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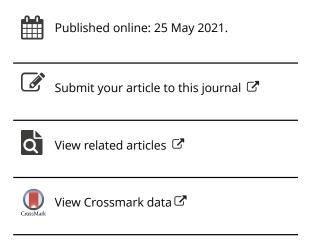
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A More-Than-Human History of Apartheid-Era Planning in Etosha-Kaokoveld, Namibia, c.1960–1970s

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ABSTRACT

Following the release and implementation of the 'Report of the Commission of Enquiry into South West Africa Affairs' (Odendaal Plan) in 1964, humans and non-humans in Etosha-Kaokoveld (northwest Namibia) undermined South African rule. Drawing on published, archival, government, and limited-circulation sources, this more-than-human history examines how responses among scientists, pastoralists, and wildlife revealed the technocratic state's incomplete assessment of human-non-human relationships in its efforts to spatially rearrange the landscape. In response to South African volkekunde 'science', former Etosha ecologist Ken Tinley presented an ecologically informed alternative to the Odendaal Plan. Herero pastoralists, led by Headman Kephas Muzuma, resisted new land designations by continuing to practice semi-nomadic pastoralism. Within Etosha, ungulates unprecedented numbers, exposing the non-human effects of apartheid technocratic planning. The legacies of South Africa's flawed approaches to governing humans and nonhumans persist. Drawing on Emily O'Gorman and Andrea Gaynor's argument for the importance of more-than-human histories, Latour's concept of the collective and call for developing perspectives relevant to the Anthropocene, and Scott's critique of the high modernist state, this article contributes to human-animal histories historiography of Namibia and the South African empire, and discusses the need for subaltern perspectives in the Anthropocene.

KEYWORDS

human-animal studies; subaltern; Anthropocene; more-than-human history; Odendaal; environmental history

Introduction

The Anthropocene provides historians with the opportunity to (re)examine the past for case studies in which the outcomes of human-environmental interactions are known. Through existing and innovative historical methods, we

may provide new lessons based on the historical record. Historians of South (ern) Africa are especially well-positioned to make such contributions. It has been more than three decades since postcolonial theorist Gayatri Chakravorty Spivak asked 'Can the subaltern speak?' Inasmuch as human-induced environmental transformations have both been caused by and generated environmental injustices, and that this legacy is particularly pressing in the global South, one possible answer to Spivak's question is, 'Not often enough!'² Examining the Anthropocene based on studies of the global South is more than just a 'rhetorical shock tactic'. By examining this new epoch of purported human dominance from spaces and perspectives previously consigned to western peripheries, largely invisible to much of the global elite, an increasingly diverse vision of the Anthropocene can be generated.

As an environmental historian and wildlife conservationist working within northwest Namibia, I examine the past to better understand what human and non-human factors lead to wildlife survival and death. The history of northwest Namibia, viewed from the temporal and epistemological (but not necessarily spatial) Edge of the Anthropocene, provides a vantage point for reflexively (re)figuring human-non-human interactions. Environmental historians Emily O'Gorman and Andrea Gaynor have recently codified 'more-than-human history' as a series of methodological and conceptual commitments for historians engaged in (re)interpreting the human-non-human past.⁴ Science studies scholars Bruno Latour and Donna Haraway,⁵ among others, have long signposted our awareness that dichotomies of nature/culture or nature/science relied upon, to paraphrase Latour, obscuring processes of purification and translation whereby humans and non-humans were thought to have been separated, but were revealed to be more interwoven and contingent than imagined. Latour has extended this assessment of the human-non-human collective⁶ to its implications for the Anthropocene.⁷

In this article I show that the South African government's attempts to govern the Etosha-Kaokoveld region of northwest Namibia during apartheid were

^{1.} D. Chakrabarty, 'The Climate of History: Four Theses', Critical Inquiry, 35, 2 (2009), 197-222.

G. Spivak, 'Can the Subaltern Speak?', in C. Nelson and L. Grossberg, eds, Marxism and the Interpretation of Culture (London: Macmillan, 1988), 271-313. Spivak's conclusion that the subaltern does not speak without perverting mediation is taken. The point here is that, moving beyond colonial production of voices, the Anthropocene reveals that subaltern perspectives are indispensable.

J. Ferguson, 'Theory from the Comaroffs, or, How to Know the World Up, Down, Backwards and For-3. wards', in A. Mbembe, ed., The Johannesburg Salon, Volume Five (The Johannesburg Workshop in Theory and Criticism, 2012), 14.

E. O'Gorman and A. Gaynor, 'More-Than-Human Histories', Environmental History, 25 (2020), 711-4.

B. Latour, We Have Never Been Modern (Cambridge: Harvard University Press, 1993); D. Haraway, 5. Simians, Cyborgs, and Women: The Reinvention of Nature (New York: Routledge, 1990).

Collective refers to the associations of humans and non-humans. While a division between nature and society renders invisible the political process by which the cosmos is collected in one liveable whole, the word "collective" makes this process central'. B. Latour, Pandora's Hope: Essays on the Reality of Science Studies (Cambridge: Cambridge University Press, 1999), 304.

^{7.} B. Latour, Facing Gaia: Eight Lectures on the New Climatic Regime (Cambridge: Polity, 2017).

confounded by an inability to sever the human from the non-human. Applying O'Gorman and Gaynor's recognition that 'the past and present [are] dynamically co-constituted by multiple organisms',8 this more-than-human history uncovers the human and non-human responses to apartheid within the Etosha-Kaokoveld collective. My argument is that in attempting to create what political scientist James Scott calls the legible state, 9 South African technocrats overlooked human-non-human relationships within Etosha-Kaokoveld. This led to the creation of conceptual, pastoral, and biophysical spaces in which humans and non-humans undermined South African rule and to lingering effects for humans and non-humans in the region. The South African apartheid-era state was 'high modernist' in its aspirations. If, as Latour has stated, the Anthropocene is the best alternative to modernisation, ¹¹ then this special issue is the perfect forum for assessing how human-non-human interactions - increasingly recognisable within the Anthropocene - reveal some of the shortcomings of the high modernist state.

Namibian history has been doubly marginalised. As part of the global South, it has also been largely overlooked within the historiography of the South African empire. Henrichsen and his colleagues have called this a 'de facto and conceptual neglect (one would almost call it denialism) on the part of South African historiography'. 12 Namibian historiography is still an emerging field but already shows a firm commitment to placing Namibian environments near the centre of historical scholarship. 13 However, the role of the South African government in these histories is rarely emphasised. Similarly, though non-humans are also incorporated, human-non-human relationships are rarely centred, though books by Giorgio Miescher and Michael Bollig do extensively treat human-livestock history. 14 Interested in the human and non-human effects of the South African empire, I examine the interrelated responses among ecologists, pastoralists, and wildlife to the South African government's efforts to

^{8.} O'Gorman and Gaynor, 'More-Than-Human Histories', 716.

J. Scott, Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed (New Haven: Yale University Press, 1998).

^{10.} Scott, Seeing Like a State.

B. Latour, 'Telling Friends from Foes in the Anthropocene', in C. Hamilton, F. Gemenne, and C. Bonne, eds, The Anthropocene and the Global Environmental Crisis: Rethinking Modernity in a New Epoch (Abingdon: Routledge, 2015), 145-155.

D. Henrichsen et al., 'Rethinking Empire in Southern Africa', Journal of Southern African Studies, 41, 3 12.

For example M. Bollig, Shaping the African Savannah: From Capitalist Frontier to Arid Eden in Namibia (Cambridge: Cambridge University Press, 2020); C. Botha, 'People and the Environment in Colonial Namibia', South African Historical Journal, 52, 1 (2005) 170-190; 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; L. Lenggenhager, Ruling Nature, Controlling People: Nature Conservation, Development and War in North-Eastern Namibia since the 1920s (Basel: Basler Afrika Bibliographien, 2018); G. Miescher, Namibia's Red Line: The History of a Veterinary and Settlement Border (New York: Palgrave Macmillan, 2012); L. Rizzo, Gender and Colonialism: A History of Kaoko in North-Western Namibia, 1870s-1950s (Basel: Basler Afrika Bibliographien, 2012).

^{14.} Miescher, Namibia's Red Line; Bollig, Shaping the African Savannah.

divide the Etosha-Kaokoveld landscape into the separately designated areas of Etosha Game Reserve (later National Park) and the Kaokoveld/Kaokoland 'ethnic homeland'. My emphasis on these subaltern actors in this hinterland of the South African empire embodies the call by Southern Theory¹⁵ scholars for citizens and policy makers to incorporate data and experiences from peripheral spaces. My approach to this as a more-than-human history means paying particular attention to the 'changing set of social, symbolic, ontological, and material relations'16 through which humans and non-humans were co-constituted.

I begin by reviewing South Africa's attempts to implement apartheid policies in Namibia. This primarily occurred via the recommendations of the "Report of the Commission of Enquiry into South West Africa Affairs", otherwise known as the Odendaal Plan.¹⁷ Resting upon a form of home-grown (white) South African social anthropology, Odendaal sought to divide Namibia into a series of ethnic homelands, primarily for the benefit of South African rule and the colony's white population. In Etosha-Kaokoveld, Odendaal sought to sever a previously unified landscape, historically shared by semi-nomadic pastoralists and wildlife. South African ecologists, most visibly Ken Tinley, protested the Odendaal recommendations for Etosha-Kaokoveld, primarily based on the unaccounted-for effects it would have on the region's wildlife. Tinley was unsuccessful. However, his failure reveals the manner in which state policy was implemented and the cultural and political valences of different sciences during the apartheid regime.

As the Odendaal policies were being implemented, semi-nomadic Herero pastoralists, long residing in northwest Namibia, used their livestock as vectors for resisting the creation of new state boundaries. Whereas the state sought to separate the Herero and their livestock from access to grazing lands in Etosha, it did not appreciate the relational ontology of Herero-livestock lives: for the Herero, human and livestock well-being were inseparable. The persistent conflicts over livestock mobility reveal historical human-non-human effects of government policies inappropriately tailored to ecological circumstances and culturally significant human-non-human interactions.

Finally, environmental outcomes following Etosha's enclosure indicate that wildlife were dynamic entities and active participants in the human-nonhuman collective. Historian Sandra Swart has shown that 'the apartheid state used animals as part of its arsenal of oppression'. 18 Here is one case in which,

^{15.} R. Connell, Southern Theory: The Global Dynamics of Knowledge in Social Science (Allen & Unwin, 2007); A. Mbembe, ed., The Johannesburg Salon, Volume Five (The Johannesburg Workshop in Theory and Criticism, 2012).

O'Gorman and Gaynor, 'More-Than-Human Histories', 717. 16.

Government of South Africa (RSA), Report of the Commission of Enquiry into South West Africa Affairs (Pretoria: Government Printer, 1964).

^{18.} S. Swart, 'Animals in African History', Oxford Research Encyclopedia of African History (Oxford University Press, 2019).



through their biophysical requirements, Etosha's ungulates made it known to the apartheid state that they too needed to be accounted for in attempts to make the state legible. During the 1960s and 1970s, ungulates in Etosha National Park undermined state wildlife conservation efforts by dying in unprecedented numbers. When government policies conflict with ecological requirements, animal deaths can reveal gaps in the state's vision. These different shortcomings in the South African government's ability to simplify, arrange, classify, and order the state 19 have been uncovered through a close analysis of texts and documents from a variety of published, archival, and limited-circulation sources.

Imperial science

By the early 1960s, Namibia²⁰ had been a socially, economically, and politically segregated space for more than 50 years. 21 Since South Africa took control of the German colony following World War I, favourable policies for white settlers, including land grants, generous loans, and the removal of Africans and mixed-race residents to 'native reserves', had entrenched a white-dominated economy. 22 Historians of the early colonial era have emphasised the importance of limiting the mobility of Namibia's residents and their livestock for 'South Africa's determined attempt to fix people in a new colonial landscape'. ²³ Specifically in northwest Namibia, Bollig has termed the limitations imposed on human and livestock an 'encapsulation', leading to an enforced isolation, dividing Kaokoveld and other northern 'native areas' from white settlement within the 'Police Zone' to the south.²⁴ Miescher has examined the centrality of this enforced isolation to Namibian history, emphasising the veterinary cordon which served as an 'internal border' separating northern and southern Namibia. 25 Miescher shows that Namibia functionally existed as two separately administered South African colonies along the so-called 'Red Line': a southern white-dominated space, where economic development was prioritised, and the northern hinterlands for economically impoverished Africans, where colonial

^{19.} Scott, Seeing Like a State.

Throughout the 75 years of South African colonialism, Namibia was officially known as South West Africa. In 1968 the United Nations began recognising the 'territory' as Namibia. Only at independence (1990) do official South African documents refer to the country as Namibia. Where documents refer to South West Africa, I have left the historical language intact.

^{21.} R. First, South West Africa (Baltimore: Penguin Books, 1963), 125.

B. Lau and P. Reiner, 100 Years of Agricultural Development in Colonial Namibia: A Historical Overview of Visions and Experiments (Windhoek: Namibia National Archives, 1993); Government of South West Africa, Report of the Land Settlement Commission (Windhoek, 1927); C. Botha, 'The Politics of Land Settlement in Namibia, 1890-1960', South African Historical Journal, 42, 1 (2000), 232-276.

^{23.} J. Silvester, M. Wallace, and P. Hayes, "Trees Never Meet": Mobility and Containment: An Overview, 1915-1946', in P. Hayes et al., ed., Namibia under South African Rule: Mobility and Containment, 1915-1946 (Oxford: James Currey, 1998), 3.

M. Bollig, 'The Colonial Encapsulation of the North-Western Namibian Pastoral Economy', Africa: 24. Journal of the International African Institute, 68, 4 (1998), 506-536.

^{25.} Miescher, Namibia's Red Line, 1.

rule was unevenly enforced and a 'bifurcated state', predicated on indirect rule through locally recognised 'tribal' leaders, was imposed. In this regard South African colonialism was not dissimilar to other African colonial experiences.²⁶

Appointed in 1962 by South African Prime Minister Hendrik Verwoerd, the Odendaal Commission was created to entrench Namibia's ethnic and landscape divisions. The Commission's purview was

to enquire thoroughly into further promoting the material and social welfare and the social progress of the inhabitants of South West Africa, and more particularly its non-White inhabitants[,] and to submit a report with recommendations on a comprehensive five-year plan for the accelerated development of the various non-White groups of South West Africa [...] and for the further development and building up of such Native Territories in South West Africa. 27

As a symbol of the government's commitment to developing Namibia, the Commission was also intended to deflect international criticism of South African rule. During the 1950s, member states of the United Nations (UN) raised concerns that the South African government was perpetuating racialised restrictions on employment, land settlement, and enforced separation within Namibia.²⁸ Beginning in 1961, South Africa faced charges at the International Court of Justice (ICJ) concerning the legality of its colonisation. The role of the Odendaal Commission as political symbol has been examined by historian Molly McCullers, who writes that, through Odendaal, 'South West Africa was intended to serve as a bridge between an Afrikaans national state and its desired hegemony in southern Africa as well as a place in which to showcase the benefits of apartheid development to an increasingly hostile international community.'29 The five members of the commission, and by extension their eventual recommendations, were meant by Verwoerd to be beyond reproach. All five commissioners were South African, loyalists of the ruling, conservative National Party, and likely members of the shadowy Broederbond. The commission included no South West Africans or non-whites.³⁰

Scott has examined attempts by high modernist governments to simplify, arrange, classify, and order societies and environments. He identifies four elements needed to create the 'legible' state. They include: a willingness to administratively order people and places; confidence in technical and scientific progress; an authoritarian state willing to exert resources to realise these goals;

^{26.} M. Mamdani, Citizen and Subject: Contemporary Africa and the Legacy of Late Colonialism (Princeton: Princeton University Press, 1996).

South Africa Government Gazette, 21/9/1962, from J. Wellington, South West Africa and Its Human 27. Issues (Oxford: Clarendon Press, 1967), 376.

United Nations (UN), Report of the Committee on South West Africa, Eleventh Session, Supplement 28. No. 12 (A/3151 and Corr. 1), Annex II, in 661st Plenary Meeting, 26 February, 1957, 28.

M. McCullers, 'Lines in the Sand: The Global Politics of Local Development in Apartheid-Era Namibia, 29. 1950-1980' (PhD thesis, Emory University, Atlanta, 2012), 37.

^{30.} McCullers, 'Lines in the Sand', 132-141.



and a prostrate civil society. ³¹ These elements characterised Odendaal's efforts. As noted by South African historian Saul Dubow, science in South Africa has long been part of the creation and maintenance of social and civil order.³² Via Odendaal, this extended to Namibia.

The commission's analysis and subsequent recommendations were predicated upon a form of Afrikaner-dominated social anthropology known as volkekunde. Throughout the apartheid era, this field of academic inquiry, generally translated as 'ethnology' - though a more literal translation would be 'nationscience', study of the people, or, even, study of different peoples - buttressed strains of biblical literalism that provided justification for white power and racial separation.³³ Anthropologist Robert Gordon has written extensively on the development and role of volkekunde within the South African academy and its linkages to the nationalist government. From 1940s to the 1960s, a rising generation of volkekunde practitioners (volkekundiges) moved seamlessly between Afrikaans-speaking universities and government service. In their policy, as in their studies, volkekundiges treated the 'ethnic' group as the relevant unit of societal concern.³⁴ Gordon has found that, particularly as civil servants within the Department of Native Affairs, volkekundiges 'played a significant role in the legitimation and reproduction of the apartheid social order on two levels: as an instrument of control and as a means of rationalizing it'. 35 Historian and sociologist Deborah Posel has examined the central role of Native Affairs – later renamed the Department of Bantu Administration and Development (BAD) in the development of apartheid policies.³⁶ Headed by Verwoerd until he became prime minister in 1958, Native Affairs/BAD was the nexus of the conservative state bureaucracy as South Africa sought to entrench its empire of white power. As theorists and technocrats, volkekundiges reinforced notions that immutable racial divisions entailed 'separate development' as the only means for creating a peaceful society.³⁷ The science undergirding volkekunde efforts to create a legible society was bound up in the maintenance of the existing

^{31.} Scott, Seeing Like a State. McCullers and Gordon have examined the extent to which the Odendaal Commission engaged in what Scott has called 'a heroic and greatly schematized process of abstraction and simplification. McCullers, 'Lines in the Sand'; R. Gordon, 'The Making of Modern Namibia: A Tale of Anthropological Ineptitude?', African Historical Review, 37, 1 (2005), 26-49.

S. Dubow, A Commonwealth of Knowledge: Science, Sensibility, and White South Africa 1820-2000 32. (Oxford: Oxford University Press, 2006).

C. van der Waal, 'Long Walk from Volkekunde to Anthropology: Reflections on Representing the Human in South Africa', Anthropology Southern Africa, 38, 3-4 (2015), 216-234.

R. Gordon, 'Apartheid's Anthropologists: The Genealogy of Afrikaner Anthropology', American Eth-34. nologist, 15, 3 (1988), 535-553.

Gordon, 'Apartheid's Anthropologists', 536. 35.

D. Posel, The Making of Apartheid 1948-1961: Conflict and Compromise (Oxford: Clarendon Press, 1991); D. Posel, 'Whiteness and Power in the South African Civil Service: Paradoxes of the Apartheid State', Journal of Southern African Studies, 25, 1, (1999), 99-119.

Posel, The Making of Apartheid, 232–233; H. Giliomee, The Afrikaners: Biography of a People (London: 37. Hurst, 2003), 521; M. de Wet Nel, 'Industrial Development in Peripheral Areas', in 42nd Annual Convention of the Federated Chamber of Industries (Pretoria: Information Service of the Department of Bantu Administration and Development, 1959).

racial order. Whilst the ethnic homeland, or 'bantustan', system purportedly encouraged separate development among separate races, it also functionally quelled fears of miscegenation and sought to entrench the status quo of white minority rule.³⁸

The government's commitment to entrenching white power was as true in Namibia as in South Africa. At the UN in 1946, 'liberal' Prime Minister Jan Smuts requested, and was denied, Namibia's formal incorporation into South Africa.³⁹ In 1955 control over Native Affairs in Namibia was moved from Windhoek to Verwoerd's department in Pretoria. The Odendaal Commission was a chance to complete Namibia's incorporation into South Africa using the guise of high-modernist style state planning as cover. Behind the scenes, the Odendaal Commission's approach exemplified *volkekunde* science. According to Gordon, Dr J. P. van S. Bruwer, previously professor of volkekunde at Stellenbosch University, was the commission's 'guiding light'. As one of the five commissioners, Bruwer drew on his anthropological expertise to cloak Odendaal's purpose of extending South African domination over South West Africa in the 'patina of "objectivity" and "science". '40 However, Gordon has uncovered letters between Verwoerd and Bruwer indicating that Odendaal's true purpose was to impress the international community. 41 UN criticisms and the ICJ case loomed over the commission's recommendations: South Africa sought to invoke its right to rule South West Africa whilst showcasing the benefits of separate development and state planning. The analysis and interpretation of the Namibian situation by the Odendaal Commission was the most concerted attempt to apply volkekunde methods to the challenges of apartheid rule within the South African empire to that point.⁴²

Odendaal's recommendations, submitted to Verwoerd in June 1963 and echoing South Africa's case before the ICJ, 43 unambiguously placed apartheid policies at the centre of governing Namibia. Consonant with the perspectives of the volkekundiges, the colony was to be made legible primarily by spatially dividing it along ethnic lines. This included setting aside 48.26 per cent of the colony for whites in the Police Zone, whilst the remaining 51.74 per cent went to 'homelands', towns, game reserves, diamond areas, government lands, and the municipality of Walvis Bay, the country's only deep-water port, which remained part of South Africa proper. In effect the white population, numbering

^{38.} S. Dubow, Apartheid 1948-1994 (Oxford: Oxford University Press, 2014).

UN Archives, General Assembly, First Session, Part Two Summaries, Fourth Committee, 7 November-12 December, 1946, https://search.archives.un.org/1st-session-part-2-summaries-fourth-committee-2.

^{40.} R. Gordon, 'How Good People Become Absurd: J. P. van S. Bruwer, the Making of Namibian Grand Apartheid and the Decline of Volkekunde', Journal of Southern African Studies, 44, 1 (2018), 104.

Institute for Contemporary History at the University of the Free State, PV 123 2/11/6, Verwoerd to 41. Bruwer, 22 August 1962, from Gordon, 'How Good People Become Absurd', 103.

Gordon, 'How Good People Become Absurd', 97. 42.

International Court of Justice (ICJ), Counter-Memorial Filed by the Government of the Republic of 43. South Africa, vol. II (The Hague, 1966), https://www.icj-cij.org/files/case-related/47/9275.pdf.

73,464, would secure 6.76 square kilometres of primarily higher-value land per capita whilst the 'native' population, numbering 424,047, was left with 0.74 square kilometres per capita, primarily along the colony's borders, far from the settler economy or government services. 44 Within the ethnically exclusive homelands the BAD would exercise hegemonic power. Based upon existing legislation, the commission concluded that '[f]ull and final authority' for implementing the recommendations, as far as they concerned non-whites, rested with 'the Government of the Republic of South Africa and the practical carrying out thereof takes place, as far as native affairs are concerned[,] through the Minister of Bantu Administration and Development'. 45 Concluding the section 'Economic and Industrial Development', the commission wrote that:

In a territory like South West Africa where there are groups that differ fundamentally from one another, a policy of socio-cultural separateness and economic interdependence is therefore the only one which can ensure the maximum freedom of action and self-realization to the greatest number of inhabitants at the same time. 46

A key Odendaal recommendation was the amount of money set aside for development: in the first five years the plan was estimated to cost over R114 million.⁴⁷ This willingness to invest was used by the government as evidence to the international community that it sought to 'develop' Namibia 48 – never mind that the largest expenditures would benefit Namibia's whites. Yet, among the international community Odendaal was unsuccessful at disguising the government's white power ambitions. ⁴⁹ Said one declassified US State Department paper: 'The Commission's premises were frankly those of the apartheid policies [...] and would have intensified apartheid in South-West Africa.'50 The Odendaal Commission also served as a tactic of delay, whereby South Africa could prolong its colonisation of Namibia.⁵¹ The implications of Odendaal's recommendations

^{44.} A. D'Amato, 'The Bantustan Proposals of South-West Africa', Journal of Modern African Studies, 4, 2 (1966), 177-192; G. Lawrie, New Light on South West Africa: Some Extracts and Comments on the Odendaal Report (Witwatersrand University Press, 1964), 1-3; RSA, Report of the Commission of Enquiry into South West Africa Affairs, 29-43. Per capita land allocation for whites included government lands, as non-whites were functionally barred from these areas.

^{45.} RSA, Report of the Commission of Enquiry into South West Africa Affairs, 51.

RSA, Report of the Commission of Enquiry into South West Africa Affairs, 427-429. 46.

Approximately R10 billion (US\$603 million) in 2020. Inflation Tool, https://www.inflationtool.com/ south-african-rand/1963-to-present-value?amount=114450000, accessed 15 July 2020; Lawrie, New Light on South West Africa, 10.

UN A/6897, Letter from South Africa Minister of Foreign Affairs (Muller) to UN Secretary General (Thant), 26 September 1967, in Report of the United Nations Council for South West Africa (United Nations, 1967), 111-116.

Howland, N.D., ed., Foreign Relations of the United States 1964-1968 Vol. XXIV: South Africa (hereafter FRUS) (Washington: United States Government Printing Office, 1999), 577. Telegram from the Embassy in South Africa to the Department of State, Cape Town, February 12, 1964, 5 p.m., Source: Department of State, Central Files POL 19 SW AFR/UN, Confidential; Immediate.

^{50.} FRUS, 600. National Policy Paper, Washington, January 18, 1965. Source: Department of State, S/P Files: Lot 72 D 139, South Africa. Secret.

^{51.} FRUS, 581. Telegram from the Embassy in South Africa to the Department of State, Cape Town, March 19, 1964, 3p.m., Source: Department of State, Central Files, POL 19 SW AFR/UN, Confidential;

were later clarified by Bruwer, who, under cross-examination at the ICJ, admitted that Namibia's economy 'would not be able to thrive or possibly survive' without a prostrate non-white labour pool. Asked when this situation might be remedied, Bruwer agreed it could be anything up to 300 years.⁵²

Rearranging Etosha-Kaokoveld

Among Odendaal's myriad recommendations was the separation of the previously unified Etosha-Kaokoveld landscape of northwest Namibia. In the early twentieth century, economic and veterinary concerns, as well as hunting prohibitions, drove the formation of what were termed 'nature reserves' within (German) South West Africa. In particular, a region-wide rinderpest epidemic (1896/97) led to the German colonial government limiting access to Etosha-Kaokoveld.⁵³ On 22 March 1907, the colonial government proclaimed Game Reserve No. 2 (the largest such reserve in the world), which was intended to protect wildlife as an economic and social resource and define the boundaries of movement for Africans and their livestock.⁵⁴ The southern border of Etosha-Kaokoveld effectively delineated the extent of German colonial control - lands north of the 'Red Line' were largely terra incognita for whites. Examinations of the German and early South African periods in northwest Namibia have shown how the lives of both the area's human residents and their livestock were understood by the colonial government to be a part of maintaining the social order: though government officials would not have termed it as such, they recognised that the governance of the collective entailed governance of humans and nonhumans. Veterinary concerns, tied to economic prospects, dominated colonial policies and practices beyond the Red Line, including Etosha-Kaokoveld.⁵⁵ Environmental and social histories of neighbouring Ovamboland and among the Haillom south of Etosha, contextualise Kaokoveld experiences within a broader set of responses to South African colonialism. 56 Within Kaokoveld, historian Lorena Rizzo found that '[c]olonial penetration remained ambivalent, discontinuous, and fractured up until the 1930s.'57 The limitations of the

Priority; FRUS, 609. Paper Prepared in the Department of State, Washington, July 31, 1965, Source: Johnson Library, National Security Files, NSAMs, NSAM 195, U.S. Policy Toward South Africa, Secret.

ICJ, Verbatim Record, C.R. 65/56, 22 and 25, from D'Amato, 'The Bantustan Proposals of South-West 52. Africa', 190 n. 1.

B. de la Bat, 'Etosha: 75 Years', South West Africa Annual - Supplement, 1982; Miescher, Namibia's 53.

^{54.} Miescher, Namibia's Red Line, 52-54.

Bollig, Shaping the African Savannah; Miescher, Namibia's Red Line; Rizzo, Gender and Colonialism; J. Heydinger, 'Eserewondo Rozongombe: Livestock as Sites of Power and Resistance in Kaokoveld, Namibia', Environment and History, online publication (23 November 2020), 1-29.

^{56.} Kreike, 'De-Globalisation and Deforestation'; P. Hayes, 'History of the Ovambo of Namibia, c. 1880-1935' (PhD thesis, University of Cambridge, Cambridge, 1992); N. Shiweda, 'Omhedi: Displacement and Legitimacy in Oukwanyama Politics, Namibia 1915-2010' (PhD thesis, University of the Western Cape, Bellville, 2011); U. Dieckmann, Haillom in the Etosha Region: A History of Colonial Settlement, Ethnicity and Nature Conservation (Basel: Basler Afrika Bibliographien, 2007).

^{57.} Rizzo, Gender and Colonialism, 302.

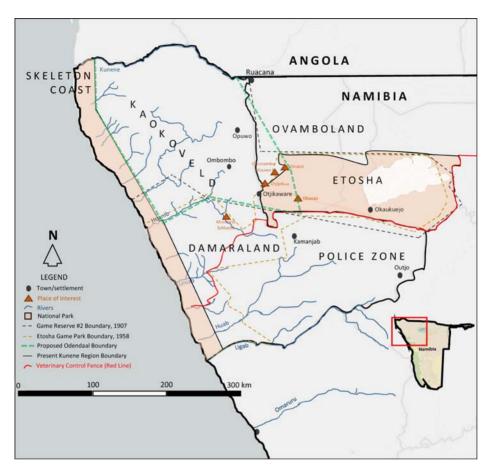


Figure 1. Historical and contemporary boundaries and key locations in Etosha-Kaokoveld, northwest Namibia. Created by author.

early colonial state meant that Etosha-Kaokoveld was incompletely controlled and often beyond the government's reach. Within this massive, almost entirely unfenced area, pastoralists and their livestock, as well as wildlife, moved largely unencumbered. As South Africa began tightening its grip in the 1940s, veterinary concerns were joined by the logic and language of development. By the 1950s wildlife were increasingly considered an important part of the territory's tourism industry. The application of *volkekunde* 'science' to the governance of Namibia was not a departure, but a continuation, of policies to control people and environments for state benefit. What was different was the state's confidence in exercising what Dubow has called 'a more rigorous, methodical'

^{58.} Namibia National Archives (hereafter NAN), Native Affairs Ovamboland (hereafter NAO), 066, Game Control, Official Correspondence, South African Police, Namutoni to Native Commissioner, Ovamboland, 12 December 1947.

application of racial segregation.⁵⁹ This came to a climax with the Odendaal Commission.

Following the recommendations of Odendaal, Etosha-Kaokoveld was to be divided into the homelands of Kaokoveld⁶⁰ and Damaraland, and into two government-controlled game reserves, which became the national parks of Etosha (1967) and Skeleton Coast (1971).⁶¹ Kaokoveld would serve as the homeland for 9234 'Kaokovelders', a supposedly unified ethnic group of Herero, Himba, and Tjimba people. The Etosha Game Reserve, which since 1957 had encompassed 2564 square kilometres of Kaokoveld, was to be greatly reduced. Originally covering approximately 80,000 square kilometres in 1907, Game Reserve No. 2 was already reduced to approximately 55,000 square kilometres by 1958.⁶² Odendaal recommended further shrinking the reserve to 22,270 square kilometres. 63 This dramatic reduction was exacerbated by the recommendation that Kaokoveld, having functioned as a de facto game conservation area since 1928, 64 be de-proclaimed as a game reserve.

There is no indication that ecological concerns entered into Odendaal's recommendations. The plan left many conservationists 'aghast'. 65 In transforming Etosha's boundaries and de-proclaiming Kaokoveld's game reserve status, Odendaal was also set to alter the region's ecology, with negative outcomes feared particularly for rare species such as the black rhino (Diceros bicornis) and the mountain zebra (Equus zebra). 66 To counter these feared effects, numerous representations were made to the South African government, even reaching Verwoerd's office, but they were largely deflected.⁶⁷ The written protests culminated in 1969, when the conservation-minded and reputable Wild Life Society of South Africa commissioned ecologist Ken Tinley to write an alternate plan for dividing Etosha-Kaokoveld. 68 '[B] ased on the intrinsic ecological potential and

^{59.} Dubow, Apartheid 1948-1994, 13.

Though Odendaal re-designated Kaokoveld as Kaokoland, the area continued to be referred to as Kaokoveld, which remains common practice among the region's inhabitants.

^{61.} Even before the Odendaal Report, Etosha-Kaokoveld was not devoid of volkekunde influence. Etosha's second warden was P. J. Schoeman, who received his PhD in volkekunde at Stellenbosch University.

H. Berry, 'Historical Review of the Etosha Region and its Subsequent Administration as a National 62. Park', Madoqua, 20, 1 (1997), 3-12.

RSA, Report of the Commission of Enquiry into South West Africa Affairs, 87-95. 63.

G. Owen-Smith, 'Proposals for a Game Reserve in the Western Kaokoveld', South African Journal of Science, 68, 2 (1972), 33.

^{65.} Bat, 'Etosha: 75 Years', 20.

NAN, SWA Executive Committee — Odendaal Liaison Committee (hereafter LUKS), 1.3, Notule van vergadering van die Skakelkomitee insake besluite oor Suidwes-Afrika-Aangeleenthede gehou te Windhoek op 4 September 1964; R. Bigalke, 'The Odendaal Report and Wild Life in South West Africa', African Wild Life, 18 (1964), 181-188.

Anonymous, 'The Threat to the Etosha Pan Game Park', African Wild Life, 24 (1970), 232-233; Bigalke, 'The Odendaal Report'; H. Verwoerd, 'The Odendaal Report and Wild Life in South West Africa', African Wild Life, (1965), 181-182.

J. Pringle, The Conservationists and the Killers: The Story of Game Protection and the Wildlife Society of 68. Southern Africa (Cape Town: Books of Africa, 1982); G. Owen-Smith, An Arid Eden: A Personal Account of Conservation in the Kaokoveld (Johannesburg: Jonathan Ball, 2010), 148.



capabilities of the different land types', Tinley's alternate plan, submitted to the government in 1969, coalesced the so-called 'Kaokoveld controversy'. 69

Ecology as conceptually subversive

From 1965-1968, Tinley served as Etosha's ecologist for the South West Africa Department of Nature Conservation. Highly regarded by his colleagues, Tinley was considered a pioneer for his ecological approach to land-use planning.⁷⁰ Tinley's alternative to Odendaal, which ran as a special supplement in the Wild Life Society's journal African Wild Life, criticised the effects that Odendaal would have on what he saw as the natural wonders and wildlife of Etosha-Kaokoveld. In part, Tinley's abstract reads,

the Odendaal Commission's recommendations for northern South West Africa [...] will result in the loss of the most valuable and greater part of the Etosha National Park.

This report submits an alternative plan of land apportionment for man and wild life based on the intrinsic ecological potential and capabilities of the different land types, providing man with better living sites and at the same time making provision for the preservation of the unique features of Etosha and Kaokoveld as a natural resource of national importance. [...] The present report presents a case for saving the Etosha and Kaokoveld[.]⁷¹

Tinley's disagreements with Odendaal were on the grounds of ecological sensitivity. 72 Throughout more than 270 pages of technical language, the Odendaal report spent only one paragraph describing the 'Etosha Game Reserve', four paragraphs on 'wild life conservation', and one paragraph on game species (under the heading 'veld foods'). 73 In contrast, Tinley's 11-page report used evocative language, photography, and maps detailing historical, ecological, and political aspects to draw a unified picture of Etosha and Kaokoveld as a unique landscape inhabited by humans and non-humans, with special economic and environmental value. Responding to the commission's treatment of the landscape as a technocratic problem of social and civic planning, Tinley wrote that Odendaal's recommendations

ignore the ecology of the region entirely, but effectively exclude almost all of the endemic flora and fauna from any national park space, as well as cutting the annual and periodic migration routes of certain large ungulates, such as elephant and gemsbok between the Kaokoveld and the Etosha saline area.⁷⁴

K. Tinley, 'Etosha and the Kaokoveld', African Wild Life - Supplement, 25, 1 (1971), 3; Owen-Smith, 69. An Arid Eden, 145-163.

^{70.} Owen-Smith, An Arid Eden, 148, 155.

^{71.} Tinley, 'Etosha and the Kaokoveld', 1.

^{72.} In July 2019 Tinley declined a request to be interviewed.

^{73.} RSA, Report of the Commission of Enquiry into South West Africa Affairs, 371, 285.

^{74.} Tinley, 'Etosha and the Kaokoveld', 4.



Meeting the commission's recommendations on the grounds of technocratic planning and the efficient use of the landscape, the core of Tinley's stated disagreement was that

[d]esert, mountain and saline areas can support wildlife, whereas the better environments of the higher rainfall interior plains containing perennial savanna grassland and good soils can be more efficiently used by man. In certain areas under the present and proposed political division of land, this situation is in reverse. Desert and mountain areas have been allotted to man and tall perennial grasslands in the west of Etosha to wild life. 75

Though he did not suggest that wildlife and humans could indefinitely occupy shared spaces, Tinley recognised that their interactions also required attention and incorporated the non-human into his assessment of the best appropriate use for the landscape. Marshalling an array of ecological, anthropological, and geographic evidence to support his case, Tinley made a series of sweeping recommendations to 'preserve the unique natural features of Etosha and the Kaokoveld, and to provide better living sites' for the area's residents.⁷⁶ These included carving out of Kaokoveld and Damaraland the Kunene (River) and Kaokoveld National Parks, which could link to Etosha, effectively re-creating much of Game Reserve No. 2; purchasing greater amounts of private (white) farmland to enlarge these new parks; transporting remaining 'natives' further east, outside these new parks; and upgrading the roads for the use of tourists, nature conservators, and researchers. Tinley's vision for a vast nature reserve in the desert west, and ethnic homelands in the wetter east, would have led to dramatic land-use transformations, including uprooting thousands of residents.

In contrast to Odendaal, Tinley was providing ecological, we might even (apocryphally) say more-than-human, answers to technocratic challenges. By both explicitly countering Odendaal's recommendations and implicitly critiquing its underlying assumptions, including the almost complete disregard for the landscapes and wildlife, Tinley's ecologically informed approach subverted state planning goals.⁷⁷ For Odendaal, science-based planning aimed to address social-political challenges with little regard for ecological factors: recognising ecological limits meant acknowledging limitations of state power. For Tinley, rational planning had to account for ecology before solutions to social-political challenges could arise. Drawing upon a different form of science, Tinley was envisioning a dissimilar collective than Odendaal.

Though Tinley's report substantively departed from the Odendaal recommendations, it shared what historian of science Peter Taylor calls a

^{75.} Tinley, 'Etosha and the Kaokoveld', 3.

^{76.} Tinley, 'Etosha and the Kaokoveld', 13.

^{77.} P. Sears, 'Ecology: A Subversive Subject', BioScience, 14, 7 (1964), 11-13.

'technocratic optimism' in the state's ability to efficiently allocate resources and contain people, reminiscent of Scott's identification of state confidence in technical and scientific progress.⁷⁸ Such optimism was consonant with an increasingly dominant managerial-style ethos across the applied sciences, beginning during the interwar period.⁷⁹ Tinley's philosophy of ecological science can be distilled from other, similar documents he authored. Prior to the Etosha-Kaokoveld report, Tinley composed a response to Odendaal's recommended conversion of the Caprivi Nature Reserve in northeast Namibia into a homeland for the Barakwengo 'bushmen' (Khoe-Sān). In many ways this earlier report anticipated the Etosha-Kaokoveld one. Tinley outlined the area's natural resources, as well as the history of 'ethnic-environmental relations involving the health of the land, and thus of the people', discussed from what he termed 'an ecological point of view'.80 Particularly pertaining to human-non-human interactions, Tinley conveyed an ecosystem at once unique and fragile, capable of maintaining the biota of an ecological climax community, if left relatively undisturbed. He also saw this space as requiring extensive scientific research and government management of game and ecosystems. In the Western Caprivi report, Tinley defined conservation as

an ecological type of land use concerned with the maintenance of habitat as the fundamental first principle in maintaining populations of animals and plants; in this particular instance it is the natural ecosystem, its use, and improvement that is to be maintained.81

The reference list for this report indicates the scientific *Denkkollektiv* Tinley was operating within.⁸² During the early to mid twentieth century, the natural sciences were increasingly mathematised, providing ecology with a solid theoretical base akin to the physical sciences. The key to this was representing ecocomponents mechanistically, including through mathematical equations and models, to forecast the likely outcome of component interactions. This approach was further refined and by the mid-1940s the mechanistic approach eclipsed field-based methods as the dominant model in the

^{78.} P. Taylor, 'Technocratic Optimism, H. T. Odum, and the Partial Transformation of Ecological Metaphor after World War II', Journal of the History of Biology, 21, 2 (1988), 213-244.

^{79.} S. Kingsland, 'Review: The History of Ecology', Journal of the History of Biology, 27, 2 (1994), 349-357.

K. Tinley, Western Caprivi Conservation Area, South West Africa: A Proposal of Natural Resource Land Use, unpublished internal report (Etosha: Nature Conservation Department, South West Africa, 1966), 30, http://the-eis.com/elibrary/search/19252.

Tinley, Western Caprivi Conservation Area, 34. 81.

^{&#}x27;Thought-collective', from L. Fleck, Genesis and Development of a Scientific Fact, edited by T. J. Trenn and R. K. Merton, translated by F. Bradley and T. J. Trenn (Chicago: University of Chicago Press, 1979). Fleck's thought-collective is not directly related to Latour's human-non-human collective. Tinley's references include: W. Allan, The African Husbandman (London: Oliver & Boyd, 1965); J. Ford, 'The Role of Elephants in Controlling the Distribution of Tsetse Flies', IUCN Publications, New Series, 19 (1966), 6; International Union for the Conservation of Nature, 'The Ecology of Man in the Tropical Environment', Symposium Papers, IUCN Publications, New Series, 4 (1964); H. Ledger, The Importance of Stock Selection for Increasing the Productivity of Semi-Arid Areas', IUCN Publications, New Series, 1 (1963), 223-231.

discipline.⁸³ In the Western Caprivi report, Tinley cites a 1960 article by F. Fraser Darling which terms conservation as 'a realm of scientific intervention called ecology', which also goes on to define an ecological climax as 'embod [ying] the maximum energy-flux possible in a given set of physical climatic conditions'.84 Tinley was, at the very least, sympathetic towards the mechanistic approach to ecology. He was also operating within an economic understanding of ecology. Speaking later on the need to maintain diversity in wildlife and protected areas in Africa, Tinley outlined his economic perspective of ecology:

By economic is meant not only the narrow monetary benefits, but the full range of natural resource values to the surrounding human communities. Economy is the judicious use of the resources of a community for which management, regulation and authority is required for its maintenance and distribution.⁸⁵

This combination of the mechanistic and economic led to what historian Donald Worster has called the 'New Ecology'. Worster traces this ethic to the ambivalent relationship between westerners and industrial technology, evident in the growing confidence of ecologists to employ contemporary methods to order nature and plan for its development, and in the concurrent growing sense that the environment was defenceless in the face of globalised industrial technology.⁸⁶ In this ambivalence, ecological systems are understood as dynamic – even evolving – but therefore potentially at risk of crisis and destruction. Though this bears many resemblances to the South African government's brand of volkekunde-informed high modernism, such dynamism contradicted many of the aspirations of the apartheid government.

Historian of science Peder Anker has shown the existence of an adversarial relationship between evolutionist thinking and ecological science, on the one hand, and South Africa's apartheid government, on the other, the latter which saw ecology as primarily a source of subversive criticism.⁸⁷ During the 1950s and 1960s, anti-evolutionists held powerful roles in a government that linked ethnonationalism to biblical interpretations of history. In the late 1950s, evolution was not in the curriculum of South African schools or Afrikaans universities.⁸⁸ During this period, Edward Roux, one of South Africa's most high-profile ecologists, was a vocal critic of the apartheid regime, tacitly and explicitly linking apartheid, industrialisation, and ecological collapse. The linkage that Roux made between ecology and

^{83.} D. Worster, Nature's Economy: The Roots of Ecology (San Francisco: Sierra Club Books, 1977), 311; S. Kingsland, 'Mathematical Figments, Biological Facts: Population Ecology in the Thirties', Journal of the History of Biology, 19, 2 (1986), 235-256.

F. Fraser Darling, 'Wildlife Husbandry in Africa', Scientific American, 203, 5 (1960), 124, 127. 84.

K. Tinley, 'The Maintenance of Wilderness Diversity in Africa', in I. Player, ed., Voices of the Wilderness, Proceedings from the First World Wilderness Conference (Johannesburg, 1979), 35-36.

Worster, Nature's Economy, 291-348; Taylor, 'Technocratic Optimism'. 86.

P. Anker, 'The Politics of Ecology in South Africa on the Radical Left', Journal of the History of Biology, 37 (2004), 303-331.

^{88.} Anker, 'The Politics of Ecology', 319.

politics, and his use of ecology as vehicle for questioning the racial order in society, raised the profile of ecology as a science in South Africa, but garnered no favours for the discipline within government. Roux's work and activism resulted in his highprofile banning (preventing him from teaching at or entering any university) in 1964. The criticism by Roux and other ecologists of policies and technologies they viewed as unsustainable or deleterious to human and environmental health would not have predisposed the government to favourably receive Tinley's case for Etosha-Kaokoveld.

Tinley's call for 'saving the Etosha and Kaokoveld', and his concern that allowing the Herero, Himba, and Tjimba ('Kaokovelders') to settle within unsuitably arid areas 'only results in devastation of the environment and wretchedness of the people', can thus be read as subversive statements.⁸⁹ Like Odendaal, Tinley operated within a paradigm of technocratic optimism for ordering society and the natural world. However, unlike volkekundiges and other apartheid technocrats, Tinley was exposing gaps in the state's approach by showing that systems of humans and non-humans were dynamic and could not be frozen once a desired status quo was achieved.

By departing from the commission in his concern for ecological factors, Tinley's alternate plan subverted the apartheid state's claims that not only people, but implicitly wildlife, and environments, were also prostrate in the face of the government's desire to spatially rearrange Etosha-Kaokoveld. It is thus unsurprising that Tinley's recommendations were rejected. To those familiar with the human rights abuses of apartheid, it is ironic that the government's stated reason for the rejection was because 'the interests of the Natives [...] could not be subordinated to nature conservation.'90 Given the continued criticisms of South Africa from abroad, it was a clever rhetorical strategy to be purportedly privileging the interests of the area's inhabitants over other issues. The rejection of Tinley's proposal came from the BAD – reaffirming the source of the state's technocratic voice. Tinley's failure was one more example of when 'environmental stewardship took a back seat to the rulers' economic and political priorities;' a trend historian Christo Botha has identified across Namibia's colonial era.91

Pastoral problems: an inhospitable homeland

In addition to Tinley's ecologically based criticisms and alternate plan, the gaps in Odendaal's approach to Etosha-Kaokoveld were already playing out among

Tinley, 'Etosha and the Kaokoveld', 3. 89.

Department of Bantu Administration and Development, 'The Minister's Reply: Division of Land 90. Between the Kaokoveld, Damaraland and the Etosha National Park', African Wild Life — Supplement, 25, 1 (1970), 15.

^{91.} Botha, 'People and the Environment', 171.

semi-nomadic Herero⁹² pastoralists, whose actions reveal the extent to which state approaches overlooked human-non-human relationships. Along the newly-conceived boundary, the separation of Etosha and Kaokoveld 'decoupled' Herero pastoralists from rangelands that had long been part of their survival strategies and, in certain cases, severed them from birthplaces and family burial plots. 93 However, from the publication of Odendaal in 1964 until a government land survey in 1972,⁹⁴ the precise boundary of Etosha-Kaokoveld remained uncertain. During this period, the boundary's location was being negotiated behind closed doors, and then was not immediately implemented. This lack of clarity led to conflict between Herero pastoralists and government staff, in which Herero livestock were vectors of political negotiation.

Nomadism has long been practiced by pastoralists across Africa, including northwest Namibia.⁹⁵ Increasingly, scholars of dryland ecosystems and pastoralism are appreciating livestock herd mobility as an adaptive strategy by pastoralists for reducing vulnerability to rainfall variation, gaining access to different markets, and protecting against overgrazing.⁹⁶ Prior to the imposition of government-mandated boundaries, the necessities of mobile pastoralism forged communal resource management strategies in northwest Namibia.⁹⁷ In contrast to private land ownership delineated by static lines, non-western pastoralists have delineated territory based upon resource access or other valued landscape features, such as places with historical meaning. 98 Bollig has written extensively about the role of pastoralism in Himba society and northwest Namibian environments, including contrasting Kaokoveld practices with those of the Pokot in northern Kenya.⁹⁹ Anthropologists D. P. Crandall and Margaret

- 92. The Herero, Himba, and Tjimba of Kaokoveld generally identify under the inclusive term ova Herero. A Himba saying states this clearly: 'omuHimba omuHerero' (a Himba is a Herero). M. Jacobsohn, Himba: Nomads of Namibia (Cape Town: Struik, 1998), 17. Differences between these groups have only taken on widespread meaning since the beginning of colonialism. For a discussion of the historical relationships between the Herero, Himba, and Tjimba in Kaokoveld, and the central role of livestock, particularly cattle, to each, see Heydinger, 'Eserewondo Rozongombe'.
- 93. A. Hoole and F. Berkes, 'Breaking Down Fences: Recoupling Social-Ecological Systems for Biodiversity Conservation in Namibia', Geoforum, 41, 2 (2010), 304-317; Rizzo, Gender and Colonialism, 154-155,
- 94. A. Hoole, 'Community-Based Conservation and Protected Areas in Namibia: Social-Ecological Linkages for Biodiversity' (PhD thesis, University of Manitoba, Winnipeg, 2008), 160.
- A. Smith, Pastoralism in Africa: Origins and Development Ecology (London: Hurst, 1992); J. Kinahan, 95. 'Cattle Paths and the Choreography of Late Pre-Colonial Contact and Trade on the Namib Desert Coast', South African Archaeological Bulletin, 69, 199 (2014), 96-102; H. Vedder, South West Africa in Early Times (Windhoek: Namibia Scientific Society, 1934), 145.
- M. Niamir-Fuller and M. Turner, 'A Review of Recent Literature on Pastoralism and Transhumance in Africa', in M. Niamir-Fuller, ed., Managing Mobility in African Rangelands: The Legitimization of Transhumance (London: Intermediate Technology Publications, 1999), 18-46; M. Samuels, N. Allsopp, and M. Hoffman, 'Traditional Mobile Pastoralism in a Contemporary Semiarid Rangeland in Namaqualand, South Africa', Rangeland Ecology and Management, 72, 1 (2019), 195-203.
- 97. S. van Wolputte, 'Cattle Works: Livestock Policy, Apartheid and Development in Northwest Namibia, c 1920-1980', African Studies, 66, 1 (2007), 103-128; J. Friedman, Imagining the Post-Apartheid State: An Ethnographic Account of Namibia (New York: Berghahn Books, 2011).
- 98. Smith, Pastoralism in Africa, 26.
- 99. M. Bollig and J. Gewald, 'People, Cattle and Land-Transformations of Pastoral Society: An Introduction', in M. Bollig and J. Gewald, eds, People, Cattle and Land: Transformations of a Pastoral Society in

Jacobsohn have insightfully explored the central place of cattle and other stock in Himba society. Jacobsohn has observed that cattle are 'everything' to the Himba. 100 It is not overstating the case to say that many Herero make no distinction between livestock well-being and the well-being of Herero society. 101 Among African pastoralists, the Herero and Himba historically made use of some of the largest grazing areas, which, prior to colonial rule, were negotiated among kin networks. 102 In Kaokoveld it remains common for families to uproot and, with their livestock, travel far afield to where rain has fallen, sometimes for years at a time. Even so, they maintain a central homestead to which they expect to return. 103 This periodic approach to landscape use conflicted with the South African empire's attempts to spatially arrange Namibia - one of Scott's four elements needed to create the legible state. Another, the need for a prostrate civil society, was also undermined by Herero people living along the newly emerging, fenced Etosha-Kaokoveld boundary.

Following the publication of the Odendaal report in 1964, the government began the process of implementing many of its recommendations. Tinley's 1971 alternate plan gives no indication that he was aware that extensive governmental negotiations occurred in 1964-65 concerning the location of the new Etosha-Kaokoveld boundary. The discussions surrounding the boundary's location are revealed in the minutes of the South West Africa Skakelkomitee (liaison committee), which was tasked with identifying the practical obstacles to Odendaal and providing recommendations to the government for its successful implementation. 104

Initially, the Odendaal report defined Kaokoveld's eastern boundary as running from

the line of longitude [on the Namibia-Angola border] 14° E; thence south-eastwards and westwards along the eastern and southern boundaries, respectively, of the magisterial district of Kaokoveld to the northernmost corner beacon of the farm Westend No. 642, district of Outjo - (the water-hole Onaiso must be situated within the Kaokoveld Homeland)[.]105

South Western Africa (Cologne: Köppe, 2000); M. Bollig, 'An Outline of Pokot and Himba Societies: Environmental, Political Economy and Cultural Beliefs', in M. Bollig, Risk Management in a Hazardous Environment: A Comparative Study of Two Pastoral Societies (New York: Springer, 2006).

^{100.} D. Crandall, 'The Role of Time in Himba Valuations of Cattle', Journal of the Royal Anthropological Institute, 4, 1 (1998), 101-114; M. Jacobsohn, 'Negotiating Meaning and Change in Space and Material Culture: An Ethno-Archaeological Study among Semi-Nomadic Himba and Herero Herders in North-Western Namibia' (PhD thesis, University of Cape Town, Cape Town, 1995); Jacobsohn, Himba, 23.

Heydinger, 'Eserewondo Rozongombe'.

Smith, Pastoralism in Africa, 186; J. Gewald, Herero Heroes: A Socio-Political History of the Herero of Namibia 1890-1923 (Oxford: James Currey, 1999).

^{103.} Personal observation.

^{104.} NAN, LUKS, 1.1, Notule van vergadering van die Skakelkomitee insake besluite oor Suidwes-Afrika Aangeleenthede gehou te Windhoek op 30 Junie en 1 Julie 1964.

^{105.} RSA, Report of the Commission of Enquiry into South West Africa Affairs, 87.

The final boundary was different, revealing the linked political and physical difficulties of simplifying a complicated landscape. In placing the boundary, the Skakelkomitee emphasised veterinary concerns, including prohibiting African stock movements between Kaokoveld and Ovamboland, or into the Police Zone from either homeland. Committee members also emphasised the need for a clear boundary between Kaokoveld and Ovamboland, resulting in the construction of an 'all-weather' road, dividing Kaokoveld from Etosha and Ovamboland, running from Kamanjab to Ruacana on the Kunene River. 106 The Onaiso waterhole had to be included in Kaokoveld because it serviced a proposed guarantine camp for cattle at Omutambo Mauwe, as well as an existing camp for goats and sheep at Otjijekua. 107 This, however, cut into Etosha, pulling the park boundary just north of Otjijekua eastwards. To not further reduce the size of the park whilst leaving Onaiso for Kaokoveld, the Skakelkomitee recommended a 'hectare for hectare' trade: 40,000-50,000 square hectares of Etosha at Onaiso and Omutambo Mauwe would be 'given' to Kaokoveld for a quarantine camp; in return, an equivalent 'rhino and zebra source' area was added to Etosha's southwestern corner. 108 These designations meant the Kamanjab-Ruacana road would swing west around southwestern Etosha, through a gap in the hills, before heading north along Etosha's western border, until Otjijekua where the park boundary and the road split. Though the Skakelkomitee recognised the value of having the road form the entire Kaokoveld-Etosha boundary, the BAD Minister had earlier informed local Hereros that the Onaiso area would be included within Kaokoveld - and the committee was cognisant that too many alterations to the proposed boundary could embarrass the Minister. 109

However, until the ICJ dismissed the charges against South Africa on technical grounds in 1966, the government delayed implementing Odendaal, including finalising Kaokoveld's borders. 110 This created uncertainty and conflict during the late 1960s. The boundary recommended by the Skakelkomitee, though cognisant of earlier promises made to the Herero, and with the control of human and livestock movements in mind, did not account for the fact that Hereros periodically grazed their stock within Etosha and considered certain areas of the park as their birthright. In particular, Headman Kephas Muzuma, who was born at Okavao in Etosha, resented being

NAN, LUKS, 1.3, 4 September 1964.

NAN, LUKS, 1.3, Odendaalverslag: Bemarking van vee uit die noordelike Bantoegebiede en verwante aangeleenthede, die Sekretaris van Suidwes-Afrika, 3.9.1964; Owen-Smith, An Arid Eden, 50.

NAN, LUKS, 1.3, 4 September 1964; NAN, LUKS, 1.2, Memorandum aan Uitvoerende Komitee insake notule en aanbevelings van die Skakelkomitee: verskille in die Odendaalverslag: Vorderingsverslag oor aanbevelings ens. soos vervat in die notule, 15 Julie 1964.

^{109.} NAN, LUKS, 1.3, 4 September 1964, 17.

^{110.} NAN, LUKS, 2.6, Vorderingsverslag oor Skakelkomitee-Aangeleenthede tot 12 Februarie 1965, 12.



chased [...] away from the land that I am born in. [...] He felt [the whites] had enough land south of the park to farm on. Now I want to go back to the place where I was born but my cattle are said to not be healthy enough[.]¹¹¹

Born in 1910, Muzuma and his followers had already been relocated from the Etosha-Kaokoveld boundary area once, northwards to Ombombo in 1929 when the colonial government created a stock-free corridor between 'diseased' African livestock and settler farms. 112 This earlier forced relocation is still remembered as a terrifying event, one that exacerbated a lasting feud among different kin networks of Herero and Himba within Kaokoveld. 113 From the 1940s until Odendaal, Muzuma's negotiated with Headman Joel Tjijahura for grazing and waterhole access from Ombombo to Oniaso, also making use of remote grazing in the mountainous area above the Khowarib Schlucht. Throughout this period people and stock crossed into unfenced Etosha for a variety of reasons:

There were traditional uses in the park - [the people] lived there, grazed their cattle and they hunted and traded with other indigenous peoples occupying parts of the park - they hunted oryx and giraffe and traded with the Ovambo to the North who had gardens - e.g. giraffe rumens were traded to the Ovambo who used these for clothing items and water gourds. 114

Following the ICJ dismissal, South Africa gained confidence on the international stage and began moving forward with the Odendaal recommendations. 115 During the late 1960s, the South African government purchased 223 whiteowned farms in Kaokoveld and Damaraland - needing to remove all whites to create the homelands. 116 In 1969, Muzuma and many other Hereros moved to one of these farms, renamed Otjikaware, adjacent to the Kamanjab-Ruacana road along the Etosha boundary - though their livestock stayed further west. 117 However, the exact boundary between Etosha and Kaokoveld

Interview with Fanwell Ndjiva, 27 April 2007, from Hoole, 'Community-Based Conservation'.

Hoole, 'Community-Based Conservation', 220; NAN, South West Africa Administration (hereafter SWAA), 1168, Removal of Natives from the Southern Kaokoveld to the North, Correspondence between Officer in Charge of Native Affairs, Ovamboland and Secretary of South West Africa, Windhoek (1929).

^{113.} Personal communication with Uakendisa Muzuma, 13 November 2019; NAN, SWAA, 1168, Extract from Monthly Report for May and June, Post Commander Tshimaka, SWA Police, Tshimaka (1929).

^{114.} Unpublished meeting minutes, collected by A. Hoole at Ehi-Rovipuka Conservancy, August 2006.

^{115.} FRUS, 624. Telegram from the Department of State to the Embassy in South Africa, Washington, August 17, 1966, 8:14 p.m., Source: Department of State, Central Files, POL 19 SW AFR, Confidential; Priority; FRUS, 626. Telegram from the Department of State to the Embassy in South Africa, Washington, September 21, 1966, 8:29 p.m., Source: Department of State, Central Files, POL 19SW AFR,

^{116.} Until the implementation of the Odendaal Plan there were a limited number of white-owned farms in Kaokoveld and Damaraland which had been granted as part of a generous land settlement program for German and white South African settlers. See C. Botha, 'The Politics of Land Settlement in Namibia,

^{117.} Interview with Festus Kaijao Vejorerako, 24 April 2007, from Hoole, 'Community-Based Conservation', 160.

remained unclear even among local BAD officials. 118 In the interim, BAD staff chided, but did not evict, Muzuma's followers from rangelands near the Khowarib Schlucht, which BAD considered part of Etosha but remained part of Kaokoveld when the boundaries were finalised. The restrictions on grazing in 'the park' exasperated Muzuma's herders. Confronting BAD official Garth Owen-Smith,

some of the Herero launched into a tirade about government regulations preventing them from entering the park. The areas that they came from had received no rain this season, they claimed, and if they remained there all their cattle would die of starvation.119

Government attempts to limit livestock movements conflicted with time-tested mobility strategies for survival in the semi-arid northwest. This compromised livestock health and human livelihoods, and also created new forms of conflict by forcing pastoralists to spatially realign their grazing practices. This was evident in negotiations between Muzuma, Tjijahura, and BAD administrators who sought to decrease the number of livestock in Kaokoveld, due to overgrazing concerns. Unable to make use of historic rangelands, Muzuma and Tijiahura were amenable to a government-sponsored livestock marketing programme, whereby stock would be inspected by states vets and exported south of the Red Line. Their participation in the programme reveal how livestock were vectors through which political risk could be manifest. Muzuma and Tjijahura's participation in the marketing programme brought them into conflict with rival pastoralists further north, who were more antagonistic towards government efforts for destocking Kaokoveld. BAD officials felt that securing a foothold for livestock marketing with Muzuma and Tjijahura could open the way to negotiations further north, possibly leading to, according to the Skakelkomitee, greater cooperation between government and pastoralists in Kaokoveld, and widespread destocking in the homeland. 120 Unfortunately, the government, having an effective monopoly on purchasing livestock which was otherwise restricted to Kaokoveld due to veterinary restrictions, offered only 5 cents per pound. Muzuma knew that 11 cents per pound was being paid further south. He suggested a compromise of 7 cents per pound, which BAD's chief

Van Wolputte has noted that between 1964 and 1974 Kaokoveld Commissioner Ben van Zyl found it 'impossible to indicate the [Kaokoveld] Reserve's precise size', estimating it at anywhere between 4,277,519 and 5,881,588 hectares. NAN, Bantu Affairs Opuwo (hereafter BOP), 7 N1/15/6 Bantusakekommissaris Ohopoho (B. van Zyl), Memorandum: Feite posisie van die Kaokoland (1972), 1, from S. van Wolputte, 'Subject Disobedience: The Colonial Narrative and Native Counterworks in Northwestern Namibia, c.1920-1975', History and Anthropology, 15, 2 (2004), 169 n. 19. Archives from the Skakelkomitee shed light on this difficulty: the boundary was not decided. Owen-Smith's memoir provides numerous examples of how the challenges in governing Kaokoveld, manifest in certain government-Herero interactions. Owen-Smith, An Arid Eden, 45-66.

^{119.} Owen-Smith, An Arid Eden, 88.

^{120.} NAN, LUKS, 1.3, Uitvoering van die aanbevelings van die Odendaalkomiteeverslag: Die bemarking van vee uit die noordelike Bantoegebiede, 25-26 Augustus 1965.



agricultural officer rejected. As a result, no cattle were sold to the government in southern or northern Kaokoveld, the quarantine camp at Omutambo Mauwe was not used, and overgrazing of rangelands west of the Etosha boundary continued. 121

Muzuma continued to protest state attempts to separate the Herero people from access to their historical rangelands, saying 'that he could not die with a good heart without returning to his birthplace in Etosha'. 122 The boundary of Etosha and Kaokoveld was finalised in 1972; still the Herero put pressure on the government by moving their stock into the park. In addition to being a survival strategy, nomadism in Kaokoveld could also be a political strategy, as historian Steven van Wolputte has shown. 123 In this case, livestock, as mediators of politics and as central to conflicting state and Herero visions of the idealised society, were central to the transformations of the Etosha-Kaokoveld human-non-human collective. Different perspectives on livestock mobility were not ancillary to political disagreements, they were central to Herero discontent with the apartheid state and state attempts to limit Herero mobility. This disagreement proved irresolvable. After repeated livestock incursions into Etosha, Muzuma was arrested and taken to Kamanjab. 124 But neither government policy nor punishment could alleviate the demands of keeping stock along the Etosha-Kaokoveld border. The government never seems to have understood that Herero interests were inseparable from the interests of their livestock. As Muzuma said to the government: 'Our income derives only from livestock. But if we take our animals across the cordon they will be shot. It is dry. What do we do now? We are hungry and our animals are dying.'125

Biophysical discontents: ungulate death in Etosha

Spatially segregating humans, livestock, and wildlife favoured the government's goal of a rationally organised space. 126 Following Odendaal, the erection of fencing in Etosha-Kaokoveld was a high priority for government officials. 127 Examining resistance to South African rule in Kaokoveld, Van Wolputte has noted that that Odendaal recommendations 'were never put into force due to

- Owen-Smith, An Arid Eden, 89-91. 121.
- Interview with Fanwell Ndjiva, 27 April 2007, from Hoole, 'Community-Based Conservation', 160.
- 123. Van Wolputte, 'Subject Disobedience', 154.
- 124. Interview with Fanwell Ndjiva, 27 April 2007, from Hoole, 'Community-Based Conservation', 160.
- Kephas Muzuma, NAN, BOP, 5 N1/15/4/3, Toesighoudende beampte B. van Zyl, Vergadering te Ohopoho op 10 en 11 Januarie 1963, p. 3, from Van Wolputte, 'Cattle Works', 119. (Van Wolputte gives the source as: NAN, BOP, 7 N1/15/6, Bantusakekommissaris Opuwa (B.J. van Zyl), Memorandum, Feite posisie van die Kaokoveld, undated; NAN, BOP, 5 N1/15/4/1, Notule van vergaderinge gehou te Opuwo 13 November 1978; these appear to be incorrect.)
- 126. NAN, LUKS, 1.1, 30 Junie en 1 Julie, 1964.
- 127. NAN, LUKS, 2.8, Memorandum aan Uitvoerende Komitee insake notule en aanbevelings van de Skakelkomitee (Vergadering gehou te Windhoek op 9 Junie 1966).

the combination of uncertainty and local opposition'. 128 Whilst this is largely true, the placement of the Etosha-Kaokoveld boundary, and subsequent erection of fencing, severed what Tinley and other conservationists believed was a unified ecosystem. Certainly, it was treated as such by Muzuma and his followers. Though initially the new boundaries had little effect on wildlife, 129 in the years to come Odendaal played a key role in transforming the ecology of wildlife in Etosha.

Examining the formation of what became Etosha National Park adds a new layer to the history of protected areas and resource conservation in southern Africa. 130 This history has been extensively examined by African environmental historians. In particular, works by William Beinart, Jane Carruthers, Richard Grove, and Lance van Sittert provide important background, including how imperial perspectives, economic concerns, hunting, and exclusionary land-use practices set the paradigm for African exclusion from protected areas. ¹³¹ The formation of Etosha National Park took place during a period when the 'fortress conservation' model was still globally paradigmatic, and Africa's protected areas were also considered part of states' attempts at development through high modernist approaches. 132

By the mid-twentieth century, South Africa's exclusionary national park model was being widely adopted by colonial administrators, including attempts to turn Etosha into a tourist destination. ¹³³ Until the 1940s wildlife conservation concerns were little considered by officials within Namibia. When wildlife issues

Van Wolputte, 'Cattle Works', 117. 128.

Berry, 'Historical Review', 5.

I use the International Union for Conservation of Nature's 2008 definition of protected areas: 'A protected area is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long term conservation of nature with associated ecosystem services and cultural values'. International Union for Conservation of Nature, 'What Is a Protected Area?', IUCN website, https://www.iucn.org/theme/protected-areas/about, accessed 17 July 2019. P. West, J. Igoe, and D. Brockington, 'Parks and Peoples: The Social Impact of Protected Areas', Annual Review of Anthropology, 35, 1 (2006), 251-277.

W. Beinart, The Rise of Conservation in South Africa: Settlers, Livestock and the Environment, 1770-1950 (Oxford: Oxford University Press, 2003); W. Beinart and P. Coates, Environment and History: The Taming of Nature in the USA and South Africa (London: Routledge, 1995); J. Carruthers, 'National Parks in South Africa', in H. Suich, B. Child, and A. Spenceley, eds, Evolution and Innovation in Wildlife Conservation: Parks and Game Ranches to Transfrontier Conservation Areas (London: Earthscan, 2009), 35-49; J. Carruthers, The Kruger National Park: A Social and Political History (Pietermaritzburg: University of Natal Press, 1995); R. Grove, Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860 (Cambridge: Cambridge University Press, 1996); L. van Sittert, "Keeping the Enemy at Bay": The Extermination of Wild Carnivora in the Cape Colony, 1889-1910', Environmental History, 3, 3 (1998), 333-356; L. van Sittert, 'Bringing in the Wild: The Commodification of Wild Animals in the Cape Colony/Province c. 1850-1950', Journal of African History, 46, 2 (2005), 269-291.

^{132.} D. Brockington, Fortress Conservation: The Preservation of Mkomazi Game Reserve, Tanzania (Oxford: Oxford University Press, 2002); W. Adams and D. Hulme, 'Conservation and Community: Changing Narratives, Policies and Practices in African Conservation', in D. Hulme and M. Murphree, eds, African Wildlife & Livelihoods: The Promise and Performance of Community Conservation (Oxford: James Currey), 9-23.

^{133.} W. Beinart and L. Hughes, Environment and Empire (Oxford: Oxford University Press, 2009); E. Worthington, Science in Africa: A Review of Scientific Research Relating to Tropical and Southern Africa (London: Oxford University Press, 1938); Miescher, Namibia's Red Line, 162.

arose - for instance, when an elephant (Loxodonta africana) was illegally killed, or lions (Panthera leo) terrorised settler or African farmers – official responses sought to ensure fidelity to the rule of law rather than species protection. 134 Segregationist policies and practices were primarily concerned with white settler economic and social benefits, though by the 1950s wildlife were increasingly considered an important part of Namibia's tourism industry. 135 During the apartheid era, veterinary concerns surrounding livestock and wildlife protection were joined by the logic and language of separate development. The spatial rearrangement of Etosha-Kaokoveld and the concretisation of the Etosha National Park in the 1960s, extends the history of Namibia's racialised governance beyond people to the formation of a highly visible state-protected area. The history of Etosha has primarily been written by conservationists who worked there; ¹³⁶ anthropologist Ute Dieckmann's history of how the Haillom (Khoe-Sān) were evicted or absorbed into the park administration in the 1950s is a notable exception. 137 A comprehensive historical analysis of the park, including how its history intersected with the German and South African empires, and how its politics affected Etosha's wildlife, remains to be written.

In 1973 Etosha was enclosed by 850 kilometres of fence, in response to government and white farmer demands that wildlife and livestock be separated and that Africans be disallowed grazing and hunting access. 138 As the fences went up, they halted large-scale wildlife migration routes, particularly of plains zebra (Equus quagga) and blue wildebeest (Connochaetes taurinus), leading to an unforeseen collapse in Etosha's ungulate populations. Beginning in the 1950s, low-quality fencing had been erected by white farmers along Etosha's southern boundary. During the late 1950s to early 1960s, an estimated 25,000 plains zebra and 25,000-30,000 wildebeest made an annual anti-clockwise migration along the western side of the Etosha pan, with some wildebeest moving in and out of Ovamboland in the north. 139 In 1961, ecologist R. C. Bigalke provided an in-depth analysis of how these herds alternated between dry and wet season grazing areas, following localised rains en masse. 140 In 1962, Director of Nature Conservation Bernabé de la Bat estimated

Rizzo, 'The Elephant Shooting: Colonial Law and Indirect Rule in Kaoko, Northwestern Namibia, in the 1920s and 1930s', Journal of African History, 48, 2 (2007), 245-266; NAN, NAO, 031, Petition: R. Hammerbeck & Kieckebusch, Elephants and Kaokoveld Sheep, Station Commander SWA Police, Kamanjab to Magistrate, Outjo, 27 August 1938; NAN, NAO, 028, Statement: Re shooting of Royal Game, Andries Mbara, Native Constable, 10 October 1933.

^{135.} NAN, NAO, 066, Game Control, Official Correspondence, South African Police, Namutoni to Native Commissioner, Ovamboland, 12 December 1947.

^{136.} Bat, 'Etosha: 75 Years'; R. van Schalkwyk and H. Berry, eds, Etosha 100: Celebrating a Hundred Years of Conservation (Windhoek: Venture Publications, 2007); Berry, 'Historical Review'.

^{137.} Dieckmann, Hai||om in the Etosha Region.

^{138.} Hoole and Berkes, 'Breaking Down Fences'.

^{139.} Bat, 'Etosha: 75 Years'; Owen-Smith, An Arid Eden, 321.

^{140.} R. Bigalke, 'Some Observations on the Ecology of the Etosha Game Park, South West Africa', Annual of the Cape Provincial Museum, 1 (1961), 49-67.

100,000 large herbivores in Etosha. These numbers began falling during the 1960s. From 1961 to 1963, Namibia's worst recorded outbreak of foot-and-mouth disease led to 'game-proof' fencing along Etosha's southern boundary. 141 By 1968 it was estimated that 15,000 plains zebra and 5000 wildebeest remained in the park. Fencing along the park's western and northern boundaries was completed in 1973. By 1980 only 9000 zebra and 3000 wildebeest remained. 142 The proximate causes for these declines were a rise in the incidence of anthrax within the park and a growing population of predators that feasted upon sick and dying game. 143 The ultimate causes were the Odendaal recommendations, leading to the construction of roads and water sources, and the erection of fences limiting wildlife migrations.

A 1976 study of anthrax in Etosha revealed that, between 1966 and 1974, at least 1635 animals, 89 per cent of which were plains zebra and wildebeest, were known to have died from the disease. 144 Increased incidence of anthrax – which had long been endemic in Etosha¹⁴⁵ – were traced to road-building projects and artificial waterholes which also created enzootic anthrax areas. Road building to support tourism and park administration increased the number of rain-filled gravel pits within the park: by 1970 at least 134 of these 'mini-dams' had been created in the Okaukuejo area alone and hundreds were estimated throughout the park. 146 During the 1950s and early 1960s, Etosha staff had begun an intensive borehole drilling programme in the woodlands west of the Etosha pan. As obligate drinkers, Etosha's herbivores exploited grazing areas where water was not previously available. 147 During the wet season, gravel pits would retain water for up to five weeks longer than small, ephemeral, rainwater pans. 148 Both of these developments concentrated wildlife within certain areas and altered migrations, whilst the fences kept herds from exploiting rangelands in Kaokoveld and Ovamboland. During the late 1960s and early 1970s, newly available areas were overgrazed and mini-dams became hotspots for anthrax transmission during the rainy season. From 1967 to 1987, anthrax was the primary cause of death in 11 herbivore species. 149 The epidemic increased. From 1974 to 1978, 76 per cent of recorded wildebeest mortalities were from anthrax. 150

^{141.} H. Schneider, 'The History of Veterinary Medicine in Namibia', Journal of the South African Veterinary Association, 83, 1 (2012), 1-11; P. Stark, The White Bushman (Pretoria: Protea, 2011), 122.

^{142.} H. Ebedes, 'Anthrax Epizootics in Etosha National Park', Madoqua, 10, 2 (1976), 99-118; Owen-Smith, An Arid Eden, 322.

^{143.} H. Berry, 'The Wildebeest Problem in the Etosha National Park: A Synthesis', Madoqua, 13, 2 (1982), 151-157.

^{144.} Ebedes, 'Anthrax Epizootics'.

Schalkwyk and Berry, Etosha 100, 109.

^{146.} Ebedes, 'Anthrax Epizootics'; H. Berry and W. Siegfried, 'Mosaic-Like Events in Arid and Semi-Arid Namibia', in H. Remmert, ed., The Mosaic-Cycle Concept of Ecosystems (Berlin: Springer, 1991), 155.

^{147.} H. Berry and G. Louw, 'Nutritional Balance between Grassland Productivity and Large Herbivore Demand in the Etosha National Park', Madogua, 13, 2 (1982), 141-150.

^{148.} Ebedes, 'Anthrax Epizootics'.

^{149.} H. Berry, 'Ecological Background and Management Application of Contraception in Free-Living African Lions' (Okaukuejo, 1987) (author's personal files).

^{150.} Berry, 'The Wildebeest Problem'.

Increasingly concentrated herds could no longer disperse beyond Etosha's boundaries. Wildlife caught outside the fence diminished due to hunting and competition with livestock. 151 During this same period, due to a combination of increased food availability - scavenging carcasses - and limitations in prey movement from fencing, and being resilient to anthrax, lion numbers rose within the park, putting further pressure on reduced ungulate populations. 152

The widespread death of ungulates in Etosha highlights the shortcomings of the South African government's technocratic approaches to what it saw as the primarily social-political challenges of governing Namibia. Tinley, in his alternate proposal, revealed conceptual insufficiencies, whilst Muzuma and the Herero, by contravening livestock movement restrictions, revealed material and cultural insufficiencies in Odendaal's attempts to simplify, arrange, classify, and order Etosha-Kaokoveld without accounting for the breadth of humannon-human relationships. Similarly, wildlife in Etosha could only thrive within a certain range of ecological circumstances, which were violated by the transformations following Odendaal. Their biophysical requirements were not prostrate before the state's high modernist attempts to simplify the Etosha-Kaokoveld collective.

Human-non-human relationships are always negotiated within spaces of 'mutual incomprehension'. 153 The growing field of human-animal studies addresses the difficulty of 'togetherness' among humans and non-humans. Humans' incomplete power over animals is most clearly visible in spaces where humans and animals are not removed from one another's daily experiences. Human-animal historian Harriet Ritvo has observed that animals 'never talk back'. 154 However, the interweaving lives of humans and nonhumans can be more carefully assessed by using diverse methods to incorporate alternative viewpoints. As historian Erica Fudge has written, self-consciousness is not a prerequisite for historical agency. 155 Animal (including human) biophysical requirements, when analysed as part of what Swart has called 'animal-sensitive histories', enable historians to diversify the number and range of viewpoints incorporated into histories. Prior to animal-sensitive histories, animals were among the most persistently ignored subaltern historical perspectives. Historian Aaron Skabelund has called for increased attention to relationships between animals and imperialism, particularly in non-western settings. 156 Animal-sensitive historians, such as Swart, Elinor Melville, and Peter

Berry, 'The Wildebeest Problem'.

H. Berry, 'Abnormal Levels of Disease and Predation as Limiting Factors for Wildebeest in the Etosha National Park', Madoqua, 12, 4 (1981), 242-253.

^{153.} F. Ginn, U. Beisel, and M. Barua, 'Flourishing with Awkward Creatures: Togetherness, Vulnerability, Killing', Environmental Humanities, 4 (2014), 113-123.

^{154.} From A. Skabelund, 'Animals and Imperialism: Recent Historiographical Trends', History Compass, 11,

^{155.} E. Fudge, 'What Was It Like to Be a Cow?', in The Oxford Handbook of Animal Studies, 1, 2014, 1-37.

^{156.} Skabelund, 'Animals and Imperialism'.

Boomgaard, are at the vanguard of such scholarship. 157 Melville's work in particular has revealed how European-induced landscape transformations can alter regional ecologies with deleterious effects for human livelihoods and wildlife.

By revealing the death of Etosha's ungulates, in a space designated specifically for wildlife conservation, as a shortcoming in the apartheid state's ability to sever humans from non-humans, this human-animal perspective reinforces the importance of animal experiences as a subaltern commentary on state planning. Wildlife challenges to state control in Etosha continue. Since enclosure, Etosha has often failed to keep certain wildlife within its boundaries. There is an extensive history of elephants, lions, warthogs (Phacochoerus africanus), and other species breaking down, digging underneath, and otherwise transgressing park boundaries, often with negative outcomes for wildlife, humans, and livestock. 158 As historian Dipesh Chakrabarty has noted, the Anthropocene forces humans to unify different forms of understanding. 159 This includes a recognition that human capacity to experience environmental transformations is limited. Animal-sensitive histories diversify scholars' and policy makers' abilities to critically assess both the human and non-human effects of politics, economics, and human societies, particularly in spaces within the global South, such as Etosha-Kaokoveld, where much of history remains to be written.

More-than-human outcomes

Tinley and other conservationists were right to worry over the effects of Odendaal in Etosha-Kaokoveld. Many of Odendaal's legacies are central to the political and ecological challenges still facing communities and conservationists there. During the 1970s, an era of relatively plentiful rainfall, the government embarked upon an ambitious borehole-drilling programme. At the time the thinking was that 'the [livestock] carrying capacity of an area is mainly determined by the number of boreholes'. 160 As grass replaced water as the limiting factor for grazing species, livestock and wildlife numbers rose. 161 Concurrently, fencing reduced zebra movement between Etosha and Kaokoveld. Plains zebra

S. Swart, Riding High: Horses, Humans and History in South Africa (Johannesburg: University of Witwatersrand Press, 2010); E. Melville, A Plague of Sheep: Environmental Consequences of the Conquest of Mexico (Cambridge: Cambridge University Press, 1997); P. Boomgaard, Frontiers of Fear: Tigers and People in the Malay World, 1600-1950 (New Haven: Yale University Press, 2001).

^{158.} This history has not been comprehensively set down. However, see Schalkwyk and Berry, Etosha 100; Bat, 'Etosha: 75 Years'; Berry, 'Historical Review'; R. Orford, 'Contraception in the Lions of Etosha', in South West Africa Annual (Windhoek: SWA Publications, 1986), 57-68; P. Stander, 'A Suggested Management Strategy for Stock-Raiding Lions in Namibia', South African Journal of Wildlife Research, 20, 2

^{159.} D. Chakrabarty, 'Postcolonial Studies and the Challenge of Climate Change', New Literary History, 43, 1 (2012), 1-18; Chakrabarty, 'The Climate of History'.

^{160.} NAN, LUKS, 1.3, 4 September 1964, 17, my translation; Owen-Smith, An Arid Eden, 130.

^{161.} M. Bollig, 'Towards an Arid Eden? Boundary-Making, Governance and Benefit Sharing and the Political Ecology of the New Commons of Kunene Region, Northern Namibia', International Journal of the Commons, 10, 2 (2016), 777.



were never numerous in the arid west but would move into the desert when localised rains opened pockets of available grazing. In contrast, mountain zebra primarily resided in Kaokoveld, but could move east during the dry season and years of drought. The fences put an end to such movements.

From 1979 to 1982, Kaokoveld experienced its worst drought since the early 1930s. 162 Prior to Odendaal, pastoralists had not permanently resided in the far west; overgrazing around waterpoints now became the rule. When the rains failed in successive years, rangelands which had been hammered by increasing herd sizes and limited mobility became overgrazed; in many places the soil simply blew away. 163 From 1977 to 1982, mountain zebra numbers in Kaokoveld decreased from 1199 to 193, oryx (Oryx gazella) from 1191 to 164, springbok (Antidorcas marsupialis) from 4859 to 217, and plains zebra from 667 to 0.164 Livestock also died in staggering numbers, including as much 85 per cent of Kaokoveld cattle - tens of thousands. 165 These declines were anticipated by Tinley's concern that pastoralists could not inhabit 'desert and mountain' areas without access to other grazing. A decade of relatively good rains meant that grazing for livestock and wildlife was available and the increase in water meant that livestock numbers in particular grew disproportionate to what the area could support if the rains failed. When drought came livestock and wildlife grazed the region bare. By 1980/81, the situation was critical.

The severing of Etosha-Kaokoveld, and the effects on the region's people, livestock, and wildlife, engendered 'bitterness and frustration' for years to come. 166 Driven by necessity, Kaokoveld residents and their conservationminded partners had to innovate new means of conserving wildlife and supporting livelihoods. During the 1980s, a new form of conservation known as community-based natural resource management (CBNRM), which recognised the linkages between people, livestock, and wildlife, began taking-shape. 167 Because the outcomes of Odendaal had so thoroughly marginalised Kaokoveld residents, and the South African government demonstrated little interest in protecting wildlife, it was left to locals and their partners to forge enduring structures to protect wildlife.

NAN, NAO, 028, 'Drought in Kaokoveld: Official Letter, Native Constable in Charge, Kaokoveld Drought Arrangements, Outjo to Commandant SWA Police, Windhoek, 6 February 1932; SWAA 2513, Official Letter, Concerning Famine in Kaokoveld; Secretary for SWA to Consul for Portugal, Windhoek, 11 October 1932.

^{163.} G. Owen-Smith, The Kaokoveld: An Ecological Base for Future Development Planning (Pretoria: Government Printer, 1971), 62.

^{164.} Owen-Smith, An Arid Eden, 365. Given inconsistencies in aerial survey methods, these numbers should be taken as indicative.

^{165.} G. Owen-Smith, personal communication, 10 November 2017; Owen-Smith, An Arid Eden, 332.

^{166.} Berry, 'Historical Review', 5.

^{167.} B. Jones, 'The Evolution of a Community-Based Approach to Wildlife Management at Kunene, Namibia', in D. Hulme and M. Murphree, eds, African Wildlife & Livelihoods: The Promise and Performance of Community Conservation (Oxford: James Currey, 2001), 160-176.

Since the 1970s there have been periodic attempts by the communities and CBNRM practitioners to re-connect the Etosha-Kaokoveld landscape driven. Eventually this could entail removing the fences so a corridor running from Etosha to the sea can be reopened for both livestock and wildlife, recreating aspects of Game Reserve No. 2. Efforts to create this so-called 'People's Park', and undo some of the damage of Odendaal, are underway. 168

Conclusion

This article has shown that South African attempts to spatially rearrange Etosha-Kaokoveld were undermined by conceptual, pastoral, and biophysical means, due to the state overlooking certain human-non-human relationships in the Etosha-Kaokoveld collective. Taking a more-than-human approach to this history reveals ways in which humans and non-humans were co-constituted and relationally dynamic. The South African government sought to simplify, arrange, classify, and order a human-non-human collective that - through Tinley's emphasis on the region's ecology, Herero commitments to linked human and livestock well-being, and the biophysical requirements of Etosha ungulates - were revealed as insufficient for the successful technocratic management of the Etosha-Kaokoveld. Nevertheless, many of the social, symbolic, ontological, and material relations among and between humans and non-humans were transformed during this period, yielding different Etosha and Kaokoveld collectives from the one that existed prior to Odendaal. Yet, despite transforming the landscape, the South African government did not entirely sever Etosha-Kaokoveld. As Latour has noted, 'things strike back.' 169 If humans could comprehensively account for the panoply of human-non-human interactions, perhaps we could *successfully* dominate the biosphere. If so, the Anthropocene would not pose existential challenges. Alas (fortunately?) humans have proven unable to thoroughly dominate human-non-human collectives, with lasting effects. The negative capabilities revealed in this history indicate one of the roles that historians can play in developing human understandings within the Anthropocene: we can examine the historical record to assess what drove past transformations in human-non-human collectives. Such historical case studies, and the lessons we glean from them, might provide insights for the present and possible future(s).

In closing, I offer one such lesson from this history. In the process of making a state legible, governments are implicitly making claims about what tangible and conceptual aspects require attention. In opposition to the South African

Integrated Rural Development and Nature Conservation, 'Namibia's First Large-Scale Voluntary Park', https://www.irdnc.org.na/namibias-first-large-scale-voluntary-park.html, accessed 20 November 2020.

^{169.} B. Latour, 'When Things Strike Back: A Possible Contribution of "Science Studies" to the Social Sciences', British Journal of Sociology, 51, 1 (2000), 107–123.

government's attempted transformation of Etosha-Kaokoveld, overlooked members of the collective exerted agency within the blind spots of the government's technocratic vision. It may be that subaltern humans and non-humans can always undermine state programmes by bringing attention to conceptual, material, and biophysical components, processes, or interactions, which the state has deemed unimportant. As Spivak noted, the 'colonized subaltern subject is irretrievably heterogenous'. Further, the subaltern always deviates from the ideal.¹⁷⁰ This is one way that marginality can be a position of power. 171 Idealised visions have been great contributors to negative humannon-human outcomes. Building a more positive Anthropocene is revealed to be a question not just of material transformations, but one of access and power: of politics. ¹⁷² One way or another the human and non-human subaltern will have their say. Historians inhabiting the Anthropocene can develop this perspective by revealing other examples where the domination failed due to unaccounted-for components of a given collective.

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Spivak, 'Can the Subaltern Speak?' 170.

^{171.} J. Scott, Weapons of the Weak: Everyday Forms of Peasant Resistance (New Haven: Yale University

^{172.} B. Latour, Politics of Nature: How to Bring the Sciences into Democracy (Cambridge: Harvard University Press, 2004).