johannesburg: Wits University Press, 2018).
[42] L. van Sittert and S. Swart (eds.), *Canis Africanis: A Dog History of Southern Africa* (Leiden: Brill, 2008), vii–viii.
[43] W. Beinart, *The Rise of Conservation in South Africa: Settlers, Livestock, and the Environment 1770-1950* (New York: Oxford University Press, 2003); M. Hubbard, 'Botswana's Beef Cattle Exports: Establishment of a Reserve Industry c.1900-1924', *Pula: Botswana Journal of African Studies* 3, 1 (1981), 47–57; P. Molosiwa,

focusing on the cattle themselves, and particularly how colonialism and development processes, including arms of colonial states, impacted cattle's histories and subjective experiences.

In *Wild by nature: North American Animals Confront Colonisation* (2017), Andrea Smalley set her focus on the 'colonization of American [wild] animals'.[44] Andrea Smalley casts wolves, beavers, bison, and fish as actors who interact with and resist and shape the nature of the processes of colonisation in British North America.[45] Andrea Smalley regards animals as beings who were also colonised in British North America and acted as obstacles to colonisation, so that lawmakers were compelled to shift colonisation tactics in processes that took centuries to resolve.[46] There have also been numerous edited volumes which have explored animal histories, including *Centering Animals in Latin American History* (2013), which purports to centre animals in historical scholarship.[47] Curiously, however, living, sentient animals are almost entirely absent from the volume.

There is also an important literature about animals as labourers. Jason Hribal was a pioneer of explicitly conceptualising animals as workers. Using a Marxist formulation, he argued that animals' roles in the development of capitalism should be recognised, that many animals performed work for human masters, and he rejected the assumption that labour is exclusive

'"The Tragedy of the Ababirwas": Cattle Herding, Power and the Socio-Environmental History of the Ethnic Identity of the Babirwa in Botswana, 1920 to the Present' (PhD Dissertation, University of Minnesota, Minnesota, 2013); W. Mwatwara and S. Swart, '"Better Breeds?" The Colonial State, Africans and the Cattle Quality Clause in Southern Rhodesia, c.1912–1930', *Journal of Southern African Studies* 42, 2 (2016), 333–50; C. Botha, 'The Emergence of Commercial Ranching under State Control and the Encapsulation of Pastoralism in African Reserves', in M. Bollig, M. Schnegg, and H-P. Wotzka (eds.), *Pastoralism in Africa: Past, Present and Future* (New York: Berghahn, 2013), 230–56; U. Dieckmann, 'Land, Boreholes and Fences: The Development of Commercial Livestock Farming in the Outjo District, Namibia', in M. Bollig, M. Schnegg, and H-P. Wotzka (eds.), *Pastoralism in Africa: Past, Present and Future* (New York: Berghahn, 2013), 257–88; P. Delius, *A Lion Amongst the Cattle: Reconstruction and Resistance in the Northern Transvaal* (Portsmouth: Heinemann, 1996); V. Machingaidze, 'The Development of Settler Capitalist Agriculture in Southern Rhodesia with Particular Reference to the Role of the State, 1908-1939' (PhD Dissertation, University of London, London, 1980).

[44] Smalley, *Wild by Nature*, 4.

[45] *Ibid.*

[46] *Ibid.*

[47] D. Brantz (ed.), *Beastly Natures: Animals, Humans, and the Study of History* (Charlottesville: University of Virginia Press, 2010); M. Few and Z. Tortorici (eds.), *Centering Animals in Latin American History* (Durham: Duke University Press, 2013); S. Nance (ed.), *The Historical Animal* (New York: Syracuse University Press, 2015); H. Kean and P. Howell (eds.), *The Routledge Companion to Animal-Human History* (New York: Routledge, 2019); P. Atkins (ed.), *Animal Cities: Beastly Urban Histories* (Surrey: Ashgate, 2012).

to humans.[48] He challenged labour historians to acknowledge animals as labourers. Since then, various scholars have conceived of animals as labourers, in two main ways. The first relates to the ethics of animal labour and the second to animal labour in capitalist development.[49] Ethical considerations of animal labour are premised on the bedrock claim that animal sentience implies that animals have inherent value. Sentience self-justifies moral status. On the basis of their intrinsic value, animals deserve legal protections (rights, in the deontological formulation) and/or moral consideration of their wellbeing (their interests, in the utilitarian formulation).[50]

Jocelyne Porcher and Tiphaine Schmitt studied 60 cows in a dairy operation and argued that the cows collaborated with farmers and robots, so that their compelled collaboration should be regarded as labour.[51] Jocelyne Porcher later argued that working animals are sentient beings who co-labour with humans, and sanguinely suggested the possibility of a multi-species collaborative labour utopia.[52] Rosemary Shaw argued that working animals should be afforded workplace protections by extending human health and safety legislation frameworks to include animals.[53]

A recent book on animals and labour studies called for inter-species solidarity, and a significant interdisciplinary edited volume explores whether animal labour is intrinsically oppressive or whether – for animals – there are possibilities for just and meaning-generating forms of labour.[54] Chapter Two of this thesis is an investigation into oxen's experiences as wagon-labourers in southern Africa from 1652 until the nineteenth century, and in this way contributes to animal labour history by connecting themes like colonialism and animal agency to cattle's labour experiences in southern Africa.

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[48] J. Hribal, '"Animals Are Part of the Working Class": A Challenge to Labor History', *Labor History* 44, 4 (2003), 435–53.
[49] An exception is L. Hamilton and N. Taylor, *Animals at Work: Identity, Politics and Culture in Work with Animals* (Leiden: Brill, 2013). This book relates to human identity and culture formation.
[50] Donaldson and Kymlicka, *Zoopolis: A Political Theory of Animal Rights*, 260.
[51] J. Porcher and T. Schmitt, 'Dairy Cows: Workers in the Shadows?', *Society & Animals* 20, 1 (2012), 39–60.
[52] J. Porcher, *The Ethics of Animal Labor: A Collaborative Utopia* (Basingstoke: Palgrave Macmillan, 2017).
[53] S. Rosemary, 'A Case for Recognizing the Rights of Animals as Workers', *Journal of Animal Ethics* 8, 2 (2018), 182–98.
[54] K. Coulter, *Animals, Work, and the Promise of Interspecies Solidarity* (Basingstoke: Palgrave Macmillan, 2016); C. Blattner, K. Coulter, and W. Kymlicka (eds.), *Animal Labour: A New Frontier of Interspecies Justice?* (Oxford: Oxford University Press, 2019).

Shifting from ethical considerations of animal labour, Dinesh Wadiwel explored chicken labour within themes of capitalism, resistance, and time.[55] Les Beldo usefully conceptualised chickens as performing 'metabolic labour' – where eating to become commodified flesh *is* labour – and argued that their labour should not be elided in studying capitalist production.[56] He offered an ethnographic description of the lives of 'broiler' chickens on a farm in rural Michigan.

Few historians have researched colonialism and animal labour. James Hevia's *Animal Labor and Colonial Warfare* (2018) studies the Second Afghan War and closes in the early twentieth century.[57] It is about British colonial bureaucracies and their war campaigns in which camels, mules, donkeys and horses were stolen, bred, or imported and then deployed in military campaigns and elsewhere as transporters. The book's title foregrounds the animal labour aspect but its contents reveal a lack of focus on the animals themselves and the types of labour they performed. These lacunae are not explained by a lack of suitable sources.[58] There are passing references to the animals experiencing suffering but these are mostly abstract, without detail, and unexplored.[59] He declines engagement with scholarship on animal labour within labour history and there are very few references to animal history.[60] The book is more about colonial campaigns than animal labour. Also focusing on colonial India, Heeral Chhabra has argued that labour history should include animals, and contended that analysing colonial legislation that 'mediated animal labour' enables explorations of animal labour in labour and colonial histories.[61] Among other things, my approach also connects animal labour history to colonial history, in that it recognises oxen's wagon labour as an impact of colonialism in southern Africa, and explores oxen's experiences of wagon labour. Having discussed a diverse animal history literature and literature on animal labour, the next section focuses on animal histories which have presented animals as subjects.

[55] D. Wadiwel, 'Chicken Harvesting Machine: Animal Labour, Resistance and the Time of Production', *South Atlantic Quarterly* 117, 3 (2018), 527, 534, 536, 541–43.
[56] L. Beldo, 'Metabolic Labor: Broiler Chickens and the Exploitation of Vitality', *Environmental Humanities* 9, 1 (2017), 108, 125.
[57] J. Hevia, *Animal Labour and Colonial Warfare* (Chicago: University of Chicago Press, 2018).
[58] *Ibid*, 41–42, 45.
[59] *Ibid*, 26, 31, 41, 43, 44, 45, 61, 85, 127, 148, 197, 262, 287.
[60] *Ibid*, 304–16.
[61] H. Chhabra, 'Animal Labourers and the Law in Colonial India', *South Asia Research* 39, 2 (2019), 166, 180.

Regrettably not yet translated from French to English, likely among the most sustained efforts to depict historical episodes from the perspective of feeling animal subjects is Éric Baratay's *Le Point de Vue Animal: Une Autre Version de l'histoire* (2012), *The Animal Perspective: Another Side of the Story*.[62] Éric Baratay writes that '[l]'animal vivant ne peut plus être un trou noir de l'histoire', the living animal can no longer be a black hole in history.[63] The book is an attempt to abandon an anthropocentric view of history. It focuses on the emotions, feelings, and reactions of animals, including cows in dairy industries, horses, bulls, and dogs in twentieth- and twenty-first century historical events.[64] Arguing that historians 'must make do with what we have' and drawing on archival material by veterinarians, miners, and engineers, and then reading these in light of insights from the sciences, including ethology, ecology, zoology, he claims that historians can *try* to take on their [an animal's] psychological viewpoint to see what they see and to feel what they feel'.[65] He argues that such history demands an empathetic approach towards animals.[66] In a similar way, written in Dutch, Guido van Hengel's *Roedel: een Alternatieve Geschiedenis van Yoegoslavië* (2021), *Pack: an Alternative History of Yugoslavia*, takes a sensory history approach to explore, via sights, noises, and smells, what life was like for street dogs during the Balkan war.[67]

Significantly, in English, there have been several important endeavours to write history about animals as subjects. Sandra Swart's *Riding High: Horses, Humans and History in South Africa* (2010) shows how horses laboured, were exploited, were 'a force in social change', and expressed agency in various ways.[68] She argues that including other species in history writing,

[62] É. Baratay, *Le Point de Vue Animal: Une Autre Version de l'histoire* [*The Animal Perspective: Another Side of the Story*] (Paris: Seuil, 2012).
[63] *Ibid*, 30.
[64] É. Baratay, translated by S. Posthumus 'Building an Animal History', in L. Mackenzie and S. Posthumus (eds.), *French Thinking about Animals* (Michigan: Michigan State University Press, 2015), 6–7.
[65] *Ibid*, 5–7.
[66] *Ibid*, 6; For the role of empathy in writing about animals see: J.M. Coetzee, *The Lives of Animals* (Princeton: Princeton University Press, 1997), 35; Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, 345; and, E. Aaltola, *Varieties of Empathy: Moral Psychology and Animal Ethics* (Lanham: Rowman & Littlefield, 2018).
[67] G. van Hengel, *Roedel: Een Alternatieve Geschiedenis van Yoegoslavië* [*Pack: an Alternative History of Yugoslavia*] (Amsterdam: GA Van Oorschot, 2021).
[68] S. Swart, *Riding High: Horses, Humans and History in South Africa* (Johannesburg: Wits University Press, 2010), 202, 209, 212, 219.

not only adds to the story but 'changes it'.[69] For Sandra Swart, horses experience and contribute to history in their own biologically differentiated ways, and she argues carefully that animals deserve inclusion in the same way that other neglected groups (of humans) have deserved inclusion.[70] Sandra Swart's prolific and lively writing on animal history in southern Africa, in the form of narratives, theoretical contributions and historiographies, distinguishes her as a primary specialist on southern African animal history.[71] Her acknowledgement of animals as sentient subjects, her inclusion of the sensory aspects of horse history, and her use of a history from below approach to include animals marks her as an innovative pioneer in the literature.[72] My approach draws on Sandra Swart's in that cattle are positioned as sentient and sensory beings, whose histories deserve inclusion in their own right.

Jonathan Saha's scholarship on elephant labourers in colonial Burma is sophisticated and sensitive.[73] It is alert to the pitfalls of anthropocentrism, recognises animals as sentient, acknowledges their mental powers, and is alive to forms of animal resistance.[74] He recognised elephants as colonial labourers who felled trees, freighted timber and loaded it onto ships for export, and argued that their labour was both 'essential' and 'integral' to colonialism in Burma, specifically the colonial teak industry.[75] He writes that elephants

> were conscripted into the imperial project through force and violence. They were treated as meaty machines to be captured, trained, worked, bought, sold and experimented upon. At the same time they were essential, sentient coworkers.[76]

[69] *Ibid*, 197, 202.
[70] *Ibid*, 7, 197, 198–208; S. Swart, '"The World the Horses Made": A South African Case Study of Writing Animals into Social History', *International Review of Social History* 55, 2 (2010), 257.
[71] S. Swart, 'The Lion's Historian: Animal Histories from the South' (Inaugural Address, Stellenbosch University, 17 October 2017); Swart, 'Animals in African History'; S. Swart, 'Settler Stock? Animals and Power in Mid-Seventeenth Century Contact at the Cape, circa 1652-62', in P. Cuneo (ed.), *Animals and Early Modern Identity* (London: Routledge, 2016), 243–69; S. Swart, 'Beasts of the Southern World' (African Environments & Their Populations, Georgetown University, 23 April 2016).
[72] Swart, 'Animals in African History', 3; Swart, *Riding High: Horses, Humans and History in South Africa*, 197–208.
[73] J. Saha, 'Colonizing Elephants: Animal Agency, Undead Capital and Imperial Science in British Burma', *BJHS Themes* 2 (2017), 169–89; J. Saha, 'Milk to Mandalay: Dairy Consumption, Animal History and the Political Geography of Colonial Burma', *Journal of Historical Geography* 54 (2016), 1, 8–10.
[74] Saha, 'Colonizing Elephants', 170, 172, 179, 187.
[75] *Ibid*, 169.
[76] *Ibid*, 172.

Further, he demonstrated their agency in protestatory and resistance actions – elephants refused to work after the dinner time bell, and stuffed mud into the bells around their necks to move imperceptibly and take crops from local farmers.[77] On occasion, the elephants were tranquilised with opium, indicating a recognition that animals have brain hardware on which opiates act.[78] There are sensitive passages about elephants being 'broken in' as compelled labourers and their resistance punished by being burned with torches, and he notes that the elephants 'bore the physical scars of the training process throughout their lives'.[79]

Brett Walker's *Lost Wolves of Japan* (2009) sees wolves as co-participants in history, as *subjects* who act, rather than *objects* who are acted upon.[80] In terms of a wolf-perspective, Brett Walker drew on his own observations of wolves, psychology, biology, neurology and ethology to enrich our view of the Hokkaido wolves, wolves driven to extinction by bounties and traps as part of the Meiji restoration's shift to modernisation in the late nineteenth century.[81] My approach also draws on an interdisciplinary understanding of cattle as subjects, but as a way to centre cattle throughout the historical investigations. Brett Walker described wolves' social rituals, their tactics for group cohesion, their familial and social bonds, including 'close psychological bonds' between pairs of wolves.[82] He emphasised that wolves like other animals have limbic systems, neurotransmitters like epinephrine and oxytocin, and have the faculties for 'complex emotional lives'.[83] In this way, we can see the wolves more on their own terms, as co-competitors for resources with cattle ranchers, within their own wolf ecologies, and as '*a part of* colonial finance systems and not distinct from our modern order'.[84] *The Lost Wolves of Japan* shifts humans from the role of central actors and sees other animals as actors too, who also experience and are part of history in their own right.

Brett Walker's core methodological argument is that because we have known since Darwin that animals have emotions and experiences, it follows that historians ought to revise how

[77] *Ibid*, 170, 179.
[78] *Ibid,* 179.
[79] *Ibid*, 177, 178.
[80] Walker, *The Lost Wolves of Japan*.
[81] *Ibid*, 26, 32, 176, 177.
[82] *Ibid*, 195, 197.
[83] *Ibid*, 197, 198.
[84] *Ibid*, 194, emphasis added.

they write about animals, seeing them as more complexly and richly part of history, recognising them as having complex emotional lives, and thus – most importantly – relooking at our relationships with them.[85] Distinguished in that it makes an intentional attempt to view historical shifts from the wolves' perspective, shifting animals from the category object to the category subject, the book is something of an exception in the broader animal history literature, even if only two of the six chapters feature the living wolves.

There are other examples where animal subjectivity is treated historically, and their perspective is approximated. Jason Hribal's *Fear of the Animal Planet: The Hidden History of Animal Resistance* (2001), for example, is replete with examples of animals exercising agency historically, resisting their station, destroying tools, and otherwise making domestication difficult and in some cases impossible.[86] Jason Hribal shows that the way the institutions, training regimes and tools used to control animals all indicate that people who work with animals know full well that animals resist their station and wish to escape. My approach is similarly alert to instances of cattle resistance, which are framed as expressions of animal agency. Very recently Peter Braden's doctoral thesis used Actor-network Theory (ANT) to innovatively explore bovine experiences in the twentieth century Chinese civil war and revolution.[87] ANT as an approach for writing animal history is discussed later.

Outside of rare, exceptional counterexamples, animal histories in general tend to feature animals as lenses, or instrumentalities. The living, feeling, experiential subjects are mostly blanked out. Animal histories tend to double back to really be human histories which incidentally feature animals. In most cases, animals feature in histories *qua* a window through which to view and derive insight into essentially human concerns. In light of this common feature of animal histories, my approach was to instead pay attention to cattle's experiential capacities and use knowledge of these capacities to interpret historical sources in ways that enabled an exploration of cattle's historical experiences. Animal historians have often been, if not incurious about then at least unwilling, or, unequipped to more deeply explore animals'

[85] *Ibid*, 28–32.
[86] J. Hribal, *Fear of the Animal Planet: The Hidden History of Animal Resistance* (Oakland: Counter Punch Press and AK Press, 2011).
[87] P. Braden, 'Serve the People: Bovine Experiences in China's Civil War and Revolution, 1935-1961' (PhD Dissertation, University of California San Diego, San Diego, 2020).

subjective historical experiences in a sustained way. Save for some notable exceptions, what is lacking in the scholarship on animal history and colonialism is an analysis that gives sustained primary attention to the animals themselves. This is what I set out to do in this research. My project takes the lives of cattle seriously, conceiving of cattle as sentient indivisible individuals, with rich psychological and emotional lives of their own, centres of experience, somebodies not somethings, beings who possess a good towards which they strive, and who have rich kin and social relationships.

If animals are depicted as subjects, then arguably we ought to know something about animals' minds. One powerful conceptual tool for thinking about animals' minds, specifically those of mammals and birds, is Gay Bradshaw's theory of Trans-species psychology, which recognises that human and animal minds are different sides of the same coin.[88] Drawing on ethology, neuropsychology, neuroscience and psychiatry, Gay Bradshaw has developed an animal theory of mind which accounts for the fact of animal and human minds having more commonalities than differences, minds differing in degree and not in kind. The theory is born from psychological and psychoanalytical diagnoses of animals who have experienced trauma, such as elephant communities after culling episodes, and the neurological similarities between humans and animals, in particular mammals and birds. Most prominently, Bradshaw and other psychologists use this theory to explain Post-Traumatic Stress Disorder (PTSD) in elephants, chimpanzees, parrots and bears.[89] Once it is recognised that human and animal minds are more similar than different, historians can better interpret sources and write animal-centred histories. Gay Bradshaw notes that 'once occupying four conceptual quarters, mind, body, animal, and human are reintegrating into one.'[90] Gay Bradshaw offers an alternative to adding species to the 'holy trinity' of class, race, and gender.[91] The concept of mind underpins the concepts of race, class and gender. Thus, another approach might be to enrich and broaden our conceptions of mind so that our conscious cousins are included in a more elementary conceptual way. The suggestion here is that rather than adding the category

[88] Bradshaw, *Elephants on the Edge*, 16, 18, 23, 112, 186, 249.
[89] G. Bradshaw, T. Capaldo, and G. Grow, 'Building an Inner Sanctuary: Complex PTSD in Chimpanzees', *Journal of Trauma & Dissociation* 9, 1 (2008), 9–34.
[90] Bradshaw, *Elephants on the Edge*, 186.
[91] S. Swart, '"But Where's the Bloody Horse?": Textuality and Corporeality in the "Animal Turn"', *Journal of Literary Studies* 23, 3 (2007), 285.

'species' to the core categories of class, race, and gender, or land, labour, and class, we might expand the concept of mind, so that animals are included within the broader category 'mind'. This approach is implicit in the German name, *Geisteswissenschaften*, and Dutch name, *Geesteswetenschappen*, for what in anglophone universities is called the Humanities. The Dutch and German terms signify the broader category spirit/mind whereas anglophones narrow the focus onto humans. Within the genre of animal history which acknowledges animals as subjects, a core concept is animal agency. A theoretical engagement with the concept of animal agency follows, after which the thesis' methodology can be discussed.

Animal agency

Numerous historiographies and historians have discussed animal agency.[92] However, the concept of animal agency is still relatively under-theorised. Owing to its importance for an animal history that depicts animals as experiential subjects, the following section comprises a substantive theoretical discussion of animal agency. It sketches different views on animal agency and then offers a species-specific conception of agency developed by combining theories from political philosophy and philosophy of mind. In terms of the broader humanities and social sciences scholarship, conceptions of animal agency can be arranged into four broad categories, namely, a) post-humanists, b) deniers or those who think agency is severely limited, c) ignorers, and d) those who affirm that animals have agency.

Two major contributors to the conceptual development of animal agency are Donna Haraway and Bruno Latour, both deeply post-humanist in orientation.[93] In *A Cyborg Manifesto* (1991), Donna Haraway started to challenge the persistently strong human and animal dichotomy in the social sciences, and argued for kinship between humans, animals, and machines.[94] In *When Species Meet* (2008), Haraway went further, by arguing that human agency and animal

[92] A. Rees, 'Animal Agents? Historiography, Theory and the History of Science in the Anthropocene', *BJHS Themes* 2 (2017), 1–10; E. Domańska, 'Animal History', *History & Theory* 56, 2 (2017), 267–87; B. Walker, 'Animals and the Intimacy of History', *History & Theory* 52, 4 (2013), 45–67.
[93] For a good discussion and qualified defence of these authors and animal agency debates see C. Pearson, 'History and Animal Agencies', in L. Kalof (ed.), *The Oxford Handbook of Animal Studies* (New York: Oxford University Press, 2016), 240–57.
[94] D. Haraway, 'A Cyborg Manifesto', in D. Haraway (ed.), *Simians, Cyborgs, and Women: The Reinvention of Nature* (New York: Routledge, 1991), 149–81.

agencies co-constitute each other.[95] She argued that animals are 'actors' and challenged the notion that agency be understood in a human-exclusive way.[96] Donna Haraway noted rather that humans and animals have 'asymmetrical' agencies.[97]

Other scholars draw on Bruno Latour's development of ANT.[98] ANT is a highly influential approach, and various animal histories have drawn on it, which motivates my extended theoretical engagement with it. It is also the approach that contrasts most with my conception of species-specific agency. As Chris Pearson put it, for Bruno Latour nature and society are constituted and explained by a 'circulating hybrid collective of quasi-objects and quasi-subjects'.[99] In this view agency is distributed and miscellaneous, meaning that everything in the environment, including sand, rivers and trees, are ascribed agency. Everything plays a role (is an actor) in a matrix of relations (network) in co-constituting society and nature. Agency is not only extended to include conscious animals but *everything*, implying that in ANT a grain of sand possesses agency. While ANT did well to challenge the late twentieth century orthodox view that humans uniquely possessed agency, it met criticisms of vagueness and a lack of explanatory power.[100] Like Donna Haraway and Cary Wolfe, Bruno Latour does not appear to place a premium on clarity and being publicly understandable, preferring a poetic, meandering style over a crystalline one.[101] Sometimes the writing, especially of the latter two, is positively obscure. Others have worried that ANT overstates the agency of things and animals at the expense of humans' role and the powers of capitalism.[102]

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[95] D. Haraway, *When Species Meet* (Minneapolis: University of Minnesota Press, 2008), 27, 71, 134, 208, 220, 344, 383.
[96] *Ibid*, 25, 26, 134, 136.
[97] *Ibid*, 262.
[98] B. Latour, translated by C. Porter, *We Have Never Been Modern* (Cambridge: Harvard University Press, 1993); B. Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2007); D. Shaw, 'The Torturer's Horse: Agency and Animals in History', *History and Theory* 52, 4 (2013), 146–67; C. Pearson, 'Dogs, History, and Agency', *History and Theory* 52, 4 (2013), 128–45; E. Sayes, 'Actor-Network Theory and Methodology: Just What Does It Mean to Say That Nonhumans Have Agency?', *Social Studies of Science* 44, 1 (2014), 134–49.
[99] Pearson, 'History and Animal Agencies', 244.
[100] B. Carter and N. Charles, 'Animals, Agency and Resistance', *Journal for the Theory of Social Behaviour* 43, 3 (2013), 323–25, 328.
[101] Latour, *Reassembling the Social*, *passim*; C. Wolfe, *What Is Posthumanism?* (Minneapolis: University of Minnesota Press, 2010), *passim*.
[102] N. Castree, 'False Antitheses? Marxism, Nature and Actor-Networks', *Antipode* 34, 1 (2002), 111–46.

My concern with ANT also relates to explanatory power. The feeling, experiencing beings seem to vanish into a matrix of dispersed, inscrutable causal relations. While ANT did well as a lens through which to see that humans are ineluctably embroiled in relationships with nature, the environment, objects, and animals, the theory deflates the concept of agency by ascribing it to everything, including immobile insensate objects like grains of sand. There is a real sense in which if everything has agency then nothing has agency. In this way, ANT risks doubling back to again placing animals in the object category, via under-appreciating their subjective capacities, their interiority and the richness of their experiences and strivings. Some historians, however, have written animal histories within an ANT framework while recognising that animals are conscious and intentional.[103]

Some scholars appear to deny that animals have agency altogether or claim that their agency is severely limited. In *Rule of Experts, Egypt, Techno-politics, Modernity* (2002), Timothy Mitchell studies mid-twentieth century Egypt and paints a picture of human agency operating in unavoidable relationships with 'forces' of disease, nature, chemistry, hydraulics, war, technology and others.[104] Conceived this way, Timothy Mitchell sees human acts not as 'calculating interests directing social outcomes' but 'more as the product of a series of alliances in which the human element is never wholly in control', such that human 'agency and intention are partial and incomplete products' of interactions with processes, nature, and technology.[105] Humans and animals both lack meaningful agency in this view, in that their choices are severely limited by external factors, a view which I return to below.[106] Some, like historian William Sewell, reject animal agency on the basis of a view that animals lack the capacities for consciousness, intention, and judgement.[107] Linda Nash is also critical of human and animal agency, although she stops short of accepting environmental determinism, and instead suggests that notions of agency should be 'critically foreground[ed]'.[108]

[103] Shaw, 'The Torturer's Horse'; Pearson, 'Dogs, History, and Agency'; Braden, 'Serve the People', 8, 9, 17, 28, 89, 224, 309–310, 322.
[104] T. Mitchell, *Rule of Experts: Techno-Politics, Modernity* (Berkeley: University of California Press, 2002), 10.
[105] *Ibid*, 10, 34.
[106] *Ibid*, 34.
[107] See Pearson, 'History and Animal Agencies', 247.
[108] L. Nash, 'The Agency of Nature or the Nature of Agency?', *Environmental History* 10, 1 (2005), 68.

Since animals lack human language, philosopher Ralf Stoecker denies that animals can participate in public deliberation, and infers that animals cannot be social agents, literally cannot act.[109] To say that animals lack agency because they lack language is really to say that animals lack human linguistic agency because they lack human language. That animals lack human language is true, but that animals lack language or modes of conspecific and inter species communication, that animals do not communicate in their own characteristic or species-specific modes, is false.[110] There is no reason a uniquely human feature such as human language should be a *necessary* feature of a conception of agency that applies to human, *and all other animal species.* The weight of empirical evidence collated in Eva Meijer's *Animal Languages* (2020) is simply too strong to deny that animals have languages and meaningful modes of communication of their own.[111] Further, pioneering animal linguists Leonie Cornips and Louis van der Henger are building theoretical bases for a cattle linguistics, which recognise cattle's 'cognitive, emotional and social intelligence'.[112]

Scholars here conceived of as down-players of animal agency argue that animal history has triumphed and that scholars have convinced mainstream historians that animals possess agency.[113] In this view, animal agency should be a starting point, not a preoccupation and a conclusion to a study. Joshua Specht, while taking animal agency as a given, has two issues with a preoccupation with animal agency.[114] The first is that it conceives of the agent as disaggregated from the broader historical process, and the second is that a focus on animal agency risks neglecting the powerful structures and processes in which beings are embedded and which constrain their agency. We return to these concerns later.

[109] R. Stoecker, 'Why Animals Can't Act', *Inquiry: An Interdisciplinary Journal of Philosophy* 52, 3 (2009), 255.
[110] E. Meijer, *When Animals Speak, toward an Interspecies Democracy* (New York: New York University Press, 2019).
[111] E. Meijer, translated by L. Watkinson, *Animal Languages* (Cambridge: MIT Press, 2020).
[112] L. Cornips and L. van der Henger, 'Place-Making by Cows in an Intensive Dairy Farm: A Sociolinguistic Approach to Nonhuman Animal Agency', in B. Bovenkerk and J. Keulartz (eds.), *Animals in Our Midst: The Challenges of Co-Existing with Animals in the Anthropocene* (Cham: Springer, 2021), 177.
[113] Specht, 'Animal History after Its Triumph', 332.
[114] *Ibid*.

There are simply too many historical and contemporary accounts of animals expressing agency available to allow an outright denial of animal agency.[115] That, and the increasing scientific evidence of animals' brain hardware, makes a denial of animal agency implausible. Or as Jason Hribal and Sandra Swart and others have pointed out, farmers who have worked with animals did not doubt that animals were active actors, in terms of their daily interactions with animals, and also as the tools and methods and structures with which they interact with animals indicate.[116]

One challenge for those working with the concept of animal agency in historical investigations is that historians have not spelt out analytically what the *features* of animal agency might be. For example, Jason Hribal, an English-speaking author who has likely devoted the most attention to demonstrating animal agency historically, defines agency as 'the minorities' ability to influence their own lives — i.e., the ability of the cow to influence and guide her own life', while Joshua Specht defines animal agency as 'the ability to shape in meaningful ways the world around them'.[117] But such definitions do not say *why* or *how* animals can possess agency. I aim to enumerate core features of a more developed, species-specific conception of animal agency. Another way of conceptualising agency would link agency to the presence of a mind. That is, agency is conceptualised as mind-based. This conception of animal agency integrates current neuroscientific evidence of animals' minds.[118] While many species of animals' minds are scientifically regarded as a given, this knowledge has been insufficiently appreciated in debates about animals' agency and in how historians conceive of animals.

What some denials of animal agency have in common is that a) they do not engage the empirical neuroscientific evidence on animal minds and behaviours, and b) they define agency in a human-exclusive way and based on that definition deny that animals possess agency. Thus, these views on animal agency lack empirical backing, and reject animal agency by

[115] S. McFarland and R. Hediger (eds.), *Animals and Agency: An Interdisciplinary Exploration* (Leiden: Brill, 2009); T. Räsänen and T. Syrjämaa (eds.), *Shared Lives of Humans and Animals: Animal Agency in the Global North* (New York: Routledge, 2017).
[116] Swart, *Riding High: Horses, Humans and History in South Africa*, 202; J. Hribal, 'Animals, Agency, and Class: Writing the History of Animals from Below', *Human Ecology Review* 14, 1 (2007), 101–12; Glover, 'A Cattle-Centred History of Southern Africa?', 35.
[117] Hribal, 'Animals, Agency, and Class', 102; Specht, 'Animal History after Its Triumph', 232.
[118] DeGrazia, 'Sentience and Consciousness', 21–28.

definitional caveat. They do not offer compelling grounds for denying that animals possess their own species-specific agency. They fail – to borrow phraseology from Vinciane Despret – to take an interest in animals on their 'own terms'.[119] In respect of William Sewell's view that animals lack consciousness, intentionality, and judgement,[120] we have seen that the premise that animals lack consciousness is empirically false. Further, we can deny that animals lack intentionality and judgement, by affirming that a) animals lack *human* intentionality and judgement but still b) possess *species-specific* intentionality and judgement.

When we speak of a concept like animal agency, we must bear in mind that we may be seeking to use a single concept to signify the at least 1.5 million named species of animals.[121] Upper estimates suggest the number of animal species may be as high as 7.7 million.[122] If we assumed that the lower number of 1.5 million animal species is correct, and that each species' name comprised one word, and that a book's length is 80 000 words, it would take 18.75 books to name each species of animal.

Faced with such extreme conceptual broadness, the proposition that we define the features of agency based on the features of *one* species, namely humans, and then use those features to potentially deny agency to over a million other species appears wrongheaded. It appears wrongheaded because it forecloses explorations of how millions of other species might possess and express agency, and elides the empirical fact of many animal species' minds. Features such as human rationality, human intentionality, human free will, human calculation, human language, human-species-membership and human self-reflexivity illegitimately claim agency as human-exclusive by definition.

Philosopher Martha Nussbaum defends a *species-specific* conception of animal flourishing.[123] Drawing on an Aristotelian tradition of *eudaimonia* – i.e., flourishing, or living excellently, or the good life – Martha Nussbaum defends the view that each animal pursues and seeks to

[119] V. Despret, translated by B. Buchanan, *What Would Animals Say If We Asked the Right Questions* (Minneapolis: University of Minnesota Press, 2016), 92.
[120] See Pearson, 'History and Animal Agencies', 247.
[121] R. May, 'How Many Species Are There on Earth?', *Science* 241, 4872 (1988), 1447.
[122] C. Mora *et al*., 'How Many Species Are There on Earth and in the Ocean?', *PLOS Biology* 9, 8 (2011), 2.
[123] Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, 94, 326, 327, 337, 351, 356, 60, 365, 382, 383, 392.

pursue their good. Under suitable enabling conditions, animals, like humans, pursue their own flourishing, they strive in their species-characteristic ways towards *eudaimonia*. This coheres well with observations of animals – each striving to live excellently, to flourish, in their own species-characteristic ways. A crow pursues her good by building a nest, in the same way that a cow pursues her good by grooming her calf: very different activities but both eudaimonic.

Interestingly, a species-specific conception of flourishing implies a species-specific conception of agency, in that agency would typically have to be connected to the characteristics and capabilities of the animals within a species. Drawing on the work of philosopher Hans-Johan Glock, and combining it with Martha Nussbaum's conception of species-specific flourishing, we can define species-specific animal agency as requiring the following features.

Features of species-specific animal agency reasonably include: a) possessing sentience, i.e., having *felt* experiences of the world, positive or negative affect or feelings, b) having perceptions and hence beliefs about their environment, i.e., cognitive states, c) having conation, i.e., intention or desire, d) acting subjectively in response to beliefs, and e) striving towards a species-characteristic good (*eudaimonia*).[124] Agency in this formulation is thus more than just sentience or the possession of a mind but is combined with a pursuance of flourishing.[125] Agency has a mind aspect and a eudaimonic aspect.

Feature a) is sufficient and necessary for agency, features a) to d) are necessary for agency, and feature e) is necessary but not sufficient for agency. Features b) to d) are really sub-or-implied features of the primary overarching feature, namely a) sentience.[126] To be sentient is to have feelings, perceptions and beliefs, to have intention, and typically to be able to act subjectively in response to beliefs. Plants might be said to strive towards their species good – by growing towards sunlight, for instance – but plants are insentient, do not possess features a) to d), and so do not possess agency in this view.

[124] H-J. Glock, 'Agency, Intelligence and Reasons in Animals', *Philosophy* 94, 4 (2019), 1, 4–7, 20, 23–24.
[125] Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, 94.
[126] For a distinction between consciousness and sentience, see DeGrazia, 'Sentience and Consciousness', 17–18.

A species-specific conception of agency can thus be defined as that which is possessed by a being of a particular species who possesses sentience, has perceptions and beliefs, has desires and intentions on the basis of the perception-derived beliefs, and who enacts their agency in response to those beliefs, towards the goal of their species-specific flourishing.[127] Agency thus goes beyond mere possession of sentience, but includes acting in ways that are based on ones' species-specific capacities, and includes the activities one undertakes in pursuance of one's flourishing. Agency is a combination of a set of capacities and enactments. An animal in a cage has the capacities for agency but is unable to enact her agency. The structure restricts her agency. To be an agent is to have sentience and strive in a species-characteristic way towards a species-characteristic good. Mammals, birds, fish, cephalopods, reptiles, and many insects qualify for this mind-based, species-specific form of agency.[128] When I use the term animal agency from here on, I refer to this species-specific formulation of agency.

This conception of animal agency has six merits. First, it avoids diluting the concept of agency to such an extent that agency lacks meaning, in the way that ANT has ascribed agency to *everything*. Second, by including a species-specific sensitivity to biological discrepancies, and connecting these to core general features of agency such as sentience and striving towards species-characteristic goods, this definition is not human-exclusive and includes forms of non-linguistic agency that intellectually disabled persons and children, for example, possess.[129] Children's agency, once hardly considered, in the same way that colonised humans' agency was once not recognised or women's agency was not recognised, is now recognised in

[127] Glock, 'Agency, Intelligence and Reasons in Animals', 7; Nussbaum, *Frontiers of Justice: Disability, Nationality, Species Membership*, 392.
[128] DeGrazia, 'Sentience and Consciousness'; T. Birkhead, *Bird Sense: What It's Like to Be a Bird* (London: Bloomsbury Publishing, 2012); C. Brown, 'Fish Pain: An Inconvenient Truth', *Animal Sentience: An Interdisciplinary Journal on Animal Feeling* 1, 3 (2016), 1–5; A. van Huis, 'Welfare of Farmed Insects', *Journal of Insects as Food and Feed* 5, 3 (2019), 159–62; J. Lockwood, 'The Moral Standing of Insects and the Ethics of Extinction', *Florida Entomologist* 70, 1 (1987), 70–89.
[129] There is also the option to make this theory more granular and specific to the different capacities of individuals within a species. A cow with severe arthritis would have different strivings and goods than a cow without arthritis, for example – and so the conditions for enabling agency would be different, also.

provisions of recent United Nations conventions.[130] Historians have also begun to explore children's agency.[131]

Third, this conception of agency is theoretically and empirically compatible with social history-inspired conceptions of animal agency where resistance is an expression of agency. In pursuing their good, animals may resist the human order, for example by downing tools or by disobedience, which plausibly counts as species-specific expressions of agency and resistance. Fourth, unlike ANT this conception of agency links agency to a mind, rather than to an item in a highly dispersed causal network chain/assortment, such as sand, and is thus principally about subjects and their navigation of structures and processes. This connects to Joshua Specht's concern that a preoccupation with agency draws attention away from processes and structure. Plausibly, a preoccupation with animal agency can investigate processes and structures in the most interesting and important way – namely in terms of how they impact and are experienced by sentient beings.

Fifth, this species-specific conception of agency can interpret animals' behaviours in terms of exercising agency in pursuance of their good. Oxen labourers who run away from their masters during wagon journeys, for example, express their agency by pursuing their good, namely their not pulling wagons for their masters. Finally, sixth, this conception of agency is compatible with views that deny that any beings, human or otherwise, can act with free will or autonomy, where free will and autonomy are synonymous with agency. It is compatible with free will scepticism. So, whether the being is metaphysically free to pursue their good, has agency, in the sense of having free will-grade autonomy, has no bearing on whether that animal acts in a species-characteristic way in pursuing their good, namely whether that being has species-specific agency. Hard determinism can be true, all beings can lack metaphysical free will, but that does not mean that the beings do not have agency. Because even if one is metaphysically determined one can still be sentient and strive towards flourishing. Lastly, this conception of agency has normative content, in that fair and good treatment of animals

[130] S. Donaldson, and W. Kymlicka, 'Animals in Political Theory', in L. Kalof (ed.), *The Oxford Handbook of Animal Studies* (New York: Oxford University Press, 2017), 52.
[131] J. McDonald, '"We Do Not Know Who Painted Our Pictures": Child Transfers and Cultural Genocide in the Destruction of Cape San Societies along the Cape Colony's North-Eastern Frontier, c.1770–1830', *Journal of Genocide Research* 18, 4 (2016), 519–38.

would consist in recognising their agency and enabling them to enact their agency, i.e., enable the conditions for them to pursue their flourishing.

To be explicit, this is not a conception of agency where the subject is a distinctly free acting, autonomous agent, driven by rational inference, and powerfully shaping the world with their individual agency.[132] Thus, this conception of agency is compatible with Timothy Mitchell's common sense finding that humans are never wholly in control. If there is greater clarity on the concept of animal agency, positions in the debate can become clarified. With the historiography behind us, and having clarified this thesis' conception of animal agency, I now turn to the project's methodology.

Methodology

From the above historiography, various methodological implications for historians emerge. Importantly, histories that include or incorporate an animal perspective are rare but possible. Next, such histories compel historians to work across disciplines. Brett Walker's conceptions and discussions of wolves as subjects and co-participants are compelling because he draws on insights from psychology, neurology, ecology, and biology for example. His wolf-perspective is impossible if it is not interdisciplinary. As Éric Bartay put it, to 'build an animal history, history needs the help of other sciences.'[133] Further, when thinking about history from an animal or species' perspective, periodisation must relate to the animals' view in the same way that periodisation in orthodox (human) histories relates to humans. Cattle periodisation does not necessarily equal human periodisation.

There are six core aspects to this thesis' methodology. One, there is an attempt to situate cattle at the centre of analysis. Two, cattle are presented as experiential subjects. Three, agency is conceptualised as sentient, conative striving towards a species-specific good. Four, there is a sustained effort to explore cattle's experiences of impacts of colonialism. Five, the geographical lens is regional. Six, cattle' experiences are approached in an interdisciplinary

[132] Compare this to concerns raised by Swart, '"The World the Horses Made"', 251, and Skabelund, 'Animals and Imperialism', 803.
[133] Baratay, 'Building an Animal History', 5.

way, via reading archival and historical materials in light of scientific insights into cattle's subjective capacities.

Cattle often feature in southern African archival and historical material in indirect and oblique ways, but they are mentioned often. In censuses from the late nineteenth century cattle numbers were recorded. During the rinderpest epidemic in the late nineteenth century, the Cape Colony produced reports, debated the concerns in parliament, local officials corresponded on the effects of rinderpest in their region, and the Boer republics, British colonies and protectorates, and the British South Africa Company administration in the region met to devise response strategies.[134] Cattle also featured in legislation governing such things as branding and registration, or reports on vaccinations, export and imports, and veterinary protocols.[135] Agricultural reports in the twentieth century recorded cattle numbers, they indicated diseases that afflicted cattle and the state's responses to these. How many cattle, or kilograms of cattle flesh, were imported or exported were also recorded. Also, state projects, such as 'livestock improvement schemes' and breeding programmes were keenly preoccupied with cattle.[136] Certainly, cattle are mostly represented in the archives as abstractions, numbers, or instrumentalised economic units. These representations are read 'against the grain', they are not read in the way the colonial records intended them to be read.[137] These representations of cattle are read with an eye to centring cattle in an historical analysis. Faced with the challenge of cattle's experiences being excluded in archival representations, I conducted fieldwork among cattle, to try to learn about them and their ways of being, so that I could better interpret historical sources.

My commitment to wanting to understand the subjective aspect of cattle runs deep. For this thesis, I undertook fieldwork with a free-roaming herd of 17 uncommercialised Nguni cattle, on a private nature reserve in Matjiesfontein, in the Karoo, South Africa. In the spring of 2019, I spent 30 consecutive days following this matrilineal herd, at all different times of the day and night. Often the days were very hot; frequently exceeding 32 degrees Celsius. There were

[134] See Chapter Three.
[135] See Chapter Three.
[136] See Chapter Five.
[137] For an example of the against the grain approach see D. Lewis, 'Against the Grain: Black Women and Sexuality', *Agenda: Empowering Women for Gender Equality* 63, 2 (2005), 11-24.

only three water points, each about seven kilometres apart, meaning that the herd's grazing operations were always mediated by their proximity to water. During the days they mostly rested, and then walked and grazed at night, when it was cooler. It was the sixth year of drought in the area, and the herd had to walk many kilometres to find enough plants to eat. One experienced leader mostly led these missions away from water sources and towards desired plants. I documented them eating at least 17 different types of plants. I took over a thousand photographs of them, made dozens of voice notes to record my observations, and captured many hours of video footage of them. I watched juveniles being socialised, I watched social relations being maintained via grooming, grazing, sleeping, and lying together. I saw and photographed calves being acculturated into the hierarchies with nudges and horn bumps. One night I followed the herd through the night on a 14-kilometre walk to meet a newborn calf. That night I slept among the cows in their protective circular formation, myself and the calves in the middle, the adult cows facing outwards and forming the circle. Their smell was comforting to me in the darkness. In darkness I stayed close to them as we walked, using hearing and smell.

My perception of cattle changed profoundly after this month. I became convinced that cattle have culture which they pass on to younger generations. I came to learn that they are thoroughly social beings with many rich modes of communication and strong relationships. I learned that cattle are conflict avoidant. To navigate the harsh Karoo landscape as a herd, in scorching heat with limited water, requires strong social cohesion and keen intelligence. Life for them is difficult, even though they are not commercialised in any way. The fieldwork component of my research has informed my understanding of cattle's lives, culture, and behaviour. Because I had spent time observing and being among them, my fieldwork helped me to interpret historical sources about cattle, although it is not strictly part of the thesis' methodology.

Some historical material, such as the Society for the Prevention of Cruelty to Animals' (SPCA's) investigations into slaughterhouses, or travellers' accounts of oxen's wagon labour, provide notably rich descriptions of what cattle endured historically.[138] As Éric Baratay argues,

[138] See Chapter Two and Chapter Four, for example.

although most historical sources about European peasants were written 'by people with the social prestige of the ruling class… this has not kept historians from using them to write about rural history'.[139] He argues that, regarding animal history, the 'difficulty is obviously greater but not radically different.'[140]

So archival material empirically informs the historical narratives, but mostly does not give cattle's perspectives. It does not itself give direct insight into how cattle experienced colonialism. However, by studying animal disease epidemics, colonial laws and policies, veterinary projects, industrial and transport infrastructure, and breeding regimes, all of which shaped the experiences of cattle, and coupling this with an interdisciplinary understanding of cattle as experiential subjects, plausible inferences about shifts in cattle's experiences can be drawn.

Archival material does not generally give the perspectives of cattle directly. There are at least two senses of the word *perspective*. The first is the literal sense of perspective, which refers to the taste and smell aspects of experience, the visual and auditory planes, the pleasure and pain valences, the interior emotional world. To write from cattle's perspective, in this sense, would be to inhabit the emotional and sensory faculties of cattle. To write as if one were a cow or a bull, say.

In terms of knowing what it's like to be an animal, philosopher Thomas Nagel in a paper entitled 'What is it Like to be a Bat?' concluded that we cannot say that we know what it is like to be a bat, we can only say that we know what it is like for *us* to be a bat, *not* what it is like for *a bat to be a bat*.[141] Likewise, to be sure, we cannot know *entirely* what it is like for cattle to be cattle.[142] But no human can *fully* grasp the experiences of another human, never mind the experiences of a vastly different human, from a different society, class, gender, geography, and historical era. In thinking of animals' experiences, we should avoid a species solipsism, which denies that we can meaningfully comprehend the experiences of other

[139] Baratay, 'Building an Animal History', 6.
[140] *Ibid*.
[141] T. Nagel, 'What Is It Like to Be a Bat?', *The Philosophical Review* 83, 4 (1974), 439.
[142] E. Fudge, 'What Was It Like to Be a Cow? History and Animal Studies', in L. Kalof (ed.), *The Oxford Handbook of Animal Studies* (Oxford: Oxford University Press, 2017), 266.

species. In short, while we cannot perfectly access the experiences of others, we can still do the best we can with the resources we have.

Various serious attempts have been made to understand animals' experiences. Ornithologist Tim Birkhead in *Bird Sense: What it's like to be a bird* (2012) investigates bird experiences by drawing on ornithological research and using each chapter to approach an aspect of bird experience: sight, hearing, touch, taste, smell, emotions.[143] Similarly, psychologists, psychiatrists, psychoanalysts and neurologists have investigated fish, elephants, chimpanzees, parrots, and pigs' experiences, for example.[144] A recent survey of emotional, cognitive and behavioural research on cattle combines the available knowledge from animal scientists, animal behavioural scientists, developmental psychology, veterinary science, dairy science, and physiology, for example, to give a sense of cattle's 'cow psychology'.[145]

Perhaps the most innovative recent efforts to approach animals' perspectives via fieldwork is Charles Foster's *Being a Beast* (2016).[146] Charles Foster divides the book into five parts, or 'five universes', each corresponding to an animal species: badgers, otters, foxes, red deer, and swifts. To approach the perspectives of badgers Charles Foster, for example, spent about six weeks underground and ate worms.[147] By inserting himself – bodily, sensorily, and also imaginatively – into different animals' lived contexts, he endeavoured to approximate some of their perspectives, which marks the book as a major contribution in the drive to acknowledge and value animals' characteristic experiences, and move beyond anthropocentrism.

To approximate a cattle perspective in the literal sense, then, is to be cognisant of their capabilities and characteristics by drawing on disciplines like animal science, physiology, neuroscience, veterinary science, zoology, animal behaviourism, and animal welfare science, and to make scientifically informed inferences about cattle experiences of certain recorded

[143] Birkhead, *Bird Sense*.
[144] Balcombe, *What a Fish Knows*; Bradshaw, Capaldo, and Grow, 'Building an Inner Sanctuary'; Bradshaw, *Elephants on the Edge*.
[145] Marino and Allen, 'The Psychology of Cows.'
[146] C. Foster, *Being a Beast* (Suffolk: Profile Books, 2016).
[147] *Ibid*, xv, 23.

historical events and shifts. This move coheres with methodological inferences drawn by numerous animal historians and scholars.[148]

In terms of the other sense of cattle perspective, the non-literal sense, what is meant is that cattle are placed at the centre of analysis, cattle are investigated historically for their own sake. Cattle are used as an organising lens. As this thesis will show, when the focus is shifted to cattle, and colonialism is analysed, different themes and insights emerge. For example, disease epidemics like bovine pleuropneumonia and rinderpest are seen as not only afflicting people and deepening colonialism for people, but are viewed as profoundly affecting cattle societies and cattle history, also.[149] Likewise, technological advances like refrigerated shipping, rail carts and storage facilities reconfigured the lives of cattle dramatically.[150] For cattle, the South African War (1899-1902) and the gold and diamond mining boom in South Africa saw huge sums of capital injected into animal flesh industries and spurred forward processes like centralised, industrial slaughterhouses.[151] These changes implied real experiential shifts for cattle. This methodological approach allows one to see that colonialism is not only a process that affects humans, but also affects other sentient beings.

In a way, this methodological approach, namely placing cattle at the centre of analysis, is like approaches that focus on a commodity such as cotton to understand empires and global trade.[152] Cattle as a conceptual category are used as a lens to understand colonialism, but *how* cattle experienced colonialism is what makes this history different from a history of cotton, for example. So, while cattle are used as a lens they are not seen as objects, in the way that a cotton history of empire correctly sees cotton as an object.

This historical investigation looks at major impacts of colonialism on cattle in the late nineteenth and twentieth centuries from a regional rather than a national or local perspective. Its geographical scope includes what is present-day Botswana, Eswatini, South

[148] Domańska, 'Animal History', 277; Rees, 'Animal Agents?', 4–6; Baratay, 'Building an Animal History', 5.
[149] This approach differs from that of C. van Onselen, 'Reactions to Rinderpest in Southern Africa 1896-97', *The Journal of African History* 13, 3 (1972), 484. Also, see Chapter Three.
[150] See Chapter Four.
[151] See Chapter Four.
[152] S. Beckert, *Empire of Cotton* (London: Penguin Books, 2014).

Africa, Lesotho, Zimbabwe, and Namibia (see Images I.1 to I.3). There are three main reasons to use a regional rather than a national or local lens when studying cattle historically. Such a regional history, as Sven Beckert argues in respect of transnational histories generally, is one in which 'a whole range of connections that transcend politically bounded territories… connect various parts of the world to one another.'[153]

The first is that focusing on connections and similarities across a region brings local and national histories across state boundaries into conversation with each other and allows broader patterns to emerge. This approach links scholarship that has discrete national foci. It connects rather than isolates histories in the region. Second, except for Namibia, what is common to the countries included in this research – namely Zimbabwe, Botswana, Eswatini, Lesotho, and South Africa – is that all were colonised by the British during the nineteenth or early twentieth centuries.[154] Case studies of major events connected to colonialism and cattle in the region can show similarities, variations or discontinuities for the animals under colonial rule. Themes like wagon labour, disease epidemics, industrial slaughter, and breeding regimes intersect the region in ways that make it preferable to consider cattle regionally. Like ideas, diseases, and technologies do not respect human political borders.[155] Third, before colonialism in southern Africa, cattle and the human communities with whom they lived did not have their movement restricted by state borders. Many southern Africans were cattle keepers in some respect. This is the core similarity across the region: cattle were utterly central to many southern African societies. Fourth, cattle were traded and moved across borders via cattle trading networks in southern Africa for the entire period this study examines.

How might a cattle-centred history be periodised? In 2013 the world's first animal-centred museum exhibition, *The Museum of the History of Cattle*, exhibited in Helsinki. After living on earth for ten millennia, serving their human masters in myriad ways, cattle finally had their

[153] C. A Bayly *et al*., 'AHR Conversation: On Transnational History', *American Historical Review* 111, 5 (2006), 1446.
[154] The Orange Free State and the Transvaal Republic were initially controlled by the Afrikaners in present-day South Africa, although these areas were taken by the British after the South African War. What is today Namibia was given to the Germans in 1884 at the Berlin Conference and in 1920 was taken over by South Africa.
[155] T. Ballantyne, 'Mobility, Empire, Colonisation', *History Australia* 11, 2 (2014), 26, 36.

own museum. The researchers and creators of the museum, visual artist Terike Haapoja and novelist and playwright Laura Gustafsson marketed the exhibition on its website in the following terms:

> For thousands of years history has been written from the perspective of a small minority, humans. Still, the world has always been shared by numerous species. For the first time in history a non-human form of life will have their own museum, an institution that makes their experience of this shared reality visible.[156]

The creators were thus faced with the same challenge: how to offer a periodisation that is cattle-centred? Laura Gustafsson and Terike Haapoja published a cattle history to accompany the museum exhibition, *History According to Cattle* (2015).[157] Written from a first-person cattle perspective, and, so to speak, in cattle's narrative voice, the short cattle history is likely the sole history written from cattle's literal perspective. A plaque in the museum confronts the striking dilemma of imagining and then casting the history of cattle in human language.

> The language used in the Museum of the History of Cattle is borrowed from humans, and is the same as that in which they write their own history. The cattle tongue is not a written language. In cattle culture, the tongue is a means of touching others.[158]

Cattle cannot be expected to literally write their histories in human language. But that does not imply that cattle do not experience and shape history. So, getting to the crux of how a cattle history can be written by humans in human language, the authors/cattle begin their history powerfully thus:

> In the beginning there is a void. A void between us and history, between these words and our muted existence. How to cross this void? When language is by definition something we don't possess? You think that because of your writing you are the author of the world, but you're wrong. You were just an accident like the rest of us, floating in the sea of time…

[156] L. Gustafsson and T. Haapoja, 'The Museum of the History of Cattle', *Gustafsson&Haapoja*, http://www.gustafssonhaapoja.org/museum-of-the-history-of-cattle/, accessed 27 April 2021.
[157] Gustafsson and Haapoja, 'History According to Cattle.'
[158] *Ibid*, 11.

> But here I am, with my horns and tail and compartmented stomachs and a line of ancestors queuing and pushing behind me as if entering the spring field. Why? When history itself has rejected us and rendered us invisible, language as its weapon? The answer is simple: because we were there. We saw it all. But to break my silence, or what you take as silence, I must enter your language and domesticate you, like the cow whisperer tames a wild bull by talking to him with words he knows. So I borrow your words and carve myself into them, make a hole through them the shape of a cow. You might not see me, but you'll see my absence. This is where my story begins.[159]

With the necessity of using human language and human authors to write a history according to cattle, as well as the void between cattle and history, an unavoidable absence, duly acknowledged, the authors/the cattle proceed to narrate a history of cattle according to three historical periods. These are The Time Before History, The Historical Time, and The Ahistorical Time. The Time Before History refers to the period when cattle's ancestors, the Aurochs, emerged some two million years ago until the domestication of cattle by humans ten thousand years ago. In this era time is cyclical, Laura Gustafsson and Terike Haapoja write:

> Unlike human culture, cattle culture is not a linearly perceived historical continuum. For cattle, time is cyclic. Neither the past nor the future are of great importance; existing is what matters to bovines. It has been thus ever since the first ruminant trod the Earth. From one millennium to the next, unchanging rituals helped individuals to recognize their roles in society, and offered security amid the exigencies of life. The cultural stories lived on in the bodies of their narrators, in quiet grazing. They changed little by little, or if need be, very quickly, since cattle are adaptable. The greenest pastures, techniques of repose, respect for the value system, caring for calves, and mating conventions are learned through watching, listening, and by following intuition.[160]

Cattle, or beings that existed in between aurochs and the cattle domesticated during the agricultural revolution, transferred their cattle culture from generation to generation, the authors reasonably argue. The second period, The Historical Period, occurs from the agricultural revolution, when cattle revolutionised human cultures, until humans began industrialised farming of cattle during the industrial revolution. During the Historical Period, bovine and human cultures became deeply entwined.

[159] *Ibid*, 2.
[160] *Ibid*, 18.

> At the beginning of the Holocene, more than 10 000 years ago, the great Auroch starts to live side by side with the ape, gradually forgetting its traditional customs and learning a new way of life. Why this anomaly in history, this exchange, takes place, we don't know. We have only guesses and interpretations, unreliable traces of evidence. What we do know is that we, all of the 1.3 billion of us [cattle] living today, are the successors of approximately 80 individuals living with the Mesopotamian common ape 8000 years ago. From that moment on our destinies have been intertwined. The great Auroch had become cattle, and the ape the human as we know it today.[161]

The authors suggest a fundamental shift in cattle history from the industrial revolution.

> The Ahistorical Time has no linearity, nor cyclicity. Inside the factory the passing on of heritage became impossible. Calves were taken from us immediately when they were born, and family lines were scattered out of our sight. Doing was reduced to so little that all that was left of our habits died away. We did not learn from our mothers but from the machine that told our bodies how to stand and how to eat. Stuck in the industrial process we would live in collective isolation, cut off from all relations that could anchor us to time, history, culture. For how could we have culture, if culture was the transforming of things into objects? How could we have history, if history was the weaving together of times from the present moment into the past with a chain of words? We did not even have time – the only time we had was clock-time, ticking away in unison, counting. All we had was destiny, as unchangeable as the rotation of the sun in the sky, and even that we did not possess before it took us. If we were to see outside the factory, we would have seen the humans digging and carving, moulding, melting, cutting, jointing, burning and growing everything that passed their way. Like the earthworm that eats its way through the soil the humans worked through the world, processing everything into products of their culture. But what they could not see was that they were followed by eyes, eyes everywhere.[162]

After industrialised animal farming began in the late nineteenth century, intergenerational cultural transference among cattle in such institutions became impossible: the family unit, the mother-calf relationship, kinship, relationships, and social bonding became structurally excluded in the industrial animal regimes. In this way, from within the factories and feedlots and breeding stations, cattle did not and do not see time as cyclical or linear but more as a constantly interrupted and restarting present, the authors argue.

[161] *Ibid*, 2.
[162] *Ibid*, 3.

The Museum of Cattle History itself focuses on the Ahistorical Time, the period after the industrial revolution, the last 150 odd years. This period, they suggest, is the period in which cattle have experienced the most dramatic shifts. Laurie Carlson focuses her *Cattle: an Informal Social History* (2001) on the period between domestication and post-industrialisation, apportioning half the book to before and half to after industrialisation.[163] Erica Fudge's *Quick Cattle and Dying Wishes: People and Their Animals in Early Modern England* (2018) has a temporal range based on the sources informing the study, namely the wills of cattle owners in early seventeenth century England.[164]

Owing to its interest in colonialism in southern Africa, the thesis is empirically focused on the period between the mid-seventeenth century and the late twentieth century. The temporal arrangement thus spans from The Historical Period (after the agricultural but before the industrial revolution) into the Ahistorical time, since cattle in southern Africa entered industrial slaughterhouses in the early twentieth century. For some rural cattle communities (herds), namely those in relationships with rural human southern Africans, the mid-seventeenth until the late twentieth century does not comprise the period of The Ahistorical Time, because such cattle continue to have kin and mother-calf relationships, roam for example the Lesotho mountains, or the beaches of the Transkei in sunlight and oceanic air, and can transfer their bovine culture, their rearing and other cattle values, down the ancestral line, mother to calf, bovine peer to bovine peer.

Since cattle are domesticated animals, many shifts in cattle history are connected to shifts in human history. Colonialism in the southern African region generally, the arrival of wagon technology, the South African War, the emergence of refrigerated train carts, the formation of the Union of South Africa, forced artificial insemination technologies, and so forth, were all significant and transformative shifts for humans *and* cattle. Most of the events and shifts analysed in this thesis impacted both humans and cattle and thus its periodisation of cattle history is often similar to a periodisation of human history. Temporally, this thesis is more concerned with beginnings of colonial impacts, when they started rather than exploring when

[163] L. Carlson, *Cattle: An Informal Social History* (Chicago: Ivan R Dee, 2001).
[164] E. Fudge, *Quick Cattle and Dying Wishes: People and Their Animals in Early Modern England* (New York: Cornell University Press, 2018).

they ended. This is so because, with the exception of wagon labour, pedestrian observations suggest that fences, slaughterhouses, and cattle markets still profoundly impact the lives and experiences of southern African cattle. These colonial impacts are still felt and experienced by cattle. Thus, periodisation is concerned with when colonial processes that impacted cattle began and how these processes developed, rather than when these processes began, and ended.

Notes on language and terminology

The term cows is a colloquialism for cattle. But the term cows technically means female adult cattle. Thus, I use the term cattle to refer to those beings who are colloquially called cows. The source of the term cattle is from the Old French chattel meaning 'property', which derived from the medieval Latin *capitale*, from the Latin *capitalis* meaning 'of the head', in turn from the word *caput* meaning 'head', and from which the word capital too was derived.[165] Initially, the term cattle signified an alternative form of chattel property that could additionally specifically refer to cattle or other 'livestock'. From the mid-sixteenth century, the word cattle came to specifically signify cattle as distinct from the broader category chattel.[166] In the eleventh century, CE Proto-Nguni speakers used the term '*-fúyi', meaning 'to accumulate, be wealthy, to breed [cattle]', which indicates that southern Africans too saw cattle as a form of wealth, and breeding cattle as a path to prosperity.[167]

In *A Dictionary of the English Language* (1828) the modern spelling of cattle was used, and it defined cattle as 'beasts of pasture; not wild nor domestic'.[168] Earlier iterations of dictionaries, such as *Glossographia Anglicana Nova* (1707), deployed the spelling cattel but cattle did not have their own entry as a standalone term.[169] Elisha Cole's *An English Dictionary* (1676) defined pecunia as 'money, and (anciently) Cattel or other substance' but did not include an

[165] Cresswell, *Oxford Dictionary of Word Origins*, 81.
[166] *Ibid*.
[167] R. Jimenez, 'Rites of Reproduction: Gender, Generation and Political Economic Transformation among Nguni-Speakers of Southern Africa, 8th - 19th Century CE' (PhD Dissertation, Northwestern University, Illinois, 2017), 116.
[168] S. Johnson and J. Walker, *A Dictionary of the English Language* (London: George Cowie and Co, 1828), 12.
[169] I. Newton *et al*., *Glossographia Anglicana Nova: Or, a Dictionary* (London: Printed for Dan Brown *et al*., 1707), np.

entry for cattle themselves.'[170] The word 'fee' comes from the Old English word 'feah', literally meaning cattle, while the Latin term for cattle is *pecus* or *pecu*, as in pecuniary or impecunious.[171] The Middle English term peculier (peculiar) came from the Latin *peculiaris* meaning 'privately owned' or 'special', which is a derivative of *peculium*, 'property', which itself derived from *pecu*, cattle.[172] The etymology and semantics of the word cattle suggests that English speakers are slanted towards seeing cattle as chattel property and wealth, hints at cattle's position in the English-speaking world historically, and indicates that cattle may have been one of the early forms of private property.

Various researchers have explored how language can represent animals in ways that erase animals' subjectivity and individuality, objectify them, obscure their suffering, normalise their purported inferiority, and institutionalise violence towards them.[173] In many ways, language has worked against an understanding of cattle's experiences and subjectivity. Consider terms like 'dairy cow' and 'veal calf'. Conceptually, these terms are shorthand for cows who are forced to produce and part with their milk for humans, 'dairy cows', and calves who are deprived of iron for human culinary pleasure, 'veal calf'. Violence, and the human purposes of the animal are built conceptually into the words.

This thesis' approach to selecting words to write about cattle draws on Critical Discourse Analysis (CDA). Teun van Dijk defines CDA as:

> discourse analytical research that primarily studies the way social-power abuse and inequality are enacted, reproduced, legitimated, and resisted by text and talk in the social and political context. With such dissident research, critical discourse analysts take an explicit position and thus want to understand, expose, and ultimately challenge social inequality.[174]

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[170] E. Coles, *An English Dictionary* (Menston: The Solar Press, 1971 [1676]), 228.
[171] Editors of Merriam Webster, ed., *Webster's Dictionary of Word Origins* (New York: Barnes and Noble Books, 2004), 174–75.
[172] *Ibid*, 351.
[173] J. Dunayer, *Animal Equality: Language and Liberation* (New York: Lantern, 2002); A. Stibbe, *Animals Erased: Discourse, Ecology, and Reconnection with the Natural World* (Middletown: Wesleyan University Press, 2012), 4, 23; L. Mitchell, *Reading the Animal Text in the Landscape of the Damned* (Grahamstown: NISC, 2019), 19–21, 81, 152, 156.
[174] T. van Dijk, 'Critical Discourse Analysis', in D. Tannen, H. Hamilton, and D. Schiffrin (eds.), *The Handbook of Discourse Analysis* (Malden: Wiley Blackwell, 2015), 446. This reference from Mitchell, *Reading the Animal Text in the Landscape of the Damned*, 22.

According to Teun van Dijk, CDA is more an attitude than a method.[175] It *informs* word choices in this thesis and is not a methodological approach. CDA examines word choices and poses questions about who has power, who has status, who has agency, who is silenced, whether the term is an obscuring euphemism, and what assumptions underpin the word selections.[176] For example, the phrase *behaved like an animal* implies that animals standardly behave badly or in ways unbecoming of humans, and assumes a rigid dichotomy between superior humans and inferior animals.[177] To call a human an animal is in many human cultures considered pejorative. The euphemistic adjective and noun *beef cattle* implies that the purpose of cattle is to be bred, reared, slaughtered, and then butchered into segments of flesh for humans to sell and put into their mouths. The cattle are stripped of agency, interests, power, and subjectivity; they are silenced, and visiting violence upon them is normalised.

In this thesis, to signal normative disapproval of terms such as 'livestock', 'beef', and 'hides', which mischaracterise animals by reducing them to insensate commodities, I present these terms in inverted commas. Instead of 'beef', I use the accurate and non-euphemised noun cattle flesh. Instead of 'milk', I add a possessive qualifier, as in cow's milk or calf's milk, to signal that the milk belongs to the calf or cow. Instead of saying artificial insemination, I say forced artificial insemination, because for animals the process is always forced and the former term elides the forced aspect of it.[178]Artificial insemination is regarded as a euphemism that obscures, sanitises, and even conceals what is for animals a ghastly procedure.

When quoting other authors who use the definitive article *that* or the indefinite article *which*, instead of the pronoun *who*, as in the calf that escaped or the calf which escaped, instead of the calf who escaped, the word *sic* is often placed in square brackets after the article. This is to signal normative instead of grammatically prescriptive disagreement with the quoted author's use of language because such language presents the animal as an object (by using that or which) as opposed to a subject (by using who).

[175] van Dijk, 'Critical Discourse Analysis', 466.
[176] Mitchell, *Reading the Animal Text in the Landscape of the Damned*, 22–24.
[177] *Ibid*, 27.
[178] See Chapter Five.

More generally, there is no non-problematic word for animals. Because humans are animals, the term animals as distinct from humans is technically a misnomer. 'With equal validity', writes Joan Dunayer, 'we could categorize all animals as giant squids and non-giant-squids'.[179] The term non-human animals defines animals negatively – in terms of who they are not – and also centres humans. Some have suggested the term *anymals* to refer to any animals who are not human.[180] Acknowledging that humans are animals, the term animals is used to mean animals who are not human. Apart from breeding- or production-specific terms such as heifer, calf, or ox, there is no singular noun for cattle. The term cattle is a *plurale tantum*. There is no grammatically correct way to say one cattle. Conceptually, cattle are always a collective, never an individual. Thus, plural/singular verb agreement conventions are at times flouted, in that sometimes the term cattle is used in the singular, as in each cattle has a felt experience of the world. My research questions and chapter summaries follow.

Research questions and overviews of chapters

This project is an investigation of colonialism in southern Africa that places cattle at the centre of analysis and focuses on the impacts of colonialism on cattle. The guiding research question is: What are some of the major impacts of colonialism on the lives and experiences of southern African cattle?

In answering this wider question, each substantive historical chapter focuses on a related sub-question. The thesis contains four substantive, empirical historical chapters – Chapter Two to Chapter Five. My reading of animal histories convinced me that a deep, serious interdisciplinary investigation of cattle's experiential capacities was required. Therefore, in Chapter One I build up a picture of cattle as richly sentient, social and experiential beings. In Chapter One I also sketch a history of cattle from domestication, and historically locate them in broad southern African social and economic contexts before the emergence of colonialism.

[179] Dunayer, *Animal Equality: Language and Liberation*, 13.
[180] L. Kemmerer, 'Verbal Activism: "Anymal"', *Society & Animals* 14, 1 (2006), 9–14; S Borkfelt, 'What's in a Name?—Consequences of Naming Non-Human Animals', *Animals* 1, 1 (2011), 120.

The project is arranged thematically and chronologically. As a first sustained history of southern African colonialism's impacts on cattle's experiences, the *types* of impacts investigated are not comprehensive. Instead, the project sought to investigate *some* major impacts of colonialism. These impacts were selected on the basis that they had significant effects on cattle's experiences and history, and that appropriate sources could be drawn upon to compellingly investigate these effects. The project comprises the following major themes: cattle as colonial wagon labourers (1653 to 1890s) disease epidemics (1854 to 1920s), the development of slaughterhouses (1652 to 1930s), and cattle breeding regimes (1900s to 1980s). These themes are explored regionally. The thesis's substantive empirical investigations begin with the arrival of the Dutch East India Company (VOC) in 1652.

Chapter One provides an introduction to cattle as subjects, and a brief, contextualising history of cattle before southern African colonialism. A history of cattle's experiences demands an interdisciplinary understanding of cattle as subjects. Thus, Chapter One opens by deploying an interdisciplinary approach to present cattle as sentient, experiential, social beings. It invokes diverse evidence to depict cattle as possessing the requisite physiology, neurochemicals, sensory faculties, and social structures to be experiential subjects. This connects to the project's conception of species-specific agency, which requires that an animal's species-characteristic agency is understood. Drawing on archaeology, zooarchaeology, geomorphology, and comparative historical linguistics, the chapter then historically locates cattle in southern Africa before colonialism, by sketching a history of cattle from domestication until they were a core part of southern African cattle-keeping societies in southern Africa in the mid-second millennium CE. Thereafter, we proceed to the core empirical, historical chapters. Chapter One thus sets up the empirical investigations which follow.

Chapter Two explores oxen's experiences as colonial wagon labourers and their transport contributions to the development of southern Africa. It poses two questions. How did wagon labour affect the experiences of cattle? And, what, if any, contribution to the development of southern Africa did oxen's wagon labour comprise? Chapter Two focuses on the period from 1653, when wagon labour began in southern Africa to the 1890s, when wagon labour was largely eroded by a combination of rinderpest and the development of railway infrastructure.

For over 200 years after the VOC arrived at the Cape of Good Hope, at the southern tip of Africa, oxen's forced wagon labour comprised the primary mode of colonial transport in southern Africa. This chapter offers a sustained investigation of oxen as wagon labourers from the VOC's arrival until the late nineteenth century. It provides a general regional history of oxen's compelled wagon transport, and a periodisation of oxen's wagon labour. It explores the impacts of wagon labour by presenting vignettes of different aspects of wagon labour in terms of how they affected oxen's experiences. It draws on numerous published accounts of scientific explorers, travellers, contemporary observers, and missionaries, and also contemporaneous documents and secondary literature.

Chapter Three explores Lungsickness, rinderpest, and East Coast fever. It investigates how diseases eroded cattle's transhumance relations with humans, enabled veterinary expansion, and transformed cattle into biomedical subjects. This chapter investigates how three major disease epidemics – Lungsickness, rinderpest, and East Coast fever – subjectively impacted cattle's experiences in southern Africa. Its guiding questions are, how were individual cattle impacted by Lungsickness, rinderpest and East Coast fever, and how were cattle as groups affected? It approaches the diseases by centring cattle and focusing on what the diseases meant for cattle. It describes the symptoms and disease courses. It investigates the responses of states, cattle-keepers, and farmers to the epidemics. The chapter traces the emergence of veterinary regimes in the region, since these were consequences of the diseases, and notes how veterinary regimes affected cattle history in the region. Significant aspects of colonial state expansions came to exert control over the lives and experiences of cattle in wake of the diseases. It shows how these diseases eroded cattle's transhumant relations with southern African cattle-keepers. The chapter begins with the emergence of Lungsickness in the Cape Colony in 1853. It closes by discussing the cattle dipping infrastructure in the region in the 1920s, which was implemented as a response measure to East Coast fever.

Chapter Four provides a history of slaughterhouse development in the Cape, and explores cattle's experiences of slaughterhouses. The question it focuses on is, how did industrial slaughter enterprises develop and affect the lives and experiences of cattle? It begins with the first VOC slaughterhouse in 1665 and closes in the 1930s when animal welfare laws related to slaughter were first implemented. Slaughterhouses were a major cattle-affecting

colonial institution. This chapter traces the development of slaughterhouses from the early VOC markets and butchering sites in the mid-seventeenth century until the proliferation of early twentieth century, centralised, industrial slaughterhouses in South Africa and their emergence in colonial Namibia, Botswana and Zimbabwe. The secondary literature on historical slaughterhouses in South and southern Africa is thin to almost non-existent. This explains why this chapter is largely focused on South Africa as a case study for slaughterhouse development, even though the spread of slaughterhouses in the region is touched upon, and some regional impacts of South Africa's cattle markets are noted. This chapter draws on diverse, myriad, and previously unused historical sources to produce a history of slaughterhouse developments in South Africa, with a particular focus on the Cape. The South African War, 1899-1902, and the animal flesh rations supplied to mineworkers on compounds in South African mines are isolated as drivers of the expansion of South Africa and the region's cattle flesh industries, which in turn enabled the development of industrialised slaughterhouses in the early twentieth century. Novel sources such as architectural designs of municipal slaughterhouses, coupled with SPCA and other slaughterhouse investigations, enable historical access into slaughterhouses in the early twentieth century.

Chapter Five investigates colonial cattle breeding and its impact on cattle in South Africa and Botswana. Its primary questions are, how did colonial breeding regimes impact cattle as a group in South Africa and Botswana? And, how did breeding processes affect the lives and experiences of cattle? The chapter also investigates, to a lesser degree, attempts at a colonial breeding regime in colonial Swaziland. It begins in the 1900s, when the nascent South African state started to become increasingly involved in cattle breeding, and closes in the 1980s, when cattle breeding in Botswana became modernised. The chapter investigates colonial cattle breeding regimes in South Africa, and colonial Swaziland and Botswana from the early twentieth century, as well as developments of modernised breeding regimes from the mid-twentieth century until the 1980s. The development of colonial and modern breeding regimes is placed in the global context of modernised state-backed breeding regimes, and in particular the developments of forced artificial insemination technologies. Whereas the previous three chapters investigate colonial impacts of cattle as forced wagon labourers, as biomedical subjects, and in slaughterhouses, this chapter explores cattle's experiences beyond labour, health, and ways of dying by investigating how certain cattle were permitted to live and

forced to reproduce. Although the chapter cursorily describes aspects of cattle breeding before the twentieth century, its main temporal focus is on the early twentieth century until the 1980s.

The thesis' Conclusion sums up each chapter's answers to each chapter's specific questions. It then connects these answers to the thesis' primary research question. In doing so it summarises the thesis' answer to the primary question this thesis endeavoured to respond to, namely: what were some of the major impacts of colonialism on the experiences of cattle? The conclusion notes the thesis' core contributions. The conclusion also indicates directions future research could take.

The thesis closes with an Epilogue, which argues that contemporary cattle industries are closely connected to multiple, global ecological and health threats, including antibiotic resistance, zoonotic threats, biodiversity loss, climate change, deforestation, and disproportionate land and water use, for example. The Epilogue argues that shifting attention to the natural world, to the animals with whom we share the planet, is timely and defensible.