

Extinctionscapes

Bersaglio, Brock; Margulies, Jared

DOI:

[10.1080/14649365.2021.1876910](https://doi.org/10.1080/14649365.2021.1876910)

License:

Creative Commons: Attribution-NonCommercial-NoDerivs (CC BY-NC-ND)

Document Version

Peer reviewed version

Citation for published version (Harvard):

Bersaglio, B & Margulies, J 2021, 'Extinctionscapes: Spatializing the commodification of animal lives and afterlives in conservation landscapes', *Social and Cultural Geography*.
<https://doi.org/10.1080/14649365.2021.1876910>

[Link to publication on Research at Birmingham portal](#)

Publisher Rights Statement:

This is an Accepted Manuscript version of the following article, accepted for publication in *Social and Cultural Geography*. Brock Bersaglio & Jared Margulies (2021) *Extinctionscapes: Spatializing the commodification of animal lives and afterlives in conservation landscapes*, *Social & Cultural Geography*, DOI: 10.1080/14649365.2021.1876910. It is deposited under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (<http://creativecommons.org/licenses/by-nc-nd/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

General rights

Unless a licence is specified above, all rights (including copyright and moral rights) in this document are retained by the authors and/or the copyright holders. The express permission of the copyright holder must be obtained for any use of this material other than for purposes permitted by law.

- Users may freely distribute the URL that is used to identify this publication.
- Users may download and/or print one copy of the publication from the University of Birmingham research portal for the purpose of private study or non-commercial research.
- User may use extracts from the document in line with the concept of 'fair dealing' under the Copyright, Designs and Patents Act 1988 (?)
- Users may not further distribute the material nor use it for the purposes of commercial gain.

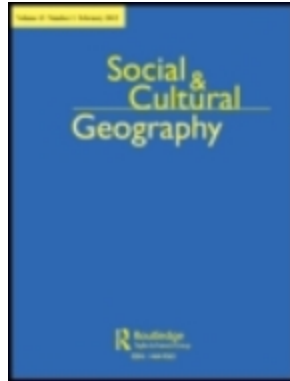
Where a licence is displayed above, please note the terms and conditions of the licence govern your use of this document.

When citing, please reference the published version.

Take down policy

While the University of Birmingham exercises care and attention in making items available there are rare occasions when an item has been uploaded in error or has been deemed to be commercially or otherwise sensitive.

If you believe that this is the case for this document, please contact UBIRA@lists.bham.ac.uk providing details and we will remove access to the work immediately and investigate.



Extinctionscapes: Spatializing the commodification of animal lives and afterlives in conservation landscapes

Journal:	<i>Social and Cultural Geography</i>
Manuscript ID	RSCG-2019-0187.R1
Manuscript Type:	Research Article
Keywords:	Laikipia, lively commodities, geographies of death and dying, absence-presence, extinction geographies
Abstract:	<p>This article advances a more-than-human perspective on geographies of death and dying, engaging with extinctionscapes as spaces where the memorialization of nonhuman life generates affective and commodifiable experiences with species loss in conservation landscapes. Bringing geographical concepts, such as absence-presence, into conversation with recent literature on lively commodities, we describe how animals at the threshold of life and death are made to work for conservation as well as how their afterlives are subjected to ongoing forms of commodification through acts of memorialization in landscape. Specifically, our analysis focuses on the stories of three rhinos at a conservancy in Kenya to consider the themes of death and dying, value, and commodification in relation to endangered species conservation. By situating the lives and afterlives of these rhinos in the history of settler colonialism and capitalism in Kenya, we examine how commodification, as a social and cultural process, becomes entangled with the corporeal and disincorporate lives of animals and contributes to the reproduction of historic injustices through extinctionscapes. Ultimately, we argue for ongoing critical engagement with the amorphous borderland of life and death in geographies of conservation, which represents an important space of biopolitics and commodification.</p>

SCHOLARONE™
Manuscripts

1
2
3 **Extinctionscapes: Spatializing the commodification of animal lives and afterlives in**
4 **conservation landscapes**
5
6

7 4
8 **Abstract**

9 6 This article advances a more-than-human perspective on geographies of death and dying, engaging
10 with extinctionscapes as spaces where the memorialization of nonhuman life generates affective and
11 8 commodifiable experiences with species loss in conservation landscapes. Bringing geographical
12 concepts, such as absence-presence, into conversation with recent literature on lively commodities, we
13 10 describe how animals at the threshold of life and death are made to work for conservation as well as
14 how their afterlives are subjected to ongoing forms of commodification through acts of
15 12 memorialization in landscape. Specifically, our analysis focuses on the stories of three rhinos at a
16 conservancy in Kenya to consider the themes of death and dying, value, and commodification in
17 14 relation to endangered species conservation. By situating the lives and afterlives of these rhinos in the
18 history of settler colonialism and capitalism in Kenya, we examine how commodification, as a social
19 16 and cultural process, becomes entangled with the corporeal and discorporate lives of animals and
20 contributes to the reproduction of historic injustices through extinctionscapes. Ultimately, we argue
21 18 for ongoing critical engagement with the amorphous borderland of life and death in geographies of
22 conservation, which represents an important space of biopolitics and commodification.
23
24

25
26 20
27 **Keywords:** lively commodities; geographies of death and dying; absence-presence; extinction
28 22 geographies; Laikipia
29
30
31 24
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1. Introduction

26 Conservation landscapes around the world are marked with the affects of past and possible extinctions
(Garlick and Symons, 2020; McCorristine and Adams, 2020). Animals at or beyond the brink of
28 extinction actively shape the ecosystems and environments where they once crawled, roamed, soared,
and swam, imbued with social and cultural meaning that persists long after their corporeal lives end
30 (Heise, 2016). The modern field of conservation plays a significant role in constructing the social,
cultural, and spatial attributes of extinction. For instance, acts of memorialisation in conservation
32 landscapes reassert the presence of absent animals – or animals that may soon be absent – into
physical space (Jørgensen, 2018). In this article, we explore the connection between these practices of
34 ‘absence-presence’ (Maddrell, 2013) and the production of value in conservation.

36 Based on fieldwork and content analysis of rhino conservation at Ol Pejeta Conservancy in Laikipia,
Kenya, we consider the themes of death and dying, value, and commodification in relation to
38 endangered species conservation. Our aim is to think further about how and why value embodied by
black (*Diceros bicornis*), southern white (*Ceratotherium simum*), and northern white rhinoceros
40 (*Ceratotherium simum cottoni*) changes as they near, surpass, and linger at the threshold of death and
extinction. To do so, we draw from established literature on the spatialities of death and dying in
42 social and cultural geography (Maddrell and Sidaway, 2010; Stevensen et al., 2016) and developing
literature on lively commodities in political ecology (Collard and Dempsey, 2013). As we later
44 discuss, lively commodities are ‘live commodities whose capitalist value is derived from their status
as living beings’ (Collard and Dempsey, 2013: 2684). In bringing these literatures into dialogue with
46 each other, we make the following contributions to relevant debates and discussions in both fields of
scholarship:

48
First, in the field of social and cultural geography, scholars have engaged with the ways spaces and
50 spatial practices of human death, dying, and bereavement intersect with politics and power
relationships in wider society (Sidaway, 2009). Yet, to date, spaces of conservation and spatial
52 practices of nonhuman death, dying, and bereavement have received less attention (see McCorristone
and Adams, 2020 as an exception). This article advances a more-than-human perspective on
54 geographies of death and dying, engaging with ‘extinctionscapes’ as spaces where the
memorialization of nonhuman life generates affective and commodifiable experiences with species
56 loss through practices of absence-presence in physical landscapes. Relying on geographical concepts
such as absence-presence, continuing bonds, and deathscapes, we advocate for an expanded
58 understanding of lively commodities that is attuned to commodities whose definitive liveliness is in
decline or indiscernible, but whose value remains active in the political ecology of conservation.

60
Second, our analysis grounds the value of rhinos in actually-existing political ecologies,
62 demonstrating how economic value accrued by humans from animal life, death, and afterlives
contributes to the production and reproduction of extinctionscapes. As a field of scholarship, political
ecology ‘highlights the interwoven character of discursive, material, social, and cultural dimensions of
64 the human-environment relation’ and involves the ‘the study of manifold articulations of history and
biology and the cultural mediations through which such articulations are necessarily established’
66 (Escobar, 1999: 2-3). By situating value attached to rhinos in the history of settler colonialism and
capitalism in Laikipia, we sketch a rough outline of how biological, cultural, economic, political, and
68 social forces come together over time, get entangled in the corporeal and disincorporate lives of
animals, and contribute to the reproduction of historic injustices in extinctionscapes and their

1
2
3 surrounding environs. Ultimately, we argue that value is a productive lens to adopt in both fields of
4 72 scholarship, as it encourages deeper engagement with spaces in-between life and death where social
5 and cultural processes of commodification take place but risk being overlooked.
6

7 74
8 This article proceeds by providing more information about the conservation landscape in Laikipia,
9 76 beginning with the story of Sudan, who was the last male northern white rhinoceros. Next, we discuss
10 relevant literature in the fields of social and cultural geography and political ecology. Our subsequent
11 78 analysis and discussion highlights spaces in-between the life and death of rhinos where important
12 processes of bodily and affective commodification unfold. In concluding the article, we discuss the
13 80 ways in which value accrued through the lives and afterlives of rhinos contributes to producing and
14 reproducing landscapes of settler colonialism and capitalism in Kenya. This final section involves
15 82 consideration for the biopolitics of conservation, which we loosely invoke without much theoretical
16 discussion to articulate the political nature of rhino afterlives.
17
18
19 84

20
21 86 **2. Endangered species conservation in a former white highland**

22 ***2.1. Sudan, the last of a kind***

23
24 88 In March 2018, Sudan, the last male northern white rhinoceros on the planet, was euthanised at Ol
25 Pejeta Conservancy in Laikipia, Kenya, due to an illness. In the years before his death, the aging rhino
26 90 had become an international sensation. Seen by many as the last hope for the future of his species,
27 Sudan was made the poster child of global campaigns that aimed to raise funds for the conservation of
28 92 critically endangered northern white rhinoceros. International conservation organisations, such as
29 Save the Rhino, also used Sudan's story to raise awareness and funds for rhino conservation.
30 94 Furthermore, international celebrities and tourists travelled from around the world to encounter Sudan
31 in person at Ol Pejeta, knowing their photo shoots and tourism fees would support the conservancy.
32
33 96

34
35 Behind all the campaigns centred on Sudan's status as the last male northern white rhinoceros is a
36 98 story of deep global connectivity. Born in the country of Sudan in 1973, Sudan was captured in 1975
37 and transported to Czech Republic, where he was held in captivity at Dvůr Králové Zoo for over 30
38 100 years. In 2009, Sudan was relocated to Laikipia, where he was released into a 700-acre enclosure at Ol
39 Pejeta. The course of Sudan's life was both shaped and made possible by flows of bodies, expertise,
40 102 and materials across borders, as well as the international exchange of ideas, paperwork, and, not least
41 of all, money. As the last surviving male of a species on the brink of extinction, Sudan became a
42 104 powerful source of value for many people around the world: as the last of a kind, the rhino's affective
43 value, entertainment value, and normative value all contributed to his celebrity status (Jørgensen,
44 106 2017). These moral and symbolic values also intersected and interacted with economic value
45 embodied by Sudan as a 'lively commodity' in ways that had real and material implications for the
46 108 political ecology of rhino conservation.
47
48
49

50
51 110 With this in mind, we think it is significant that the circulation of value embodied by Sudan did not
52 cease with the rhino's death in 2018. Rather, value embodied by Sudan as a living being was rendered
53 112 into novel forms of value after his death. A recent example of this is the documentary film, *Kifaru*, in
54 which Sudan posthumously offers audiences 'a once in a lifetime experience to feel what extinction
55 114 feels like' (www.kifaruthefilm.com). Moreover, Sudan is not the only rhino at Ol Pejeta Conservancy
56 to experience such an afterlife: it seems that value embodied by other rhinos at the conservancy
57 116 increased as their health, vitality, and liveliness decreased. Like Sudan, value embodied by some of
58
59
60

1
2
3 these rhinos continues to exist and be exchanged in disembodied forms even though their corporeal
4 118 lives have ended. Thus, when analysed through the lens of value, rhinos are capable of transforming
5 into afterlives where their value as corporeal beings continues to circulate for use by humans through
6 120 practices of absence-presence. This means the physical act of dying does relatively little to free rhinos
7 from commodification, or to sever them from the power relationships inherent to commodification as
8 122 a social and cultural process.

11 124 **2.2. Conservation landscapes in Laikipia**

13 Laikipia is a county located in north-central Kenya, where the western foothills of Mt. Kenya stretch
14 126 into a vast plateau. Described as a land use mosaic, Laikipia supports various economic sectors,
15 including cattle ranching and dairy farming, agriculture and horticulture, and subsistence farming and
16 128 transhumance pastoralism. Yet, Laikipia is best known internationally for wildlife tourism, which is
17 supported by a vast network of private- and community-owned conservancies. Although the following
18 130 numbers sometimes change and are contested, some 48 private conservancies occupy about 382,000
19 hectares or 40% of Laikipia (Letai, 2015). Community-owned conservancies in Laikipia account for
20 132 approximately 71,200 hectares or 7% of the county (LWF 2012).

23
24 134 For our purposes, two attributes of Laikipia's wildlife tourism sector are particularly important to
25 note. The first is that Laikipia is internationally recognised as a conservation success story, as
26 136 numerous endangered and endemic species are protected in the county through decentralised,
27 marketised conservation arrangements – such as eco-tourism ventures on private land. Laikipia is said
28 138 to contain more wildlife than Kenya's national parks, Amboseli, Nairobi, and Tsavo East and Tsavo
29 West, combined (LWF, 2012). This includes half of Kenya's black rhinos, the country's second
30 140 largest elephant population, and strong numbers of lion, hunting dog, and cheetah. Laikipia is also
31 renowned for the protection of endemic species like Grevy's zebra, reticulated giraffe, and Laikipia
32 142 hartebeest. Laikipia's wildlife sector was constructed around the notion that attaching value-added
33 activities to an otherwise traditional safari tourism model would help wildlife pay for its own
34 144 conservation (Bersaglio 2018).

37
38 146 The second attribute of note is that prior to being seized as part of Britain's East African Protectorate
39 in 1898, the Laikipia Plateau was largely regarded as the territory of Il Aikipiak Maasais. However,
40 148 the plateau was also a source of seasonal pasture for other pastoralist groups in the area. In 1911, the
41 colonial administration evicted Maasais from the plateau to support its project of white settlement
42 150 (Hughes, 2006). By 1933, Laikipia was officially segregated as a 'white reserve', meaning indigenous
43 Africans were barred from property ownership and economically restricted to selling their labour from
44 152 'native reserves' (sic) to white farms and ranches. In the decades after independence from Britain in
45 1964, dwindling beef markets directed settlers toward Laikipia's emerging for-profit wildlife sector.
46 154 Their large farms and ranches became the internationally-acclaimed conservancies and premier safari
47 destinations that have made Laikipia famous. Ol Pejeta is one of these conservancies.

50 156
51 Located west of Nanyuki Town in Laikipia, the 37,000-plus hectares occupied by Ol Pejeta was
52 158 historically granted to Lord Delamere – one of Kenya's earliest and most politically influential white
53 settlers. Our analysis is largely based on a detailed content analysis of Ol Pejeta's website, social
54 160 media platforms, and other discursive materials. However, it is also supported by contextual insights
55 developed by the first author through regular ethnographic research activities carried out in Laikipia
56 162 over the past five years. For this reason, we occasionally make use of first person narrative when
57
58
59
60

1
2
3 discussing empirical information. Thus, although Ol Pejeta is the focus of our analysis, our
4 164 conclusions are both informed by and relevant to the wider landscape of endangered species
5 conservation in Laikipia.
6

7 166

9 168 **3. Value and the commodification of nonhuman labour and life**

10 In recent years, geography and political ecology have experienced a resurgence of scholarly interest in
11 170 value. Much of this work highlights growing interest in nonhuman experiences with the politics of
12 (de)(re)valuation and the production of capitalist value (Kallis et al., 2013; Goldstein, 2014; Kay and
13 172 Kenney-Lazar, 2017; Collard and Dempsey, 2017a; 2017b). Recognizing that the extent to which
14 nonhumans are capable of producing value through labour is debated (see Kallis and Swyngedouw,
15 174 2018), we agree with Haraway's assertion that human labour is 'only part of the story' of capitalism
16 (2008: 46). Thus, we enter into ongoing debates and discussions concerning nonhuman value relations
17 from the position that animals are capable of producing value, and that they do so as labourers,
18 176 through their circulations, and as lively commodities. This entry point aligns politically with feminist
19 critiques that Marx's labour theory of value ignores fundamental forms of labour that, if appropriately
20 178 valued, might collapse or radically alter capitalist economies (Battistoni, 2017).
21
22
23

24 180

25 **3.1. Animal labour**

26 182 Nonhuman labour can be understood as 'structurally related to (though not the same as) the role of the
27 unwaged labour of many humans, which ... "constitutes the eternal basis for capitalist accumulation"
28 184 (Collard and Dempsey, 2017a: 80). Yet, there are many forms of nonhuman labour, and not all of
29 them equivalent in relation to value production (Collard and Dempsey, 2017a). For the purpose of this
30 186 article, it is helpful to think of unwaged animal labour contributing to value production through three
31 forms of labour suggested by Barua (2018): metabolic, ecological, and affective.
32
33

34 188

35 Metabolic labour refers to processes that make the animal body an accumulation strategy, 'where
36 190 conditions for its growth are intensified to realize relative surplus value' (Barua, 2019b: 654). This
37 form of animal labour is common in industrial dairy and meat production, which fully integrates
38 192 metabolic labour into capitalist systems of production (Beldo, 2017). For example, the reproductive
39 labour of dairy cows is harnessed and transformed through industrial milk production, as cows are
40 194 kept in a near-constant state of pregnancy to ensure a continuous supply of milk (Gillespie, 2014).
41
42

43 196

44 Ecological labour describes value produced through interactions between animals and other living
45 198 organisms in ecosystems. This form of labour is often not fully integrated into capitalist systems of
46 production, as it occurs through the 'quotidian rhythms and ethological propensities' (Barua, 2019b:
47 655) – i.e. routine actions and behaviours – of living organisms rather than through the metabolic
48 200 processes of individual bodies. For example, through interactions with plants, bees perform a form of
49 ecological value that is both essential and lucrative for agroindustries (Kosek, 2010).
50

51 202

52 Affective labour encompasses intangible forms of work done by animals that generate desired
53 204 emotional responses, such as feelings of comfort, intimacy, spectacle, or wonder, through encounters
54 with humans (Parreñas, 2012). This form of animal labour is most relevant to our subsequent analysis,
55 206 as it produces value through the 'relational achievement' of culturally-inflected desires and emotions
56 (Barua 2016). For example, domesticated elephants perform affective labour by satisfying tourists'
57 208 cultural imaginaries of wilderness safaris (Duffy and Moore, 2010).
58
59
60

1
2
3
4 210 **3.2. *Animal circulations***

5 In addition to performing various forms of labour, animals also produce value through their
6 212 circulations (Shukin, 2009). The circulation of giant pandas around the world exemplifies how the
7 movements of animals transformed into zoo spectacles or captive breeders can produce value (Barua,
8 214 2019a), as well as how giant pandas become enrolled in geopolitical alliances (Collard, 2013). In a
9 different sense, value also circulates the globe in the form of animals that have been ‘rendered’ into
10 216 mediatic images of living things or broken down into commodities that were once part of living things
11 (Shukin, 2009).
12
13

14 218
15 Although animal circulations can be understood as distinct from animal labour, the two are also
16 220 interconnected. The affective labour of animals, through exceptional wildlife encounters for example,
17 cannot be disentangled from the cosmopolitan lives many animals lead via their representation in
18 222 films, advertisements, and campaigns, which incite desire and demand for tourist encounters (Igoe,
19 2017). This is illustrated by international volunteers who provide free custodial services to orangutan
20 224 rehabilitation centres in Malaysian Borneo: it is because of affect – the desired swelling of intensity
21 produced through interactions between bodies – that mostly British women pay thousands of dollars
22 226 to clean orangutan cages (Parreñas, 2012).
23
24

25
26 228 **3.3. *Lively commodities***

27 Finally, animals are capable of producing value as lively commodities (Haraway 2008: 46; Collard
28 230 and Dempsey, 2013). Lively commodities are living organisms whose value in the commodity form is
29 tied to their status as living beings, opposed to ‘dead commodities derived from living things (for
30 232 instance, agricultural commodities like meats, fruits, vegetables, and grains)’ (2013: 2684). The
31 concept of lively commodities may refer to the commodification of nonhuman life at the aggregate
32 234 (e.g. ecosystems) or individual (e.g. exotic pets) level (Collard and Dempsey, 2013).
33
34

35 236 Aggregate lively commodities are ecosystems or, more specifically, the reproductive constituents of
36 ecosystems, that have been valued through regimes like carbon markets or ecosystem services
37 238 (Dempsey, 2016). Tourism landscapes can also be understood as aggregate lively commodities, as
38 they provide habitat for animals and plants that are encounterable through viewing, photographing, or
39 240 trophy hunting (Vasan, 2018). Individual lively commodities may be abandoned, ailing, and cuddly
40 animals who are ‘consumed’ in affective economies – ranging from physical encounters in zoos to
41 242 intimate experiences at animal cafés to medical and palliative care services to fundraising campaigns
42 using flagship species (Plourde, 2014).
43
44
45

46 244
47 Conceptualising animals as lively commodities is useful for ongoing analytical engagement with the
48 246 capitalist enclosure of animal life. Yet, the process of becoming a lively commodity is not necessarily
49 permanent or irreversible, nor can it be fully realised at the expense of other ways of knowing,
50 248 valuing, and living with animals (Taylor and Carter, 2020). For example, captive dolphins involved in
51 dolphin-assisted-therapy are neither *just* commodities nor *just* companions. Through their labour, they
52 250 are ‘working subjects, not just worked objects’ (Haraway, 2008, as cited in Taylor and Carter, 2020:
53 69). It is in the grey areas between ‘working subject’ and ‘worked object’, between living commodity
54 252 and dead commodity, that the field of social and cultural geography stands to enrich and necessarily
55 complicate our understanding of what it means to be a lively commodity. It does so in particular by
56
57
58
59
60

254 enabling us to situate the commodification of animal labour and life in social and cultural processes
 255 that produce certain types of space.

256

258 **4. More-than-human geographies of death and dying**

259 **4.1 Absence-presence, continuing bonds, and deathscapes**

260 In the field of social and cultural geography, much has been written on spaces and spatial practices of
 261 death, dying, and bereavement (Maddrell and Sidaway 2010; Romanillos, 2015; Stevensen et al.
 262 2016). This literature highlights differences in cultural practices of death and mourning across space,
 263 place, and time, and seeks to understand how ‘experiences of death, dying and mourning are mediated
 264 through the intersections of the body, culture, society and state, and often make a deep impression on
 265 *sense of self*, private and public identity, as well as *sense of place* in the built and natural
 266 environment’ (Maddrell and Sidaway, 2010: 2). Prominent themes in this literature include: the
 267 medicalization of death and dying in EuroWestern cultures; historicizing contemporary issues of
 268 social class, spatial ordering, and cultural change through a focus on spaces of death; and
 269 understanding how practices of absence-presence or continuing bonds with the deceased shape
 270 physical landscapes (Stevenson et al., 2016). This final area of inquiry in particular blurs commonly
 271 held distinctions between life and death and stands to offer political ecologists fresh and nuanced
 272 insights into how commodification unfolds in a more-than-human world.

274 Absence-presence describes relationships people have with those who have died and are physically
 275 absent. In geographical terms, the concept draws attention to the ways in which the absent deceased
 276 exert agency in the physical world through spatial practices of the living. For example, empty
 277 bedrooms, barren industrial landscapes, and memorial benches may all evoke the presence of absent
 278 individuals through the material topography of peoples’ houses, environments, and everyday lives; so
 279 too may peoples’ mundane spatial practices, such as constructing, acknowledging, or reflecting at
 280 altars and memorials (Maddrell, 2013). Through absence-presence, those who are absent and/or
 281 deceased are ‘given presence through the experiential and relational tension between the physical
 282 absence (not being there) and emotional presence (a sense of still being there) ... through enfolded
 283 blendings of the visual, material, haptic, aural, olfactory, emotional-affective and spiritual planes’
 284 (Maddrell, 2013: 505; see Meier et al., 2013). Absence-presence connects the absent to people and
 285 other living organisms in dynamic landscapes, blurring cognitive boundaries that demarcate life and
 286 death.

288 Absence-presence intersects with a wider body of geographical scholarship on relationships between
 289 death, dying, memorialization, place, and space (Jones et al., 2012; Parr et al., 2015). Informed by
 290 Appadurai’s (1996) understanding of social processes as ‘scapes’, deathscapes emerged to describe
 291 places associated with death and the dead, and the processes through which these places become
 292 imbued with association and meaning (Maddrell and Sidaway, 2010). Deathscapes refers to mundane
 293 spaces, such as sites of border crossings or roadside memorials (Kong, 1999; Rajaram and Grundy-
 294 Warr, 2007), exceptional spaces, such as sites of battle or genocide (Tyner, 2018), and their
 295 interconnected spatialities that affect peoples’ everyday experiences (Sidaway 2009). Deathscapes
 296 also intersect and interact with other scapes, ‘including those of sovereignty (sovereignty-scapes),
 297 memory (memory-scapes) and work, life and beauty (landscapes)’ (Maddrell and Sidaway 2010: 5).
 298 Thus, nonhuman life and ecological relationships are fundamental to understanding deathscapes as

1
2
3 places and processes; yet, the more-than-human nature of deathscapes has received little attention in
4 300 geographical scholarship.

6 302 **4.2. Animal life, death, and memorialization**

8 Literature on geographies of death and dying remains quite anthropocentric; although, a growing
9 304 number of scholars have begun to adopt more-than-human perspectives. Ginn's (2014) work on the
10 commemoration of death and afterlives in British gardens pays notable attention to plants as living
11 306 'commemorabilia'. Relatedly, Micieli-Voutsinas and Cavicchi (2019) draw attention to ecologies of
12 memorialization by focusing on nonhuman survivors in 9/11 commemorations in New York.
13 308 Although this work is enlivened by engagement with nonhuman life, it remains focused on human
14 death and memorialization partly due to the fact that 'the trees and animals which perish in disaster
15 310 events are not commemorated. Memorials enact the presence of lost *human* lives upon public space so
16 that the dead are not forgotten' (Heath-Kelly, 2018: 63).

17 312
18
19 Despite this anthropocentrism, geographers have a growing interest in trying to understand how
20 314 humans experience and memorialise animal death (DeMello, 2016). For example, a growing body of
21 literature focuses on pet cemeteries as spaces where humans mourn and memorialise companion
22 316 species (Howell, 2002; Schuurman and Redmalm, 2019). Additionally, Jørgensen's (2017; 2018)
23 research focuses on the affective dimensions of efforts to save species going extinct and to resurrect
24 318 extinct species. Recent work in these two areas shares a fundamental concern with how processes of
25 nonhuman death and dying are culturally mediated and become imprinted in landscapes (Heise, 2016;
26 320 van Dooren, 2016). It also provides an avenue for extending absence-presence, deathscapes, and other
27 related geographical concepts into the more-than-human world in ways that remain attentive to
28 322 intersections of emotion, gender, identity, labour, materiality, memory, power, and the contested
29 nature of space (Stevenson et al., 2016: 158).

30 324
31 Building on this recent scholarship, we seek to understand how meanings of extinction come to shape
32 326 ecosystems and landscapes through the commodification of animal lives and afterlives. Our analysis
33 reveals some of the ways in which dead and dying rhinos at Ol Pejeta Conservancy have been made to
34 328 work and memorialised in spaces of conservation, providing insights into how practices of absence-
35 presence are used to produce affective landscapes where humans pay fees to encounter endangered
36 330 species, experience the weight of extinction, and, ultimately, sustain conservation as an economic
37 sector. By reconceptualising these conservation landscapes as extinctionscapes, we highlight the
38 332 importance of paying closer attention to the political *and* ecological fabric of deathscapes.

39 334 **5. Rhinos as labouring ambassadors, spectral presences, and lively commodities with afterlives**

40 336 In this section, we unpack empirical examples of how rhinos 'hovering' at or beyond the threshold of
41 death are put to work and enrolled in activities of value production for conservation, and how this
42 338 work has become inscribed in ecosystems and landscapes through absence-presence. Specifically, we
43 discuss three rhinos at Ol Pejeta Conservancy whose liveliness is in decline, ambiguous, or persists
44 340 beyond the threshold of death, but who are no less productive from a value perspective: Baraka,
45 Morani, and Sudan. Our analysis of the lives and afterlives of these rhinos demonstrates just how
46 342 fundamental death and decline are to the reproduction of conservation landscapes, as well as to a
47 sector that understands the labour of the living, the dying, and the dead as commodifiable.

5.1 *Baraka, ambassador against extinction*

346 Something striking about Baraka's story is that a series of unexpected interactions entangled the
 348 rhino in a web of encounters where he routinely performs labour for Ol Pejeta Conservancy. Baraka,
 350 a black rhino, originally roamed freely within the boundaries of the conservancy; but after reaching
 352 maturity, he was wounded in a territorial fight with another male black rhino and lost sight in his
 right eye. Baraka later developed a cataract in his left eye, at which point the conservancy moved him
 into a 100-acre enclosure, where he is now visited daily by tourists who take turns feeding, petting,
 and taking selfies with the blind rhino.

354 Ol Pejeta likens the work done by Baraka to that of an ambassador, explaining that, since being
 356 moved to the enclosure, Baraka 'is doing a splendid job of being Ol Pejeta's black-rhino ambassador
 to humans' (OPC, ND). As an ambassador, Baraka has extended working hours: Tourists can visit
 him any day of the week between 1030 and 1800. The concept of 'encounter value' helps to clarify
 358 how interspecies encounters, such as those tourists experience with Baraka, become commodified.
 'Encounter value further constitutes the scope of economic activity in that surplus is generated from
 360 specific processes and nonhuman labour rendered into commodity form' (Barua, 2016: 738). From
 this perspective, Ol Pejeta has put Baraka to work as an encounterable, labouring rhino – and the
 362 affective experience of feeding, seeing, and touching Baraka is now a commodified tourism
 experience that generates revenue for the conservancy.

364 Beyond his role as ambassador, Baraka does other work for Ol Pejeta: His life has been 'rendered'
 366 into digital and visual form (Shukin, 2009). On the one hand, Baraka's life story has been broken
 down into a few key moments that justify his position as an ambassador and package his ailing status
 368 in a way that is accessible to donors and tourists. This rendering process includes images of Baraka
 on display in public spaces and accommodation facilities Ol Pejeta, as well as narratives told about
 the rhino by conservancy personnel and tour guides. As the conservancy's website reads, 'Baraka
 370 now lives in the enclosure, located next to the Morani Information Centre, for his own safety, and has
 taken to his new role as rhino ambassador' (OPC, ND). On the other hand, Baraka has a growing
 372 online profile. Images and videos of Baraka circulate on Facebook, TripAdvisor, and YouTube – not
 374 to mention the websites of conservation organisations and digital news sources. On Ol Pejeta's
 website, representations of Baraka and his life story are surrounded by flashy banners that read
 376 'Adopt Baraka Now', 'Book Now', and 'Support Us' (OPC, ND).

378 Even though Baraka might not be involved in literally reproducing Ol Pejeta's rhino population, his
 380 daily behaviours, routines, and tasks are no less productive. This is often recognised in discourse
 surrounding the rhino. According to Ol Pejeta, Baraka's 'total loss of eyesight meant he could no
 longer survive in the wild. Lucky for him just then we recruited him into our workforce' (OPC, nd).
 382 USA Today's Animalkind says the following about Baraka: 'He may be living a life of leisure, but he
 still has an important job as an advocate for his species' (USA Today, nd). These renderings of an
 384 ailing-but-labouring ambassador are significant, as, in addition to the labour Baraka does in
 producing encounter value, they also extend Ol Pejeta's ability to extract additional value from the
 386 rhino: 'By adopting Baraka for a year, you will help us to give him the life he deserves. You will also
 help us to secure the future of all the rhinos that live on Ol Pejeta' (OPC, ND).

388

5.2 *The ghost of Morani and other rhinos past*

1
2
3 390 The enclosure that Baraka inhabits used to be occupied by another black rhino named Morani. In
4 1974, Morani was born in Amboseli National Park. After his mother was killed, he was translocated
5 392 multiple times before arriving at Ol Pejeta in 1989, which was then a new rhino sanctuary called
6 Sweetwaters Game Reserve. Morani's last stop on the way to Ol Pejeta was at nearby Ngare Sergoi
7 394 Rhino Sanctuary (Lewa Wildlife Conservancy) where, according to Ol Pejeta, the rhino 'fell in love'
8 with a young female named Shaba. After getting into a fight over Shaba with Ngare Sergoi's
9 396 dominant male, Morani was neutered and sent to Sweetwaters where 'At last he could live without
10 male competition!'¹ Morani was considered Ol Pejeta's first rhino ambassador. According to the
11 398 conservancy, 'He helped raise awareness about the plight of black rhinos and other vulnerable
12 species in the wild' (OPC, NDd). Even though Morani was unable to produce offspring during his 19
13 400 years at Ol Pejeta, he was considered a productive addition to the conservancy.

14
15
16
17 402 From a value perspective, the biological death of Morani in 2008 marked the beginning of his most
18 productive years. Morani has been memorialised in ways that enable the conservancy to continue
19 404 extracting value from the rhino. For example, Morani was the first rhino to be buried in a cemetery
20 that was created as a memorial for poached rhinos, even though Morani died of natural causes. The
21 406 cemetery is situated on a vast plain under a single tree, which is surrounded by headstones of jagged
22 rocks. It is common for tourists to stop at the cemetery on their way to visit Baraka and the Morani
23 408 Information Centre, which is another way that Ol Pejeta capitalises on Morani's memory. According
24 to Ol Pejeta, the Morani Information Centre was developed to continue the rhino's educational work.
25 410 The centre is a place where tourists go to encounter the living memory of Morani and other rhinos, as
26 well as the skeletal remains of less valuable animals, as they learn about why Ol Pejeta's
27 412 conservation efforts are worth supporting. The centre also contains information about how to
28 financially support the conservancy and a Safari Diner has been built on site, where tourists can
29 414 purchase drinks and food.

30
31
32
33
34 416 Turning to McCorristine and Adams' (2020) work on the spectral geographies of species
35 conservation, Morani can be understood as a 'ghost' whose presence haunts the ecosystems and
36 418 landscapes of Ol Pejeta Conservancy. This 'ghostliness' 'reflects the precarious and vulnerable status
37 of the disappeared body, and provides that body with the power of making itself and its history
38 420 known through haunting and/or reappearance' (McCorristine and Adams, 2020: 106). Importantly,
39 the associations and meaning attached to the spectre of Morani at Ol Pejeta are mediated by practices
40 422 of absence-presence that create potential for more and novel commodified tourist encounters in
41 affective landscapes – i.e. extinctionscapes.

42
43
44 424 Although Morani died of natural causes, his headstone was placed alongside others that memorialise
45 rhinos poached at Ol Pejeta. This rhino cemetery conjures Morani and other deceased rhinos back to
46 426 life through absence-presence. As Maddrell writes, 'absent presence reflects the apparently
47 contradictory binding together of things absent with the present; whatever or whomever is absent is
48 428 so strongly missed, their very absence is *tangible* (i.e. it becomes a presence)' (2013: 503-504). In
49 this particular form of afterlife, Morani continues to affect tourists in ways that generate moral and
50 430 economic support for rhino conservation at Ol Pejeta.

51
52
53
54 432

55
56
57
58 ¹ This information was sourced from original materials accessible in the Morani Information Centre on Ol Pejeta
59 Conservancy.
60

1
2
3 Like Baraka, the daily behaviours, routines, and tasks performed by Morani when he was alive
4 434 provided opportunities for revenue generation through encounter value at Ol Pejeta. However,
5 Morani's biological death appears to have made the rhino even more valuable. When looked at
6 436 through a value lens, Morani's deadness is not a barrier to value production. His biological life may
7 have ended, but every day dozens of people encounter his living memory by visiting his headstone
8 438 while on safari, donating to the conservancy after reading his biography at the information centre
9 bearing his name, or eating a burger at the Safari Diner. As the conservancy's Head of Wildlife
10 440 Conservation explained, 'we thought it fit for Morani to continue with raising awareness on the
11 dangers of poaching' after his death (Chebet, 2018).

14 442

15 **5.3 The afterlife of a lively commodity: Sudan**

16 444 When northern white rhinos were pronounced extinct in the wild in 2009, Sudan, the last male of the
17 species, was relocated from the Dvůr Králové Zoo to Ol Pejeta Conservancy along with three female
18 446 northern white rhinos: Suni (deceased), Najin, and Fatu. It was hoped that a 'more natural habitat'
19 would help the rhinos reproduce (OPC, NDe). Ol Pejeta turned Sudan into a rhino ambassador, and
20 448 the rhino quickly became an international sensation. Tourists from around the world travelled to
21 Laikipia just to see Sudan. The rhino was also visited by international celebrities, such as Elizabeth
22 450 Huxley, Khaled Abol Naga, Leonardo DiCaprio, Melissa McCarthy, and Nargis Fakhri. Sudan's
23 celebrity status was solidified during a 2017 collaborative fundraising campaign involving Ol Pejeta
24 452 and Tinder, which raised \$85,000 for rhino In Vitro Fertilisation (IVF) out of a targeted US \$10
25 million (OPC, NDe). This campaign involved the creation of a Tinder profile for Sudan, which read:
26 454 'I'm one of a kind. No seriously, I'm the last male white rhino on the planet earth. I don't mean to be
27 too forward, but the fate of my species literally depends on me. I perform well under pressure ... 6ft
28 456 tall and 5,000lbs if it matters' (Winter, 2017). According to Ol Pejeta, the Tinder campaign made
29 Sudan 'the most prolific rhino ambassador in history' (OPC, NDe).

33 458

34 Conservation scientists began to prepare for the use of IVF to help save northern white rhinos from
35 460 extinction in 2015, after tests confirmed that Sudan was incapable of natural reproduction. At that
36 time, veterinarians started to collect samples of Sudan's semen and freeze them for storage alongside
37 462 specimens collected from other northern white rhinos before their deaths. After Sudan was
38 euthanized in 2018, efforts to artificially reproduce the species focused mainly on the use of sperm
39 464 cells procured from these stockpiles of frozen semen. Recognizing that IVF was likely to be
40 unsuccessful, resources were also directed at other Advanced Reproductive Technologies (ART) and
41 466 high-tech reproductive science, including stem cell technology and gene editing (Pilcher, 2018).
42 Eventually, in 2019, five oocytes were collected from both Fatu and her mother Najin at Ol Pejeta for
43 468 use in IVF procedures (Save the Rhino, 2020).

44 470 In early 2020, it was announced that scientists from the Avantea laboratory in Italy had successfully
45 created three northern white blastocysts after injecting eggs produced by Fatu with sperm cells from
46 472 two deceased northern white rhinos (Save the Rhino, 2020). As neither Fatu nor Najin are capable of
47 carrying a pregnancy to term, scientists plan to transfer the eggs into a southern white rhino surrogate
48 474 with the hope that this will lead to the birth of a northern white rhino calf. However, there has yet to
49 be a case in which a viable pregnancy has been realised in a surrogate white rhino (Save the Rhino,
50 476 2020). Even if this were to be realised, calves produced using this method may not be genetically
51 diverse enough to sustain a future population of northern white rhinos (Gilliland, 2019). Regardless
52 478 of whether or not ART helps to save or bring back northern white rhinos from extinction, global

1
2
3 circulations of northern white rhinos in the form of cells with life-giving potential exemplify the
4 480 posthumous or disembodied value of lively commodities.
5

6
7 482 Like Morani and Baraka, Sudan was incredibly valuable to Ol Pejeta as a working ambassador and as
8 a rendered ‘spectacle’ (Igoe, 2017) that circulated digital platforms, mobile apps, and websites. There
9 484 is little indication that this value is diminishing with the rhino’s biological death.² As Ol Pejeta
10 explains, ‘[Sudan’s] distinguished but tenuous role was a catalyst for scientists to come up with
11 486 technological innovations that could potentially bring back northern white rhinos from the brink of
12 extinction. Such advances ... may hopefully be used one day in preventing the extinction of other
13 488 species, breaking new ground in global conservation technology’ (OPC, NDF). From this perspective,
14 the definitiveness of Sudan’s deadness is complex. In addition to posthumous renderings of the rhino,
15 490 Sudan’s cells also continue to circulate in the global economy of conservation and, possibly one day,
16 in the physical bodies of other rhinos. In this way, Sudan continues to produce value for the
17 492 conservation sector during his afterlife while also storing up reserve value for the future, should
18 scientists succeed in artificially reproducing northern white rhinos or hybrid species. The rhino’s
19 494 value as a lively commodity continues to circulate beyond the threshold of death.
20
21
22
23

24 496

6. Concluding discussion: Extinctionscapes and the political afterlives of lively commodities

25
26 498 In a world where ‘virtually every nook and cranny of everyday, everynight life is subject to
27 colonisation by the commodity form’ (Pred, 1998, 149–150), political ecologists have started to pay
28 500 greater attention to the commodification of nonhuman life. Yet, because lively commodities are
29 defined by their liveliness, it is also important to consider how their demise – both ‘quick’ and ‘slow’
30 502 (Collard, 2018) – factors into the workings of capitalist economies, in general, and the modern field
31 of conservation, specifically. In response to Marx’s notion of commodities as dead labour, Mitchell
32 504 asks, ‘What if we understood that [dead labour] in less-than-metaphorical terms? ... Can there be a
33 theory of the geography of commodity production that accounts for labor that is killed, maimed, or
34 506 assaulted in the course of work. Or is such violence quite literally invisible in theory and in the
35 landscape?’ (2000, 761). With this in mind, our analysis makes the labour carried out by animals
36 508 during their lives *and* afterlives visible and situates their labour in commodified landscapes produced,
37 in part, through practices of absence-presence.
38
39
40

41 510

42 Thinking about Baraka, Morani, and Sudan, as well as Suni, Najin and Fatu, as lively commodities
43 512 with afterlives suggests that death is not necessarily a definitive episode for these rhinos or other
44 lively commodities; rather, it is a slow process marked by various degrees and mutated renderings of
45 514 liveliness. In broader terms, the threshold of life and death under capitalism can be understood as an
46 amorphous borderland where ‘dichotomic categories [of being alive or dead] are no longer
47 516 discernible’ (Agamben, 2004: 1048). Although numerous scholars, including Agamben (2004), have
48 written about the indeterminacies, spaces, and temporalities of life and death, we are less concerned
49 518 with theorizing further about this threshold and more interested in considering how the colonisation
50 of life through the commodity form unfolds at and beyond this biopolitical threshold (Colombino and
51 520 Giaccaria, 2016). The notion of extinctionscapes helps to illuminate the ways in which this
52 amorphous borderland maps onto physical geographies and interacts with biological, cultural,
53 522 economic, political, and social forces to produce affective landscapes through the absence-presence
54
55
56

57
58 ² The posthumous donation webpage for Sudan can be accessed here:
59 <https://donate.olpejetaconservancy.org/projects/sudan>.
60

1
2
3 of species. In this regard, extinctionscapes reflect particular modes of governing animal lives and
4 524 afterlives.
5

6
7 526 While avoiding broader debates and theoretical discussions about the biopolitics of conservation (see
8 Srinivasan, 2014), we invoke biopolitics loosely in reference to the ordering, ranking, and valuing
9 528 and/or devaluing of animal life in conservation discourse and practice (Biermann and Anderson,
10 2017). Conservation discourse and practice makes the (de)(re)valuing of certain species appear
11 530 natural, technical, and universal, just as they do related efforts to nurture and sustain some forms of
12 life while letting others die (Hodgetts, 2017). In reality, who is made to live and who is left to die in
13 532 relation to extinctionscapes is also determined by social and cultural notions of which lifeforms are
14 valuable and worth saving and which are not (Fredriksen, 2016; Margulies, 2019). These notions may
15 534 be influenced by ageist, racist, speciist, and sexist interpretations of difference; but, they nevertheless
16 inform which species are managed (and how) and which individual animals are disciplined (and how)
17 536 for conservation to function in capitalist economies (Dempsey, 2016).
18

19
20
21 538 The extinctionscapes of Laikipia intersect and resonate with the historical biopolitics of animal
22 population management: Throughout the colonial era, settler farmers and ranchers considered rhinos
23 540 vermin and hunted them prodigiously for eradication, money, and sport (Steinhart, 2006). After the
24 independent government of Kenya banned hunting in 1977, settlers began to experiment with
25 542 different ways of utilising the wildlife that had begun to repopulate their properties. With support
26 from Kenya Wildlife Service, African Wildlife Foundation, World Wide Fund for Nature, and other
27 544 conservation organisations, some settlers entered into the business of rhino conservation. As early as
28 1970, Solio Ranch was breeding rhinos to stock sanctuaries and reserves. In the 1980s, Ngare Sergoi,
29 546 Ol Ari Nyiro, Ol Jogi, and Sweetwaters established rhino sanctuaries on their properties. Thus, within
30 a couple of decades of Kenya's hunting ban, rhinos went from being nuisance vermin worthy of
31 548 extermination to valued species worthy of protection. Nevertheless, rhino life has always been
32 administered in ways that serve to reproduce iterations of settler colonialism and capitalism in Kenya
33 550 (Bersaglio, 2018).
34
35

36
37
38 552 These species management practices suggest that the commodification of animal lives and afterlives
39 is also interconnected to biopolitics at a broader level. This is certainly the case in Laikipia, where the
40 554 willingness of settlers to revalue rhinos was more than just a form of economic adaptation. Rather,
41 transforming their farms and ranches into rhino sanctuaries – with tight security features and armed
42 556 personnel – was a way for settlers to morally justify and re-enact their property rights, and to stave
43 off land redistribution in a country that had recently gone through a violent liberation struggle. As
44 558 one settler explained of Ngari Sergoi, which was located on a large cattle ranch owned by the Craig
45 family, *'The Craigs were smart. They put rhino on their land. That got the whole international*
46 560 *community behind them'* (interview, white Kenyan tour operator, Laikipia, Kenya, April 2015). In
47 other words, the value of rhinos as endangered species became an effective means to maintain an
48 562 unequal, racialised property regime with support from the national government and international
49 institutions.
50
51

52
53 564 With this in mind, consideration for the affective and related economic value of rhinos reveals the
54 processes and techniques by which animals continue to produce value as lively commodities beyond
55 566 the threshold of death, as well as the ways in which rhinos are made to work through afterlives that
56 contribute to the reproduction of colonised landscapes as a biopolitical ordering of space. In Laikipia,
57 568
58
59
60

1
2
3 these biopolitics can be observed in the journey that rhinos, as a species, have made up and down the
4 570 'rungs' of value over time. However, biopolitics are also pronounced at the level of individual,
5 where, somewhat ironically, ailing, neutered, and dead male rhinos have been cast as the epitome of
6 572 conservation success in Laikipia. In contrast, female rhinos represent what Collard and Dempsey
7 (2017a) call 'reserve' or 'underground' value. Unlike Sudan, Najin and Fatu are viewed as
8 574 increasingly superfluous in their old age – a condition exacerbated by the fact that conservationists
9 appear to view the uteri of northern and southern white rhinos as interchangeable. Our analysis also
10 576 reveals the biopower embodied by rhinos in Laikipia, or, in other words, the interplay that exists
11 between human and nonhuman biopolitics. As afterlife commodities, novel types of value can be
12 578 extracted from the absence-presence of rhinos. As this value circulates the globe in increasingly
13 abstracted forms, it continues to be reinvested into conservation landscapes, such as Ol Pejeta, where
14 580 it contributes to the maintenance of a property regime rooted in settler colonialism and to the
15 reproduction of racial capitalism (Mbembe, 2003; Robinson, 1983).

16 582
17 To conclude, 'extinctionsapes' names the profound reordering of conservation landscapes as
18 584 haunted landscapes (McCorristine and Adams, 2020) – geographies of absence-presence where
19 extinction, economy, and memory collide with biopolitical implications that reverberate through a
20 586 more-than-human world. In demonstrating how conservation landscapes are assembled to extract
21 value from animals who occupy the amorphous borderland of life and death, this article reveals how
22 588 extinctionsapes intersect and interact with politics, power, and (in)justice in a more-than-human
23 world. In doing so, it also offers further evidence of the troubling capacity of commodification to lay
24 590 claim to the exploitation of life-in-landscape beyond the grave and lays additional groundwork for
25 engaging with the spectral work of extinction as a powerful social and cultural, as well as political
26 592 and ecological, force in the world.

27
28
29
30
31
32
33 594
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60

References

- 596 Agamben ,G. (2004). *The Open: Man and Animal*. Stanford: Stanford University Press.
- 598 Appadurai, A. (1996). *Modernity at Large: Cultural Dimensions of Globalization*. Minneapolis:
600 University of Minnesota press.
- 602 Barua, M. (2016). Lively commodities and encounter value. *Environment and Planning D: Society
and Space*, 34(4), 725-744.
- 604 Barua M (2018) Animal work: Metabolic, Ecological, Affective. *Theorizing the Contemporary,
606 Cultural Anthropology*. Available at: <https://culanth.org/field-sights/1504-animal-work-metabolic-ecological-affective> (accessed 26 July 2018).
- 608 Barua, M. (2019a). Affective economies, pandas, and the atmospheric politics of lively capital.
610 *Transactions of the Institute of British Geographers*.
- 612 Barua, M. (2019b). Animating capital: Work, commodities, circulation. *Progress in Human
614 Geography*, 43(4), 650-669.
- 616 Battistoni, A. (2017). Bringing in the Work of Nature: From Natural Capital to Hybrid Labor.
Political Theory, 45(1), 5-31.
- 618 Beldo, L. (2017). Metabolic labor, broiler chickens and the exploitation of vitality. *Environmental
Humanities*, 9, 108-128.
- 620 Bersaglio, B. (2018). Green violence: Market-Driven Conservation and the re-foreignization of space
622 in Laikipia, Kenya. In S. Mollett and T. Kepe (Eds) *Land rights, biodiversity conservation, and
justice: Rethinking parks and people* (pp. 71-88). Oxford: Routledge.
- 624 Biermann, C., & Anderson, R. M. (2017). Conservation, biopolitics, and the governance of life and
626 death. *Geography Compass*, 11(10), e12329.
- 628 Chebet, C. (2018, February 7). Rhino graveyard highlights poaching threat in Kenya. *The
Independent*. Available at:
630 [https://www.independent.co.uk/voices/campaigns/GiantsClub/Kenya/rhino-graveyard-highlights-
632 poaching-threat-in-kenya-a8195521.html](https://www.independent.co.uk/voices/campaigns/GiantsClub/Kenya/rhino-graveyard-highlights-poaching-threat-in-kenya-a8195521.html). Accessed 9 September 2019.
- 634 Collard, R. C. (2013). Panda politics. *The Canadian Geographer/Le Géographe canadien*, 57(2), 226-
232.
- 636 Collard, R. (2018). Disaster capitalism and the quick, quick, slow unravelling of animal life. *Antipode*,
50(4): 910-928.
- 638 Collard, R. C., & Dempsey, J. (2013). Life for sale? The politics of lively commodities. *Environment
640 and Planning A*, 45(11), 2682-2699.
- 642 Collard, R. C., & Dempsey, J. (2017a). Capitalist natures in five orientations. *Capitalism Nature
644 Socialism*, 28(1), 78-97.
- 646 Collard, R. C., & Dempsey, J. (2017b). Politics of devaluation. *Dialogues in Human Geography*,
7(3), 314-318.

- 1
2
3 648 Colombino, A. and Giaccaria, P. (2016). Dead liveness/living deadness: Thresholds of non-human
4 life and death in biocapitalism. *Environment and Planning D: Society and Space*, 34, 1044-1062.
5 650
6 DeMello, M. (Ed.). (2016). *Mourning animals: Rituals and practices surrounding animal death*. MSU
7 652 Press.
8
9 654 Dempsey, J. (2016). *Enterprising nature: Economics, markets, and finance in global biodiversity*
10 *politics*. John Wiley & Sons.
11 656
12 Duffy, R., & Moore, L. (2010). Neoliberalising nature? Elephant-back tourism in Thailand and
13 658 Botswana. *Antipode*, 42(3), 742-766.
14
15 660 Fredriksen, A. (2016). Of wildcats and wild cats: Troubling species-based conservation in the
16 Anthropocene. *Environment and Planning D: Society and Space*, 34(4), 689-705.
17 662
18 Garlick, B., & Symons, K. (2020). Geographies of Extinction: Exploring the Spatiotemporal Relations
19 664 of Species Death. *Environmental Humanities*, 12(1), 296-320.
20
21 666 Gillespie, K. (2014). Sexualized violence and the gendered commodification of the animal body in
22 Pacific Northwest US dairy production. *Gender, Place & Culture*, 21, 1321-1337.
23 668
24 Gilliland, H. (2019, 23 August). Bold effort to save rhino completes critical step. National
25 670 Geographic. Accessed June 2020:
26 <https://www.nationalgeographic.com/animals/2019/08/plan-save-northern-white-rhino-ivf/>.
27 672
28 Ginn, F. (2014). Death, absence and afterlife in the garden. *Cultural Geographies*, 21(2), 229-245.
29 674
30 Goldstein, J. E. (2014). The afterlives of degraded tropical forests: New value for conservation and
31 676 development. *Environment and Society*, 5(1), 124-140.
32
33 678 Haraway, D. J. (2008). *When species meet*. Minneapolis: University of Minnesota Press.
34
35 680 Heath-Kelly, C. (2018). Survivor Trees and memorial groves: Vegetal commemoration of victims of
36 terrorism in Europe and the United States. *Political Geography*, 64, 63-72.
37 682 <https://doi.org/10.1016/j.polgeo.2018.03.003>
38
39 684 Heise, U. K. (2016). *Imagining extinction: The cultural meanings of endangered species*. University
40 of Chicago Press.
41 686
42 Hodgetts, T. (2017). Wildlife conservation, multiple biopolitics and animal subjectification: Three
43 688 mammals' tales. *Geoforum*, 79, 17-25.
44
45 690 Howell, P. (2002). A place for the animal dead: pets, pet cemeteries and animal ethics in late
46 Victorian Britain. *Ethics, Place & Environment*, 5(1), 5-22.
47 692
48 Igoe, J. (2017). *The nature of spectacle: on images, money, and conserving capitalism*. University of
49 694 Arizona Press.
50
51 696 Jones, R. D., Robinson, J., & Turner, J. (2012). Introduction. Between absence and presence:
52 Geographies of hiding, invisibility and silence. *Space and Polity*, 16(3), 257-263.
53 698
54 Jørgensen, D. (2017). Endling, the power of the last in an extinction-prone world. *Environmental*
55 700 *Philosophy*, 14(1), 119-138.
56
57
58
59
60

- 1
2
3
4 702 Jørgensen, D. (2018). After None: Memorializing animal species extinction through monuments.
5 *Animals Count: How Population Size Matters in Animal-Human Relations*, 183-199.
- 6 704
7 Kallis, G., Gómez-Baggethun, E., & Zografos, C. (2013). To value or not to value? That is not the
8 706 question. *Ecological economics*, 94, 97-105.
- 9
10 708 Kallis, G., & Swyngedouw, E. (2018). Do bees produce value? A conversation between an ecological
11 economist and a Marxist geographer. *Capitalism Nature Socialism*, 29(3), 36-50.
- 12 710
13 Kay, K., & Kenney-Lazar, M. (2017). Value in capitalist natures: an emerging framework. *Dialogues
14 712 in Human Geography*, 7(3), 295-309.
- 15
16 714 Kong, L. (1999). Cemeteries and columbaria, memorials and mausoleums: Narrative and
17 interpretation in the study of deathscapes in geography. *Australian Geographical Studies*, 37(1), 1-
18 716 10.
- 19
20 718 Kosek, J. (2010). Ecologies of empire: on the new uses of the honeybee. *Cultural Anthropology*,
21 25(4), 650-678.
- 22 720
23 Laikipia Wildlife Forum (LWF). (2012). *Wildlife Conservation Strategy for Laikipia County: 2012-
24 722 2030*. Nanyuki: LWF.
- 25
26 724 Letai, J. (2015). "Land Deals and Pastoralist Livelihoods in Laikipia County, Kenya". In *Africa's
27 Land Rush: Rural Livelihoods and Agrarian Change*, edited by R. Hall, I. Scoones and D. Tsikata,
28 726 83-98. Suffolk: James Currey.
- 29
30 728 Maddrell, A. (2013). Living with the deceased: Absence, presence and absence-presence. *Cultural
31 Geographies*, 20(4), 501-522. <https://doi.org/10.1177/1474474013482806>
- 32 730
33 Maddrell, A., & Sidaway, J. D. (2010). Introduction: Bringing a spatial lens to death, dying,
34 732 mourning and remembrance. *Deathscapes: Spaces for Death, Dying, Mourning and Remembrance*,
35 1-16. Routledge: New York.
- 36
37 734 Margulies, J. D. (2019). Making the 'man-eater': Tiger conservation as necropolitics. *Political
38 736 Geography*, 69, 150-161.
- 39
40 738 Mbembe, A. (2003). Necropolitics. *Public Culture*, 15(1), 11-40.
- 41
42 740 McCorristine, S., & Adams, W. M. (2020). Ghost species: spectral geographies of biodiversity
43 742 conservation. *cultural geographies*, 27(1), 101-115.
- 44
45 744 Meier, L., Frers, L., & Sigvardsdotter, E. (2013). The importance of absence in the present: practices
46 of remembrance and the contestation of absences. *Cultural Geographies*, 20(4), 423-430.
- 47
48 746 Micieli-Voutsinas, J., & Cavicchi, J. (2019). Toxic landfills, survivor trees, and dust cloud memories:
49 748 More-than-human ecologies of 9/11 memory. *Environment and Planning D: Society and Space*,
50 37(3), 504-522.
- 51
52 750 Mitchell, D. (2000). Dead labor: the geography of workplace violence in America and beyond.
53 752 *Environment and Planning A*, 32(5), 761-764.
- 54
55
56
57
58
59
60

- 1
2
3 Ol Pejeta Conservancy (OPC). (NDa). Black rhinos – Baraka. Available at:
4 754 <https://www.olpejetaconservancy.org/adopt-a-black-rhino/black-rhinos-baraka/>. Accessed 9
5 September 2019.
6 756
- 7 Ol Pejeta Conservancy (OPC). (NDb). Destinations – Baraka. Available at:
8 758 https://www.olpejetaconservancy.org/plan-your-visit/destinations/destinations-baraka/?gclid=CjwKCAjw1_PqBRBIEiwA71rmteB4bjVB-Dk2XsJFEELiikua92vpGGGrkDQSnQRaYPgTA1fOsTVyxoCYcIQAvD_BwE. Accessed 9
9 760 September 2019.
10 762
- 11 Ol Pejeta Conservancy (OPC). (NDc). Adopt Baraka. Available at:
12 764 <https://donate.olpejetaconservancy.org/projects/adopt-baraka>. Accessed 9 September 2019.
13 766
- 14 Ol Pejeta Conservancy (OPC). (NDd). Morani Centre. Available at:
15 768 <https://www.olpejetaconservancy.org/plan-your-visit/destinations/morani-center/>. Accessed 9
16 September 2019.
17 770
- 18 Ol Pejeta Conservancy (OPC). (NDe). Must see – northern white rhinos. Available at:
19 772 https://www.olpejetaconservancy.org/plan-your-visit/must-see/must-see-northern-white-rhinos/?gclid=CjwKCAjw-vjqBRA6EiwAe8TCK92E1GEYLq5rOw8C84Lkys0a8Pe_c1PjGsiKueT6wLr5RPa-LMUt5xoCAVwQAvD_BwE. Accessed 9 September 2019.
20 774
- 21 Ol Pejeta Conservancy (OPC). (NDf). Sudan – a tribute to an icon. Available at:
22 776 <https://www.olpejetaconservancy.org/sudan-a-tribute-to-an-icon/>. Accessed 9 September 2019.
23 778
- 24 Parr, H., Stevenson, O., Fyfe, N., & Woolnough, P. (2015). Living absence: the strange geographies
25 780 of missing people. *Environment and Planning D: Society and Space*, 33(2), 191-208.
26 782
- 27 Parreñas, R. J. S. (2012). Producing affect: Transnational volunteerism in a Malaysian orangutan
28 784 rehabilitation center. *American Ethnologist*, 39(4), 673-687.
29 786
- 30 Pilcher, J. (2018, March 20). Sudan the rhino is dead. But his sperm could save the species. *The
31 788 Guardian*. Available at <https://www.theguardian.com/commentisfree/2018/mar/20/sudan-northern-white-rhino-dead-species-endangered-species-conservationists>. Accessed 9 September 2019.
32 790
- 33 Plourde, L. (2014). Cat café's, affective labor, and the healing boom in Japan. *Japanese Studies*, 34,
34 792 115-133.
35 794
- 36 Pred, A. (1998). "The nature of denaturalized consumption and everyday life," in *Remaking Reality*.
37 796 Eds B Braun, N Castree. pp. 150-168. Routledge: London.
38 798
- 39 Rajaram, P. K., & Grundy-Warr, C. (Eds.). (2007). *Borderscapes: hidden geographies and politics at
40 798 territory's edge*. University of Minnesota Press: Minneapolis.
41 800
- 42 Robinson, C. (1983). *Black Marxism: The making of the Black radical tradition*. Chapel Hill:
43 802 University of North Carolina Press.
44 804
- 45 Romanillos, J.L. (2015). Mortal questions: Geographies on the other side of life. *Progress in Human
46 804 Geography*, 39(5), 560-579.
47 806
- 48 Save the Rhino (2020, 17 Jan). Scientists have successfully created northern white rhino embryos.
49 808 Accessed June 2020:
50 810
51
52
53
54
55
56
57
58
59
60

- 1
2
3 806 [https://www.savetherhino.org/rhino-species/white-rhino/scientists-have-successfully-created-](https://www.savetherhino.org/rhino-species/white-rhino/scientists-have-successfully-created-northern-white-rhino-embryos/)
4 [northern-white-rhino-embryos/](https://www.savetherhino.org/rhino-species/white-rhino/scientists-have-successfully-created-northern-white-rhino-embryos/).
5 808
6 Schuurman, N., & Redmalm, D. (2019). Transgressing boundaries of grievability: Ambiguous
7 810 emotions at pet cemeteries. *Emotion, Space and Society*, 31, 32-40.
8
9 812 Shukin, N. (2009). *Animal capital: Rendering life in biopolitical times*. U of Minnesota Press.
10
11 814 Srinivasan K, 2014, "Caring for the collective: biopower and agential subjectification in wildlife
12 conservation" *Environment and Planning D: Society and Space* 32(3) 501 – 517
13 816
14 Steinhart, E. I. (2006). *Black Poachers, White Hunters: A Social History of Hunting in Colonial*
15 818 *Kenya*. Athens: Ohio University Press.
16
17 820 Stevenson, O., Kenten, C., & Maddrell, A. (2016). And now the end is near: enlivening and
18 politizising the geographies of dying, death and mourning. *Social & Cultural Geography*, 17(2), 153-
19 822 165.
20
21 824 Taylor, C. S., & Carter, J. (2020). Care in the contested geographies of Dolphin-Assisted Therapy.
22 *Social & Cultural Geography*, 21(1), 64-85.
23 826
24 Tyner, J. A. (2018). Official memorials, deathscapes, and hidden landscapes of ruin: material legacies
25 828 of the Cambodian genocide. In *After Heritage*. Hamzah Muzaini and Claudio Minca (Eds.) Edward
26 Elgar Publishing.
27 830
28 Van Dooren, T. (2014). *Flight ways: Life and loss at the edge of extinction*. Columbia University
29 832 Press.
30
31 834 Vasan, S. (2018). Consuming the tiger: Experiencing neoliberal nature. *Conservation and Society*,
32 16(4), 481-492.
33 836
34 Winter, S. (2017, April 26). Last northern male white rhino joints TINDER to save his species: 'I'm
35 838 one of a kind'. *Express*. Available at [https://www.express.co.uk/news/nature/796819/Rhino-on-](https://www.express.co.uk/news/nature/796819/Rhino-on-Tinder-Sudan-last-white-endangered-species-creatures-Kenya)
36 [Tinder-Sudan-last-white-endangered-species-creatures-Kenya](https://www.express.co.uk/news/nature/796819/Rhino-on-Tinder-Sudan-last-white-endangered-species-creatures-Kenya). Accessed 9 September 2019.
37 840
38
39 842
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60