In the Name of Conservation: the impact of ecological changes, neoliberal policies, and social and environmental imaginaries on traditional parrot hunting among indigenous Jamaican Maroons

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85,920 words
I, Lydia Gibson confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.
The skin was dried after the skin was dried. The skin was put on the drum and wrapped round with string on a bendy stick. Illustrated, devised and written by Yasminah, daughter of the writer of the thesis.
Abstract

Cockpit Country is a dense, upland forest in west-central Jamaica. Its distinctly un navigable terrain created a “green armour” around Maroon societies during the 18th century war against the British Empire that secured their autonomy and recognition as indigenous peoples. In the present day, it remains a refuge for rare species and Maroon communities. In November 2017, the Jamaican Prime Minister announced plans to designate Cockpit Country as a protected area after years of anti-mining campaigns involving numerous stakeholders. Among them was a Maroon community with whom I had just begun research, following a small group of traditional parrot hunters. What started as an ethnographic exploration of resource use and Maroon history soon broadened, after the announcement, into a socio-ecological study of species conservation, cultural preservation, indigenous knowledge systems, and speaking against extractive industries, all centring around the moniker of “conservation”, giving rise to my question: what, precisely, is conservation? After three years studying conservation action across local and global scales and engaging in conservation praxis, I have come to see conservation as a spectacle: a representational form that eulogizes the political, social, and environmental actions of particular actors within natural spaces. In doing so, it both justifies and dismisses the movement of different forms of capital, washing clean the hands of capitalism while fencing the poor into reservoirs of cultural, agricultural, and labour exploitation.

By examining ways that parrot hunting practices have been shifted, nudged, distorted, or transformed, this thesis explores how the spectacle of conservation works. How it is sustained and reproduced through articulations of indigeneity, science, nature, morality. How the “particular actors” become indoctrinated into the spectacle. The necessary practices they must adopt and, drawing from Stuart Hall and Tania Li, the way their identities and intentions must be articulated. I draw from Pierre Bourdieu to contrast the spectacle of conservation with the materiality and sociality of everyday actions through which forms of capital are continually redistributed. In each chapter, I explore a particular imaginary: indigenous practices; environmental change; stakeholder participation; species extinction; and plastic pollution. Each begins with an experience of a hunt, relying on a number of literary devices and the thickest of descriptions to represent the everyday robustly enough to contrast against conservation’s global discourses. Through these counter-images, I trace the movement of capital to understand how these imaginaries reproduce themselves and the objects they collateralise. I end with a discussion of the consequences of leaving everyday practices unseen, unremembered, or unacknowledged in the shadow cast by the spectacle.
Impact statement

Cockpit Country is a dense, upland, forest that covers over 5% of Jamaica’s land area but contains almost all of the nation’s endemic terrestrial fauna. There is currently no long term, active ecological research in the region; for decades species monitoring has comprised pockets of short-term assessments conducted by foreign-based scientists. This has led to significant knowledge gaps in the spatial ecology of the many site-endemic species, and the consequent relisting of many as data deficient on the IUCN Red List, in absence of maintained and updated data sources. The four-year research I have undertaken straddles applied ecology and social anthropology; my ecological findings have begun to address these knowledge gaps.

I have contributed to the 2020 IUCN Red List assessment for both non-human focal species of this research: yellow- and black-billed parrots, both listed as Vulnerable. Determining population fluctuations through a combination of (i) the catch statistics gathered during my observations of hunts, (ii) camera trap images confirming increasing threat of small mammal depredation, and (iii) the ecological knowledge of Maroon interlocutors (documented in an Oryx journal article co-authored with them), my contribution recommended the uplisting of the black-billed parrot to Endangered. This recommendation will be officially adopted in October 2020. Our monitoring efforts have been extended to a number of critically-endangered frogs, soon to be reclassified as data-deficient. Funded by Auckland Zoo and the Wild Planet trust, Maroon collaborators and I are monitoring two streams – one of which has been used in a state-endorsed development project – to contribute to the upcoming reassessments of two site-endemic frogs.

Findings on the critical importance of maintaining Maroon ecological knowledge in this data-scarce landscape led to the curation of a digital exhibition on traditional knowledge, funded by UCL Centre for Critical Heritage Studies. The exhibition, featured in a local museum, includes four short films, species fact files, and infographics. This was developed into a larger project on documenting and mapping traditional knowledge, funded by National Geographic Society: Countermapping Cockpit, an online open-access map of portions of the forest to support conservation policy- and decision-making. Many of the project’s unpublished findings have been disseminated to government departments in annual meetings convened with the Forestry Department, National Environment Protection Agency, and Maroon representatives to support the gazettement of Cockpit Country Protected Area.
The theoretical foundation of my work conceives of conservation not as a science or a set of disparate, incoherent practices, but as a consolidated set of social and environmental imaginaries that governs the accumulation of forms of capital (economic, cultural, social, symbolic, political, and scientific) within spaces. This further challenges the widespread promotion of participative and inclusive conservation and considers its role in exacerbating (rather than remedying) gender inequalities, strengthening political regimes through elite capture and disproportionate representation, reinforcing hierarchies between indigenous knowledge-holders and rural poor. In a recent article in Journal of Ethnobiology, I consider wild meat consumption among Maroons against prevailing discourses that such consumption promotes social capital, arguing it is instead a symbol of the exclusive nature of traditional practices. This research will continue to add to the growing body of literature that interrogates the philosophical, theoretical, and moral assumptions underpinning conservation to challenge its influence on the rationalisation of the political and economic actions of ruling classes.
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For the party of eight who opened the gate,
For the village guide who stood by my side,
For the women three who are closest to me,
For all the mothers alone, who try to prop up their homes,
For the women in the academy, meeting oppression with bravery,
For the black and underserved, who feel dirty and undeserved,

To those who walk through nature and let it soften theirs,
To those who may not understand but have such open ears,
To those who can’t believe what’s happening in our world,
To those who could have predicted precisely what unfurls,

I could not have done this work without the wide-eyed innocence of my children who help me to try to reimagine a world behind the spectacle and a worried mother whose silent footsteps I cannot see for they are behind me waiting to catch me should I fall. I am also indebted to my supervisors, who have made me feel so safe in being as vulnerable as this work required me to be. You are both an inspiration and I do not believe that you will ever grasp how profoundly your humble brilliance has shaped me. I am also grateful to the Royal Geographic Society and Royal Anthropological Institute for funding my PhD research. Finally, I thank the unnamed community that has transformed my life. I don’t know what the future holds, but I know you will always be in it, for I will never abandon you.
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Introduction

At the British Ecological Society’s 2019 Annual Conference I co-hosted a workshop on indigenous knowledge. It was I who approached my colleague to do it, yet I resented the endeavour from the outset with every fibre of my being. We both saw the value in it. We wanted to reinvigorate – in ways, begin – conversations about a kind of ecology that did not take place in a vacuum, the kind of ecology that cared about more than the trappings and technologies that finally legitimised it as a hard science. We knew from our exposure to praxis in conservation and interdisciplinary spaces that, despite decades-long pleas for collaboration and common ground, more work was required to include local communities. We saw the consolidation of a science that was unrelenting, that chastised the complexity of the real world for its lack of consideration. This new and emboldened science shoehorned species into allocated ranges and people into specific, “sustainable”, rational, moral – all, being western-determined – modes of action. Listening to a range of methods and justifications at the conference, it almost felt as if the ecologists we encountered were enslaved by its presence rather than empowered by its reproduction.

The workshop gave me the kind of dull agitation that hangs familiarly to your bones when you venture beyond of truth. It is, in fact, a feeling that has been growing over the course of this PhD. It is only now, as I reflect upon the past four years in preparation of this thesis, that it has begun to subside. Throughout this research, I had started to carve out a niche in indigenous knowledge and local participation. I went to a clandestine indigenous village in the middle of a rainforest in the centre of Jamaica with no NGO support, no connections, no introductions. Recklessly, I left my children with my mother (an appreciable distance away) and asked random strangers, hopped on random buses, and sidestepped random disasters until I somehow arrived unscathed and unannounced at the village. Over three summers, I engaged in a bricolage of classic anthropological fieldwork (observing daily
life and deeply traditional customs over extended periods of time) and a kind of makeshift ecology, involving tools of the trade that I barely knew how to operate and, consequently, often misused. On the third day of that first summer (after returning for my children, whom I brought to this village that I did not know and had barely vetted), I sat on the stoop of the half-built house I had just rented, brimming with excitement after hearing about the traditional parrot hunting practiced by a small group of villagers.

Unlike most of my research group, I did not come from a conservation background. I did not come from anywhere in particular; there was no one academic discipline, passion, or circumstance that fuelled a focused desire for research. I just somehow happened into it, much like the extended family member who peoples one’s spare room for over a decade and nobody quite knows how the arrangement began. I spent the first year in awe of everyone’s field sites, the depth of their contextual knowledge, and the breadth of their interdisciplinary understanding. My only beacons were a broad interest in how rural people lived their lives and a diasporic duty to advocate against forms of neo-colonial development that appeared to be endangering the cultural, economic, and ecological life of Jamaica. I say this as a note on my positionality, which drives both my disdain for the workshop and the overarching argument of this thesis.

I approached this research as a response to ongoing discourse in Jamaica around the rapidly emerging role China plays in the nation’s development. I heard it mentioned often during annual trips to visit my mother, who had returned to Jamaica (as do many of the Windrush generation) upon retirement. Two recent development projects – the new trans-Jamaican highway and the (currently on-hold) coal plant, both funded by Chinese firms – added fuel to a subdued but perceptible national angst. It is well-understood that the country’s economy is largely supported by tourism. However, over the past two decades, the increased number of Chinese migrants who own supermarkets, petrol stations, and hardware stores has
ignited criticism of the government’s use of (or, rather, submission to) liberalism as if it were aid. Jamaica’s economic history is discussed in greater depth in Chapter 4. I highlight here that structural adjustment policies between the 1970s and 1990s left deep scars. There was a national trauma that was palpable to me as a small child, when I lived in Jamaica for three years in the early 1990s. It drives a distrust that many Jamaicans have of foreign investment in development outside of tourism. It also drives a scepticism that inclines me to advocate against development in all forms (which includes conservation).

This research also provided an opportunity to metabolise the malaise that engulfed the scholastic experience that was my Masters (undertaken in the same department as my PhD, UCL Department of Anthropology). It was not the expected absence of other black students that bothered me, nor was it the (implicit or aggressive, but almost always pernicious) institutional bias that I was fortunate not to encounter very often. It was this uncomfortable feeling that I felt – especially after the fieldwork – of being a kind of double agent, bringing back the soft body of my heritage and people’s lives to become intellectual fodder. I would walk through the corridors of the department sobered by the eyes of the people who looked just like me that hung abundantly on its walls. I became hypersensitive to wider smiles and softer tones as I began to envisage the way academics in the department probably approached local interlocutors and I buckled under the weight of self-disappointment every time I played native in return. I almost loathed myself for liking the discipline; I matriculated feeling dirty and sticky, yet curious.

My concerns over Jamaica’s neo-colonial development and an aversion to the presentation of more vulnerable, broken, black bodies to salivating anthropological audiences drew me to the Maroons. As a child I had heard stories of their legend. Their name whispered in the dark with trepidation and awe as you do with all antiheroes and complex protagonists whose morals you may question but whose power you daren’t. I was not sure what I would
find, but I was convinced that if there was an antidote for the racialised capitalism that fuels labour exploitation and distorts, corrupts and monetises cultural values, that has become the appraiser and mediator of social relationships through prisms of productivity and the harbinger of environmental destruction, then it could be found within their midst. Inside their forest, which has served for centuries as a green armour shielding both people and wildlife from the violent advances of modernity whose stride often tramples both underfoot. I expected to embark on four years of research documenting interlocking systems of resource use, noting their simplicity, elegance, effectiveness, and function. To detail sustainable practices dovetailed into heritage and culture. I planned to survey smallstock and understand agricultural techniques. It was to be a small, humble manifesto on permaculture and degrowth.

My first two days in the field, I set about documenting exactly that. On day three I learnt that a small group of eight highly-skilled men left the village under the cloak of darkness, travelled miles through the inner core of the dense mountain forest – uninhabited for over a century – to hunt parrots. I haven’t documented another agricultural practice since. I was swept up by the spectacle. They were no longer Maroons, they were indigenous hunters. It was no longer about how they lived, but what they could represent. I caught myself painting images of their likeness in the sky. I couldn’t help but mythologise them into deities. Every word of advice became the transmission of indigenous knowledge. Every sentiment uttered over something atop an open fire became an incantation. I was no longer their witness, I was their voyeur. On paper I described my transition as an exploration of the traditional practice of parrot hunting, its importance to Maroon culture and its use – particularly, the many forms of indigenous knowledge held within it – to the improvement conservation science. In reality I was the author of myths, the creator of images, the ringmaster, the orator, the sensationalist. I was drawn deeper and deeper into the spectacle of
conservation. Strands of history plucked from the contemporary, thin actions and thinner words seized from daily lives, I began to take all that I could.

I became less and less interested in documenting the hunters’ indigenous knowledge and increasingly curious of indigenous knowledge as a phenomenon, created and maintained not just through practice, but through articulation, ‘the continuous “play” of history, culture and power’ (Hall, 1990; cited in Li, 2000). As I entered conservation I was met with the faceless, breathless, disembodied expectation that I would paint images of these exotic people and their flamboyant, ethnic, surprisingly useful knowledge systems. I met that expectation with a compulsion to reproduce and defend these images. By the time I stood in front of the rostrum to deliver the workshop, having completed all three seasons of fieldwork, I took (and still take) significant issue with both the initial research aims and the advertised bill. I question the term indigenous: what it represents, what it does to communities who are (and are not) described by the term, why it has become so necessary in advocating for rural communities. I wrestle uncomfortably with the concept of indigenous knowledge: the way it is conceptualised as an artefact unearthed in our dealings with the communities labelled as indigenous, the assumption that it hovers over communities like a cloud from which villagers can download ancestral data. My interest is not to undermine indigenous activism. Nor is it to arm myself with the discursive material, highly technical traditional practices, or socio-political injustices to also advocate. This work seeks to understand the stakes that people have and the shares that people hold, trade, and acquire in natural landscapes and the social units that emerge from and people them.

Though definitions of indigenous knowledge vary considerably, there is relative agreement that it involves a ‘web of meaning and influence’ (Scoones and Thompson, 1994: p19) and is ‘ingrained in a set of material and ideological practices in which [knowledge-holders] engage in a fairly matter-of-fact way’ (Baviskar, 2000: p101). Indigenous
knowledge is a symbol of habituation, patience and observation: it is the throbbing archive of traditions and experience that is patiently accrued over long periods of time (Barnhardt and Kawagley, 2005; Gadgil et al, 1993). Within conservation, there is growing recognition of the interdependence between biological and cultural diversity – and the significant decline in both (Breckenridge 1991; Pretty et al. 2009; Rappaport and Maffi 2010). This interrelation has reinvigorated explorations of traditional and indigenous practices and the knowledge and skills that they generate (Bridgewater and Rotherham 2019; Bridgewater et al. 2007; Berkes et al., 1994; Gavin et al. 2015; Sterling et al. 2017). Many argue that this attention has led to the disassembly of indigenous knowledge as ideologies, cosmologies, and conviviality are peeled away during conservation efforts that dispassionately use it merely as a source of information or mode of calibration (Agrawal, 1995; Brightman and Lewis, 2017; Homewood, 2017; Nakata, 2002).

Conservation does not just remove these rinds and peels, it watches and helps as they are created and slipped on. Material practice becomes ensheathed in layers of spirituality, cosmology and meaning, as stakeholders (traditional practitioners, advocates, and scientists alike) interact and trade in the currency of indigenous knowledge. During my fieldwork, there were signs I later understood to be the layering-on of meaning. A narration here, a prayer there. It was the impassioned speech of a village emigrant as he spoke truth to development power. The spontaneous ritual that was not there the year before. The talisman that went from profane to sacred and then, inconspicuously, back again. It was the consultation meeting that barely happened. The history miscited. Indigenous knowledge is not just the way to access resources, it is the resource. It is the ticket. It is capital. It is leverage. It is power. As its net worth continues to grow, it concomitantly becomes an apparatus of control. It becomes a liability. It becomes a burden; a debt that must be repaid, through action, performance or
repentance. If conservation is our government then indigenous knowledge is the polling station, where governments are re-elected, deposed, forced to reassess, or forced to subjugate.

As I tapped the microphone and began to speak at the workshop, the expectant and wide-eyed audience evoked a wave of resentment within me. As one of the merchants of this exotic knowledge, I had taken the everyday and intimate experiences that I had shared with a small group of hunters, dusted it off, and presented it as the shiniest and most polished fodder. Weary of reporting to my department, I had worked my way up to double agency on an international scale and now I was training up another elite cohort. Not once did my voice tremble, as I taught the group how to pierce through the everyday. How to grab hold of a casual phrase, to capture an absent-minded encounter. How to magnify and sensationalise perfunctory activities that were sometimes there and sometimes not – susceptible to oversleeps, shortcuts, procrastinations – and craft them into enduring, poised, and deliberate performances.

This thesis is not an evaluation of how sustainable parrot hunts are. It is an exploration of what makes the practice sustainable. By this, I do not mean sustainability as an outcome, or the presence of restraint or some special bond with nature that allows particular people to hear when it whispers “stop”. I mean to explore what sustains the practice and the practitioners as they wearily carve out time in their increasingly busy lives to continue to hunt. Why, when money is tight, bills pile high, and favours wear thin, they continue to indulge in tradition. Why they stop. Why they start again. What knowledge they really hold. How tight they hold it, after it is detected, found, lost, and found once more. How it is traded as it is passed around small, private circles, traded in places and through endeavours in which very few are privileged to engage. This thesis is also an exploration of how certain practices within and about natural landscapes are sustained by different forms of capital as they move between spaces of economic and social action. Spaces, I argue, in which spectacles are
formed and reside. The spectacle of conservation both sustains and is sustained by the practices of its sanctioned actors – from the scientist to the indigenous knowledge holder; ensconcing their activities in layers of meaning, morality, and rationality through processes of articulation. The spectacle of conservation does not only sustain, it compels and imprisons. It turns on a dime to both justify and dismiss the movement of different forms of capital and the spaces in which they occur. It is the clean hand of capitalism that covers the dirty hand of labour exploitation, helping to corral the poor and the unsanctioned into reservoirs of cultural, agricultural, and labour exploitation. Before I outline how I have arrived at this conclusion, I offer some context in the form of the remote region, dubbed “an island within an island” (Kuymulu, 2011), and the village within which this research took place.

**Cockpit Country: Ecology and History**

Cockpit Country is a mid-elevation wet limestone forest located in Jamaica’s west-central plateau. Spanning over 650km², Cockpit Country’s karstic limestone formations produce a densely packed series of hills, buttes, and mountain that characterises the forest (Chenoweth et al. 2001; Newman et al. 2014). Forest composition is varied: the north is flatter and less dense, whilst the south is of higher average altitude (Newman et al. 2014). In the 1950s, forest reserves now spanning 221.75km² were designated by the national government (Newman et al. 2014; UNEP-WCMC and IUCN 2015) (see Figure 1). In 2017, after a series of anti-mining campaigns organised by conservation stakeholders, the Prime Minister of Jamaica announced plans to designate Cockpit Country as a protected area, covering 747.26km² of the forest and a buffer zone (Jamaica Information Service, 2017). Despite continued efforts, the Forestry Department have been unable to meet initial timelines for data collection and confirmation of the proposed boundary and at the time of writing this, 28 months after the announcement, the protected area is yet to come into effect. There are two key reasons for the delay: the remote nature of the forest and the geological, biological
and cultural significance of the area, which – compounded by its remoteness – creates a complex, highly political, and divisive set of relations between stakeholders.

Figure 1: Map of forest reserve within the Cockpit Country region (shapefile of reserve from UNEP-WCMC and IUCN 2015). The forest, both exterior and edges, extend beyond the forest reserve.

Cockpit Country spans five of Jamaica’s eight watersheds, providing 40% of the nation’s groundwater and 25% of its surface water (Chenoweth et al. 2001; Newman et al. 2014). The forest is home to many of the country’s endemic species, some of which are site endemic. It is home to 28 of Jamaica’s 29 endemic bird species (Davis 2017). This includes the native white-crowned pigeon (*Patagioenas leucocephala*) and endemic ring-tailed pigeon (*Patagioenas caribaea*) (Davis, 2017). The ring-tailed pigeon is assessed as Vulnerable on the IUCN Red List, and is protected under national law. The white-crowned pigeon, assessed as Near Threatened on the IUCN Red List, however, is among the four species of pigeon included in game bird hunting in Jamaica by the National Environment Protection Agency
(NEPA). Pigeon meat is desired by select groups of tourists and middle-class Jamaicans who partake in game shooting and are able to afford the required licences and shooting club membership (NEPA 2017). Pigeon meat is also highly desired by their parrot hunters; pigeons are, however, larger and heavier than the parrot species for which their traps are intended. Consequently, the adhesive often fails to successfully hold this most elusive and prized bycatch.

It also includes the black-billed parrot (*Amazona agilis*) and yellow-billed parrot (*Amazona collaria*) that are hunted in the traditional practice this thesis explores. Though significant proportions of the populations of both parrot species reside in the forest (Davis 2017), the black-billed parrot is believed to be site-endemic, with over 95% of its population estimated to be resident in Cockpit Country (Koenig 2001). Both species are assessed as vulnerable on the IUCN Red List (BirdLife International 2016a, 2016b) due to habitat loss and hunting pressures. Though both are protected under national law, they are still hunted for the domestic pet trade: in the forest as part of traditional practice; across the islands (using nets) as part of commercial practice. Population estimates are difficult to acquire and update; field research conducted in the 1990s remains the only systematic study of resource and habitat requirements for any avian species in Cockpit Country (Koenig, 2016). The training, skill, and equipment required to conduct bird surveys in dense, remote, tropical forests, present unique and particular logistical challenges. Inaccessibility and unnavigability can further exacerbate factors affecting detection rates, such as observer performance, vegetation, and climate (Gale et al. 2009; Thompson 2002). Consequently, current policies, analyses, and conservation efforts rely on only sparse data.

Human disturbance in the forest reserve is significantly less than the forest periphery, due, in part, to lack of road access (Newman et al. 2014). Agro-entrepreneurs fell smaller trees around the periphery (as with much of the island’s secondary and dry forests) for yam
sticks. Yam cultivation is one of the region’s primary economic activities and one of the biggest drivers of deforestation (Beckford, 2000; Newman et al., 2014a; 2014b; Timms et al., 2013; Tole, 2006). Yam sticks (wooden posts, 2-3 metres high) are used to support the vines, whose (healthy) growth determines the size and quality of the tuber. One study estimates that each Jamaican yam farmer uses over 3000 yam sticks each season; over half of which require replacing each year because the wood is of poor quality (Beckford, 2000). This has contributed to the thinning of the forest edge, where forest cover has reduced by a quarter since 2001 (Newman et al., 2014a). Between the 1910s and 1990s, the forest interior was also heavily logged. Small traditional villages, with the technical knowledge to identify trees and undertake such complex operations within the dense, humid forest, traded hardwood, used in furniture and the construction of a railway line that used to service the island until the 1950s (Beckford, 2000). Few indigenous and rural communities continue to live around the sparsely populated the forest edge (Figure 1). Even fewer continue to rely on such forest resources. Decreased traditional practices and forest use that take place deep within the interior, evidenced by an annual reforestation rate of 4% (Newman et al., 2014a), render the forest even more unnavigable. Overgrown trails now exacerbate the lack of access that confounds conservation science and planning.

The importance of Cockpit Country’s inaccessibility to Jamaica’s heritage cannot be overstated. In 1655, a 7000-strong troop of British soldiers overwhelmed the small population (of around 1500 citizens, comprised largely of Spanish soldiers with a small proportion of enslaved Africans and even smaller group of remaining native Taino Indians) and assumed colonial rule (Craton, 1982: 67-70; Martin, 1839: 4-7). What followed, in the transatlantic slave trade in British West Indies, was an agricultural empire of unprecedented proportions, with Jamaica in the centre of crop production (Marshall, 1972; Mintz, 1961). The scale of sugar and banana production in Jamaica left soil nutrient-deficient and required
the constant replenishment of enslaved Africans (frequently worked to death), both of which often bankrupted plantations (Marshall, 1972; Mintz, 1974:150). The origins of Jamaican Maroon societies are unclear. Some scholars suggest that free Africans and Taino Indians lived together as forest peoples during Spanish colonisation and out of these communities, Windward Maroons – who inhabit the foothills of Blue and John Crow Mountains – were formed (Craton, 1982; Kopytoff, 1978), and that Leeward Maroons – who inhabited Cockpit Country – formed much later (during British rule). Some argue that Leeward Maroons formed first in 1673 after a plantation rebellion of 200 enslaved Africans (Kopytoff, 1976b), and that Windward Maroons later splintered from this original society.

What is clear is that the distinction between the two Maroon societies demonstrates how important Cockpit Country was to the cultural heritage and traditional practice of the Leeward Maroons it accommodated. Slave labour may have financed much of the British Empire, however profit margins of individual plantations were slim. To reduce costs, the enslaved were given less-fertile land for subsistence farming and limited permission to trade surplus domestically (Besson, 1999; Mintz, 1974 – who refers to this phenomenon as proto-peasantry). Plantation owners could not afford further loss of enslaved workers; runaways were hunted relentlessly. To stem the volume of defaulted payments, the British Crown became increasingly involved in the recapture of the enslaved. The British armed forces began to target and disband Maroon communities, whose presence encouraged and supported further escapes. This culminated in the First Maroon War (1730 – 1739). In Windward Maroon communities, where villages and leadership were dispersed across relatively flat and accessible areas and escapees were particularly welcome, British troops attacked and disbanded many of the settlements (Kopytoff, 1976a; 1978).

Leeward Maroon communities were different. All settlements were ruled under one chiefdom, rather than the devolved West African political system under which Windward
Maroons operated (Kopytoff, 1976a; 1978; Zips, 1998). Their central political system relied more on military strategy than their Windward counterpart, who often incorporated magico-religious and spiritual solutions. Leeward strategies included restricting the language spoken to English to reduce inter-ethnic conflicts (Kopytoff, 1976a; 1978). They were also more resistant to accepting escapees: it could expose their locations and gave the opposition additional reason to target them. The few escapees they did accept were subject to a probation period so strict that many returned to the plantation from which they escaped (ibid.). These strategies, in combination with the impenetrability of the forest and the meticulously planned military ambushes they employed, brought the British to near-defeat. The war ended after the British negotiated a peace treaty with the Leeward Maroons, offering them ownership of part of the forest and the freedom to settle, cultivate, and hunt its entirety. The Leeward Maroons then helped to organise negotiations of a similar (though less beneficial) treaty between British troops and the Windward Maroons.

Some of this background brings greater clarity to Chapter 3, where the reconstruction of heritage and disputes over land claims are discussed. This history, however, has wider significance. It serves to show how the history of Leeward Maroons is entangled in the unnavigability of the forest. The geographical, political, and cultural isolation of the Maroons who inhabit Cockpit Forest, relative to their eastern counterparts continues today (Barker and Spence, 1988). More pertinently, it shows how the freedom, identity, and legacy of Leeward Maroons is derived if not directly from exclusion, then exclusivity. In 1718, just before the start of the First Maroon War, a large group of enslaved Madagascans escaped a nearby plantation and settled in Cockpit Country forest (Kopytoff, 1976b). A long and bloody inter-ethnic feud ensued between the Madagascans and the largely West African (mostly Coromantee) Leeward Maroons (ibid.). It was from this feud that the central chieftaincy arose. Maroon history was shaped not just from revolt against British rule, but complex and
dynamic alliances and conflicts (Barker and Spence, 1988). Identity was defined through conflict, rather than culture. Skills were honed through battle, rather than living. Safety was gained from isolation, not in numbers.

This background also provides an opportunity to discuss my use of the term indigenous when describing the Maroons. In 2016 I came across a UN webpage that listed all the recognised indigenous communities – it has since been removed as the organisation moves towards communities’ self-classification. Jamaican and Surinamese Maroons both appeared on the list. I never questioned why these two groups were specifically chosen, or what that choice said about the remaining Maroon communities across the globe, however the ambiguity it creates (between Maroons as a tribal group or indigenous peoples) has provided the most fertile of grounds for the articulation work I began adopting as a new conservationist. ‘I’m unsure about your use of the term Indigenous here. Are you calling the Maroon people Indigenous? Could you delete the ref to Indigeneity here and in many places throughout? You’re talking about the Maroon community, no?’, a journal editor commented in response to my use of the term in the article I submitted on the hunters’ wild meat consumption. In my revisions, I apologised profusely for my presentation of statistical data and copyediting errors. I conceded to many of the restructuring suggestions and toned down my use of rich, descriptive language for the scientific journal. But to the use of the term indigenous, I responded:

‘There was one change that I did not incorporate, and it happens to be a topic that I am very passionate about. Jamaican Maroons are considered an indigenous group by the nation, the national government and the United Nations. Most importantly, the Maroons themselves identify as indigenous. In 2017, the United Nations stopped keeping a global list of indigenous communities (which included Jamaican and Surinamese Maroons) and began to drive an agenda around indigenous rights with self-identification at the centre. They
acknowledged that current, very limited, definitions of indigeneity were often restricted to particular ethnic groups and were anti-black in nature for two reasons. Firstly, it created deep divisions between African tribes, marginalising nomadic and pastoral groups that had equally ancient forms of knowledge and customs. Secondly, it denied this categorisation to the many traditional communities removed from Africa in the transatlantic slavery. There was a special issue in Cultural Anthropology that deals with this much more effectively than I have here, but I hope that I’ve begun to explain why it is very important to me that academic scholarship also adopts this shift and widens the very narrow definition of what is considered indigenous.

Removing the term throughout the paper would go against this belief, and while I am extremely grateful for your generosity in offering such constructive feedback and leniency in the face of my many copyediting errors, I cannot make this change. Because the topic of emergent indigeneity is so nuanced and has had a growing body of anthropological literature behind it, I did not attempt to explain my reasons for using the term indigenous in the paper as I thought there was no way I’d be able to do it succinctly but with enough gravity. I hope that you understand, and I apologise for the initial offence this caused. I have also chosen not to capitalise the word indigenous – because I oppose its use as an ethnic, rather than political, identifier. I understood from section 2.1.6 of the guide (which unfortunately seems to be the only thing I understood the first time around) that this choice was left to the author’s discretion.’

I will not attempt to defend or problematise my identification of the Maroons as indigenous throughout the thesis, however I want to note how its use has provided the significant conceptual and ideological space that has brought me closer to the spectacle of conservation. It is the backstage pass, granting me and my interlocutors access to behind the scenes. The ephemeral, equivocal, debatable nature of Maroon indigeneity has allowed me to easily trace
the paths made between spaces of articulation and capital accumulation for, like the first tracks in fresh snow, many were not there before my insistent use of the term within Jamaica’s emerging conservation scene.

**The Village**

Parrot hunting takes place in the dense interior of the forest. The hunting ground is less than 4km from the edge of the village. By the time we weave through the density of trees and balance our way across the narrow ridges and paths donated to us by the series of karsts we must traverse, it might as well be a hundred miles away. There are many stories about the conflicts that ensue when a formation is considered a mountain by one group and a hill by another. I don’t know how many of those obstacles that we clambered over each hunt were higher than 2000 feet. The GPS device was yet another instrument that I used to legitimise myself more than my work – it seldom left my backpack. Every ascent, though, felt as if fingertips outstretched in the dark could graze the knees of God. The hunts are undertaken by two small groups alone. One consists of eight men, the other a pair of brothers sometimes accompanied by their cousin. Hunting takes place between July and September, which, according to one hunter, is three months after the parrots’ breeding season, when the sky is full of fledglings naïve and eager enough to fall for the trap.

I conducted field research each hunting season between 2017 and 2019 in one of the indigenous Maroon communities on the forest periphery. I have chosen to anonymise the village to minimise potential recrimination against hunting protected species. Each year, for three months, my children and I lived in the village and participated in daily life while I attended as many hunts as my stamina and responsibilities would allow. This participation included sharing childcare. My fieldwork (and, luckily, hunting season) coincided with the summer holiday. I quickly built strong relationships with the mothers and grandmothers who cared for my children while I attended hunts, and whose children and grandchildren I cared
for in return, as they played with my own. This blurred some boundaries and sharpened others. The hunts became my work; its spectacle, my interest. This, I shared with the hunters whose return to the practice each year was both an occupation and a compulsion. I better understood their sacrifices and commitment. If we hunted on day one, we wouldn’t have clean clothes until day three. One cannot handwash clothes in the midday heat, so washing would have to be done on day two.

During the third fieldwork season, many villagers began to cultivate marijuana. In the summer of 2019, the Ministry of Agriculture piloted a medicinal marijuana project in two rural villages either side of the island. Very few participants had been officially invited to join the scheme. At the same time, the Prime Minister recently reimposed a state of emergency in an attempt to curb the recent spike in shootings. Police cloaked the island and check points punctuated the streets; contraband could no longer be shuttled across the island by a network of small- and medium- sized buyers. All the same, marijuana farming had been reinvigorated in the village and I spent many afternoons harvesting marijuana by the roomful at my host’s farm. Bin liners of cleaned, sorted, and weighed marijuana lined porches by the pound – there they stayed, long after I left, depreciating as they dried. Most of the hunters had also started marijuana farms. I welcomed the prompter earlier ends to the hunts that year, that allowed us to rest and eat before working the farm or cleaning, sorting, or storing the harvest.

The village became my home, the women my refuge. I sat with other mothers in kitchens while our children played and complained about the costs of sending them back to school. They had planned trips to town. I had scoured the internet for cheap school skirts that could (even marginally) offset the investment in school shoes. It was the shoes, we agreed, that would send us all to the poorhouse. We speculated whether or not we would need an extra job the coming academic year. The children were getting older now – how much time
could we spare to earn some more money? We shared recipes. I was raised by a Jamaican mother and knew how to cook Jamaican food well – this came as a surprise to most. We shared water. There is no water utility service in the village (nor are there landlines, cell reception is intermittent, and electricity – wired legally to few houses – is by and large stolen). Rainwater is collected in drums which households often share or trade during the dry season (May – October). We supported each other with the weekly shopping. There are no more than four taxis that service the community and rarely are they all running at any one time. One was in a constant state of disrepair and lay stationary outside of the owner’s home more often than it ran. Two did not run when the Department for Transport were conducting registration checks. To save on petrol, taxis waited in town until they had a full return load. If you were not ready to go (and secured a seat) by 8:30am, then you would have to wait until at least 11am. If you missed the midmorning returns, then the next outbound taxi was early afternoon. After that, between the errands that taxis ran and the unmanned goods they transferred, there was no guarantee when the next taxi would arrive. The last taxi left the town by 5.30. One of the mothers and I missed it once. We did not arrive back to the village until 11pm. Food shopping was, therefore, another endeavour to which one had to dedicate most, if not all, of the day. My female friends and I saved spaces for each other in the taxi, alerted each other when one returned. We bought extra bags of rice for each other. We bought extra snacks for each other’s children. During the 2019 drought, when most spring onion (amongst other) crops failed and the price had increased fivefold, one mother shared a large bundle she had acquired from a family friend.

I moved between two very gendered spaces. In one, I was the voyeur. I observed, I was observed – and resisted (it was, in fact, one of the mothers that scolded the hunters into allowing me to participate in the second season). I performed. They performed. The hunts were a stage and had been from before my arrival. The other, I inhabited. I was a mother, a
friend, a confidant. I am not naïve enough to believe that I was considered one of them. I might be a black mother, but I am different, I come from a different place, and I have different life chances. But life is abrasive. In this space, we bore similar chafing and scrapes and it endeared us to each other in a “collective vulnerability”. An old visitor I may be, but every time I return, to many I smell like new money. Yet, with the group of women that were my friends, somehow it was not that way. I lived. They lived. When we visited each other’s homes, we removed our public armour and withstood the abrasions together. I saw through these two spaces (of which, I am sure there are many more) how heterogeneous traditional communities are. How divergent priorities are, how different access to resources was, how exclusive traditional practices were. I better understood the relationship between the everyday and the eventful and the multiple positions along the spectrum that traditional practice occupied.

**Sustainable Practices**

On the one hand this thesis is an exploration of the practices that people sustain – the ones that define them as indigenous, scientists, conservationists, and advocates. It aims to make familiar the spectacle and find peculiar the everyday. It is an investigation of the simple magic of the everyday, where practices done both in solitude and among witnesses pass seamlessly through time. Life is negotiated there. Abrasions are felt there. Change is at once confronted and yet somehow bypassed there. This thesis also attempts to offer a demystification of the spectacular. In his canonical work *Society of the Spectacle*, French philosopher and filmmaker Guy Debord defines “the spectacle” as ‘an affirmation of appearances and an identification of all human social life with appearances’ which ‘presents itself as a vast inaccessible reality that can never be questioned’ (2005:9). Conservation is a spectacle. Not a practice that has been beset by the spectacular or consumed by the incursion of environmental and political imaginaries. Conservation, in every single one of its forms –
the good, the bad, the ugly, is a spectacle, conjured, amplified, and protected by articulation. The articulation of the wildly unusual, deeply romantic, nobly performed traditional practices affirming indigenous identities. The articulation of the objective, robust science that justifies oppression and intervention and rationalises the actions of some and not others. The spectacle demarcates those local and intimate spaces and sorts intruder from inhabitant. The spectacle is the weak state and the engorged NGO. The spectacle is the conflict. The spectacle is the participation, the collaboration, the common ground that sits in the middle of here and yonder.

Paradise is the fifth book of African-American Nobel Laureate Toni Morrison. Centred around an all-black town established by descendants of freed slaves, it depicts the horror of mass violence and redesignates labels of perpetrator and victim. In an interview, the late author described the work as

‘an interrogation of the whole idea of paradise: the safe place – the place full of bounty – where no one can harm you. But in addition to that, it’s based on the notion of exclusivity. All paradises, all utopias are defined by who is not there; by the people who are not allowed in’

The spectacle is utopia. It too requires people to be excluded from and by it. Like all spawns of capitalism, it is sustained by exclusion, marginalisation, and reservoirs of impoverishment. The bounty must be kept from those who seek to use, deplete, destroy, and corrupt both it and us. Utopia, and spectacles, is the capture and accumulation of capital. Who can access it and who is excluded from it? What are the circumstances and conservation actions that empower some stakeholders and exploit others? When do subversive acts subvert regimes and when are they simply consumed and co-opted by others?

What, though, is a spectacle? The definition operationalised throughout this thesis is that the spectacle is the set of images that mediate our social relationships (Debord, 2005: 7);
they are the representations of reality that inform our expectations, which when met, exceeded, or unreached determine how we recognise, (re)categorise, and interact with others. Though the spectacle, Debord argues, is a distortion, falsification, and transcription of reality, it is also real (2005: 8). Western perceptions of truth and falsehoods as binaries, make this distinction difficult to digest – that something fictional can become real. This however is what a spectacle is, and our inability to simultaneously acknowledge both its fictionality and its realisation has made the spectacle extremely dangerous. Overcoming these digestive issues requires clear distinctions between spectacle, abstraction, and the everyday.

**Spectacle, abstraction, and “the everyday”**

Across both of his seminal works – The Production of Space and The Critique of Everyday Life – Henri Lefebvre’s description of “the everyday” treated everyday life not as a curation of individual experiences, but as a phenomenon: a “practical consciousness” of the ‘familiar, trivial, inauthentic guises’ of everyday life (1991: 132). ‘The everyday’ writes Lefebvre, ‘establishes itself, creating hourly demands, systems of transport, in short, its repetitive organisation’ (2004: 7); it is self-critiquing, paradoxical, mobile, and unrelenting (Lefebvre, 1991: 9). Sitting in contraposition to this pragmatic awareness of our material world, however, is a “reverse image” – another consciousness born from distortions of reality (Lefebvre, 1991: 133). This other consciousness is able to ‘conceal the production of repetitive time and space’ (Lefebvre, 2004: 7), smooth out inconsistencies, and present to us a cogent, coherent set of images of our material world. This is precisely the spectacle as defined by Debord, that ‘presents itself as a vast inaccessible reality that can never be questioned … [t]he passive acceptance it demands is already effectively imposed by its monopoly of appearances’ (2005: 9-10).

These two forms of consciousness respond to, produce, obscure, destroy, and remake each other (Debord, 2005:10-11; Lefebvre, 1991: 9). The spectacle breaks apart reality, showing to us pieces that are out of context in order to fashion an appearance of reality that
hastens our subjugation to the market economy (Debord, 2005: 10-11). In Chapter 5, I show how the spectacle breaks apart plastic use and pollution to fashion a reality of single-use plastic bags that strips from the poor a technology that supports critical economic lifelines. Conversely, there is something profoundly anti-spectacular about the continuity of life and the ongoing, contradictory, polyvalent nature of the everyday. It eats holes in the silk fabric of the spectacle, undermining its domination. In that same chapter (Chapter 5), I show how everyday (re)use of single-use plastic bags dispels their overwhelming portrayal as an environmental and humanitarian hazard. Similarly, in Chapter 3 I discuss the spectacularisation of indigenous knowledge, that lumbers communities with untenable expectations – from both sceptics who seek to dismiss its importance and the advocates and allies who preen their interlocutors into glossy falsifications of themselves. I also explore how Maroon parrot hunters use, maintain, and transmit such knowledge in “the everyday”. Here indigenous knowledge is shrouded by exclusivity, privilege, jealousy, betrayal, and inadvertence; stark opposition to the “reverse image” of such knowledge as a leveller and unifier. The spectacle and the everyday can be found within each other, at times even uphold each other, but this does not mean the relationship is symbiotic.

Several scholars have juxtaposed the spectacle with the everyday; none, however, have explicitly realised the role of abstractions in the contradictory, destructive enmeshment of spectacle and the everyday. Many, in fact, consider the spectacle and the “abstract, formal, and metaphysical” to be one and the same (Lefebvre, 1991:133). The failure to distinguish spectacle from abstraction, I argue, is one of the biggest theoretical blunders of our lifetimes and is – along with the capitalist expansion that fuels spectacle (more on this later) – responsible for the violence and uncontrollability of the spectacle, since this conflation allows the spectacle to penetrate our lives so fully and to be excused so wholeheartedly once present. Race has been classified as, and critiqued through the lens of, spectacle (see Murray, 2004;
Gilroy, 2000). Emphasis on and spectacularising of race, Paul Gilroy argues, has left marginalised communities tethered to rigid “racial solidarities” that fail them in contemporary geopolitical contexts, where collective meanings are unable to span across diasporas with diverse economic rationalities who face completely different political realities (2000: 210). The spectacle of race shepherds some of the most oppressed members of society towards an embrace of “blackness” that has been constructed both in response to and by “whiteness”, that fails to solve any of the plethora of material conditions to which black bodies are subjected (Murray, 2004). Jim Igoe presents a similar application of spectacle towards nature, which, he argues, ‘does not exactly exist’, but is instead ‘an abstraction derived from material realities and relationships’ (2017: 3). Nature as spectacle has led to the preservation of iconography, panoramas, and vistas which misrepresent, if not corrupt, both the natural spaces and the human activities that take place within it (2017: 5). Except race and nature are not spectacles, they are abstractions – and this distinction has significant consequences.

There is no one clear definition of abstraction; some argue it is the associations made between objects (Fine, 2002: 1-2); others, the mere uncovering of existing, complex systems of relations between elements, which are symbolised by concepts (Ricoeur, 2003: 123); others still, the process itself of iterating a series of inscriptions to transform a physical referent into knowledge (Latour, 1986: 220-229). Typical of most definitions, though, is the link between the conceptual and the material. Abstractions are ways of generalising, ordering, categorising, understanding our world – whether or not these classifications are correct. Abstractions are the fluid record of the ways in which material realities have been inscribed, transcribed, interpreted, made sense of, or dealt with. The spectacle is a falsification, not a(n) (mis)interpretation, of reality (Debord, 2005: 8). It is the deliberate attempt to invade the everyday so aggressively and often undetectably in order to reconfigure it, so that reality is
aligned to the spectacle in such a way that the appearance of the spectacle is unquestioned. Making itself indistinguishable from the abstractions that are a natural part of our lived experiences transforms abstractions into the trojan horse that facilitates this invasion. Abstractions provide a point of entry for the spectacle because they are the elements of our reality sufficiently distanced from its concrete source that it is pliable, malleable, corruptible enough to be easily transformed and distorted. ‘Nature as panorama is familiar’ and is ‘readily abstracted into spectacular images and simulated into a profusion of themed environments’, Igoe argues (2017: 5); this is true no because abstractions are spectacles, but because abstractions can be so easily manipulated by spectacles.

In his reflections “Comments on the Society of the Spectacle”, Debord further develops corollaries and axioms to help us identify and define the spectacle, arguing:

‘When the spectacle stops talking about something for three days, it is as if it did not exist. For it has then gone on to talk about something else, and it is that which henceforth, in short, exists. The practical consequences, as we see, are enormous.’

(2010: 10)

It is the spectacle that brings the abstract in and out of view, as it acts upon, co-opt, obscures, and refuses it. Race is not a spectacle. Racism is the spectacle that brings race in and out of view. It decides when to gaslight us into thinking race is not there or does not matter, and when to assure us that it acknowledges the consequences of a capitalist world driven by racial hierarchies. Racism tells us when to protest and when we have taken it too far. Racism dictates who is the victim and who is in fact a perpetrator. Nature is not a spectacle. Conservation is the spectacle that brings nature in and out of view. It protects, transforms, monitors, evaluates. Conservation decides what is natural and who or what deserves protection and recognition. Conservation decides what is in decline and what must be eradicated. Conservation also distinguishes victim from perpetrator (from hero).

Throughout this thesis, I will try many other associations on for size – conservation as an
imaginary, a concentration camp, gulag, corvee, a science, a non-science, an assemblage of technical actions by members of an exclusive quorum, a cabal, an act of self-narration, and much more. I will ultimately arrive at the conclusion that though some of these associations are true, conservation is a spectacle: ‘capital accumulated to the point that it becomes images’ (Debord, 2005: 17); the specialisation of power through distortion (2005: 12).

The spectacle is so potent and dangerous because of its ability to make itself real, by embedding itself into abstractions (Debord, 2005: 8-9). It would rather have us unpick the seams that hold together the fabric of our reality than to leave itself open to identification, isolation, and extraction. It would have us abandon histories, memories, experiences, relations that bind us; for it knows that we are left with little recourse other than to return to our abstractions as a means to describe, understand, communicate, organise, and ingest. The spectacle of conservation is entangled in the metaphysical institutions that organise our worlds – knowledge, science, communities, nature – knowing that through our need to conceptualise these things, “economy’s domination of social life” is reproduced and preserved (Debord, 2005: 10-11). For now, I will restrict the application of spectacle to mainstream conservation, however I cannot help but issue notice that I strongly believe it is applicable to the concept of conservation in all its forms and that any and all actions done in the name of conservation (not actions that happen to be done in harmony with the environment, and would therefore be approved by “conservation”, were it aware) is an opportunity to (unwittingly) create, control, accumulate, and expand capital. The beginnings of this can be seen in Chapter 2, when space is juxtaposed with paths to determine that the definition and categorisation of space (even the small and exclusive space of Maroon hunting grounds), and the technical and economic actions within it, leads to the accumulation of capital. Expanding this further into how other “just” forms of conservation then dismantle the lives, economies, and political structures of local and traditional communities through the
inadvertent introduction of spectacle and examining the resulting reactions and co-productions between the spectacle and the everyday, however, is beyond the scope of this thesis.

**Thesis outline**

In this thesis, I draw on Pierre Bourdieu’s many notions of capital (social, symbolic, cultural, scientific) to begin to address some of these questions and understand how the spectacle of conservation works. I also draw on Tania Li’s exposition of ‘the cultural and political work of articulation’ (Li, 2000), in which the interplay of history, culture, and power has positioned indigenous communities in dynamic, but often exclusive, political relationships and separates multiple stakeholders into those who are able to generate, through their own articulation of the socionatural landscape, forms of capital (including economic and political) and the voiceless, stage-less actors who must live with the consequences of the redistribution of capital. I also engage with Caribbean cultural identity explored by Jamaican cultural theorist Stuart Hall, from whom Tania Li draws in her development of articulation. I apply these to ongoing contemporary debates about the practice and the spectacle of conservation.

Chapter 1 is an introduction to traditional parrot hunting. As part of doctoral research, I accompanied the larger group on 14 out of a total of 40 hunts in 2018 and 15 out of a total of 25 hunts in 2019. Focusing on the hunts in the 2018 hunting season, Chapter 1 distinguishes the traditional practice from other rural and agricultural practices, examining the increasingly clandestine nature of forest use and the exclusion of the remaining community who slip deeper into sedentariness. I compare the use of paths to the use of space in our conceptual approach as a way of comparing the spectacle to the everyday actions it inspects and attempts to oversee. Chapter 2 explores changes in the catch statistics between 2018 and 2019. In attempting to unearth causal factors, I initially turned to the spectacular: locally-experienced climate change; shifts in species’ ranges; deliberate and calculated modifications to centuries-old traditions. The likely cause of the significant changes in catch
yield, however, requires a combined examination of both the social and environmental shifts that occur. As catch yields decline significantly in the 2019 hunting season, the chapter ends by discussing the responses of the hunters as they develop and redefine a “practical kinship” in response to their collective vulnerability. Through this kinship, defined by another concurrent traditional practice (the consumption of wild meat), the remaining hunters unconsciously determine who is included in and excluded from an emerging inner circle that envelops their shared hardship.

Chapter 3 explores the way in which indigenous knowledge and identity are used as capital by conservation stakeholders. Drawing from Tania Li’s description of “fields of power” – spaces of conservation action, in which indigenous identity is articulated and utilised, this chapter considers how Maroon indigenous identity is manifested, accumulated, and asserted in the (ongoing) designation of Cockpit Country Protected Area. Cockpit Country Stakeholder Group was created in 2006, as part of a joint conservation initiative, by The Nature Conservancy, USAID, Jamaican state departments, and local NGOs, research departments and communities. The stakeholders brought together by this project represented diverging interests; despite many collaborative difficulties, the anti-mining initiatives emerged as the main output from the stakeholder group. In 2004, Government of Jamaica granted prospecting licences in the Cockpit Country region to Aluminium Company of America (ALCOA). As part of anti-mining advocacy, one independent research centre (Windsor Research Centre) mapped the Cockpit Country region (used in Figure 1).

Cockpit Country at that point had no formally-defined boundaries; central government used the forest reserves and, later, a geological report published by an academic at University of West Indies to make ad-hoc determinations of what did or did not constitute the forest as it granted mining leases. Windsor Research Centre included a buffer zone to protect the forest from further mining encroachment; the generous boundary was deemed
excessive by some actors and no consensus was reached over the region’s formal definition. In September 2017, the incumbent Prime Minister granted mining concessions to national bauxite company, Noranda Jamaica Bauxite Partnership (NJBP). The stakeholder group who, as a collective, had lain largely dormant since their initial formation, launched an online petition against the mining. The petition gained 30,000 signatures by the end of the month, prompting a response from government. In November of 2017, the PM announced plans to designate Cockpit Country as a protected area. Today, there is still no formal boundary and a mining lease has been recently granted in the “buffer zone”. Chapter 3 explores stakeholder actions and counter-actions over the last 13 years to better understand how it has defined the “field of power” and the identities of the actors operating within it, yet has left undefined the subject of the action: the physical landscape. It is in this chapter that I make the case for the roles that indigeneity and legitimacy – as articulated by specific actors whose actions are eulogised, permitted, but also dictated by the spectacle of conservation – play in conservation’s inherently exclusive nature. I also argue that this exclusive nature is shaped by a region’s colonial legacy, which governs the way power and identity is expressed and how capital is moved.

Chapter 4 probes how the spectacle of conservation shapes science work and data practices. Employing Bourdieu’s definition of scientific capital, this chapter explores the social units within which science is produced by examining constitutive sets of practices and techniques, as well as the recognition, knowledge, and data that bound these units together through the process of “science work”. The context of this investigation is the process of IUCN Red List (re)assessments; the results of which shape science, policy, conservation efforts, and, as it trickles its way down a cast of actors, perhaps traditional practice. These assessments are conducted through and validated by a series of contributions, disputes, and distinctions that embrace or reject data and their producers. The chapter ends with a personal
reflection of my invited contribution to the 2020 Red List assessments of the black-billed and yellow-billed parrot. My first-hand accounts of collecting, aggregating, categorising, and representing specific forms of data in a scientific form that I recognise but do not know, provide insights into the relationship between practice and standard within “science work”. As I stretch thin my own sparse data to disguise absent expertise, I learn that scientific social units are likely defined as much by collective vulnerability as a kitchenful of mothers or a waning group of hunters.

Finally, Chapter 5 builds on Chapter 4’s discussion of conservation action as it explores the impact of Jamaica’s ban on single-use plastic bags, implemented in January 2019 – before my final fieldwork season. Where the ongoing protected area designation makes central the role of the stakeholder and illustrates the use of indigeneity as capital, this measure is void of all such considerations. A spectacle in its own right, the unquestioned promotion of the single-use plastic bag ban in fact holds more consequences for the sustainability of the hunting practice (among other rural and traditional practices) than it does for the overall ecological impact of plastics. For many rural and traditional communities, these plastic bags are not “single use”, they are a technology – one of significant consequence to the already-enfeebled hunt. As policy makers in the global south pick conservation’s low-hanging fruit that is the implementation of plastic bans, these developmental gestures go beyond critiques of the removal of actors and actions in conservation spaces: it erases their everyday existence, through slow violence, from our understanding of the Anthropocene as we know it.
1. Paths

It was the third night in a row that we had not left the village square before 4am. Two older hunters and I sat on the cold concrete steps of the rum shack, waiting for spheres of light in the pitch-black. I was only just beginning to learn to walk alone in the darkness – it was harder without the moon. I did not know why it was important that we were not seen, only that it was important we weren’t. By my final fieldwork season, when I arrived confidently, stealthily, I could glean from the remaining hunters that I had officially graduated from burden to something else. In spite of itself, the approach mattered.

Infrequently, dogs would bark outside of their owners’ yards when you walked past. It lit up the barren soundscape like a landing strip. Yet you never turned on your headlight. Not in the village. Not to see. To signal once you were close, yes – one or two flashes like knocking on an open door. But you never left it on for prying eyes behind curtained windows to trace your steps.

Two other older hunters arrived. One squeezed a breadfruit in the hesitant mouth of a tattered backpack. It would be breakfast. The other smiled at his phone. Over the years I came to recognise the parting of lips as a reaction to talk from a pillow left behind. A young hunter arrived. He was rarely as early as the more seasoned hunters, but he was never as late as the rest. If he overslept then he would find his own way. Angry, aggressive, and seeking repentance for a former life less-well-lived, he would make it through the dark without their help or their patience. He finished his packing at the square, coaxing two caged birds in an old chicken feed bag. The cage was made of chicken wire; the two parrots perched on the whittled branch that ran down its centre. The unravelled ends of the wire caught against the weave of the bag as he eased it down. Packing the cages for transport was careful work. Perhaps he saved this preparation for the square because he needed the space it provided; I would walk past his hut – each time one slat more and a patch of tarpaulin less than the last –
and wonder how it provided enough space to sleep lying down. Perhaps he did need the patience after all.

The oldest hunter flickered his headlight – an impatient beacon to those for whom he waited. The remaining young hunters all lived on the opposite side of the village. One called half an hour ago to say he was picking up the others. Since two of the three lived together, we all knew this delay for what it was: attempting to rouse the third. The third, and youngest, was new to hunting – this, like mine, was his second season (though my first was brief: I attended all of three hunts). ‘Ah kill dem waan me kill miself up Long Hill’ the oldest hunter groaned, as ten more minutes passed us by. Of all the maybe-hills, maybe-mountains along the way, Long Hill was the last and the steepest. The hunting ground stood at its summit. A relief washes over you once you zigzag past those shards of rock and step over the knotted tree root. If the hunting ground was an address, then you were finally on its street. 20 metres ahead, that relief will abandon you. Those shards of rock, so out of place moments ago, dress the incline as far up as the eye can see. The walk is now a climb and you are a lamb in the valley. The shards are not steadfast; they wobble in the soil like milk teeth. You are tired but it is dangerous. Any conversations had on the way, end at the valley. ‘Muss stress dem love’ agreed the young hunter, cage finally packed. The oldest hunter stood, slinging his backpack on his back, ‘All nung we could ah gwaan tek we likkle time, but ah bun dem waan mi bun up miself.’

As the dog at the house opposite the oldest hunter’s barked, a small white circle flickered twice. Up walked two of the three young hunters. One stopped to greet the irritated group. The youngest just kept on walking. He had been late every hunt that week, he knew what was coming. ‘Yellow batty bwoy, mi nuh like how yuh ah handle we, yuh nuh’, Jimmy

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1 Translation: ‘All now we could have go on and taken our little time, but it’s burn they want me to burn up myself [deplete energy]’
barked after him. The slipstream created by the youngest hunter as he breezed past seem to somehow deflect the insult. He informed us as he passed that if anyone had a problem waiting, they were free to walk ahead – he would undoubtedly catch them up by Long Hill. The oldest hunter softened his tone, and moaned (to no one in particular) about how selfish it was to leave this late when there was the additional burden of the woman they had to keep safe. That insult was deflected onto me.

Several hours later, Long Hill was mounted, traps were set, breakfast was cooking. ‘Look, loo-loo-loo-look’, stuttered an older hunter pointing north at something in the sky I could not see, ‘ah few ah dem deh roung suh inna di valley’. The flock emerged from the ridge, circled overhead and disappeared back down into the valley. We drew close to the trees for cover, waiting motionless, eyes peeled. A vulture sunned its wings in the distance. The hunters once told me that the vultures were drying their garments from rain the night before. It was a good sign because the rains brought parrots. It was a bad omen, because its presence drove the parrots away. But this one was far ahead and it too looked north. The flock would return, the hunters predicted. They would land one of the traps closer to where we camped. The younger hunters’ traps were further from camp. They had seen much success so far in the season as flock after flock swooped over the ridge and landed on their traps as though they were the first service station they had seen in miles. The youngest hunter’s trap was the most northerly and he was trapping parrots by the branch. His adhesive was lumpy and barely tacky. His clumsy, inexperienced hands broke so many parrots’ wings trying to prise his capture from the trap that one of his “likkle fren dem” had to remove them for him. Storm ahead he might, but earlier that week he took a wrong turn in the dark and had to double-back. He was the last to arrive that day. Went all the way to a once-pasture known locally as Saucy Train. His traps were full of bounty, and he earned not a single one of them. This luck drew a contempt from the marrow of the older hunters that metastasised into envy.
But now the vulture guarded the north. The flock returned and circled once more. One slowed but did not stop. They grow tired, the hunters predicted. Soon they will land. We shrank further into the trees. An older hunter pulled the blue tarpaulin in with us as we withdrew. We waited. “See dem deh!” shrieked one of the young hunters. They shushed him. Only three were on the trap; the flock had promised more. I took out my hygro-thermometer and prepared, as usual, to take temperature and humidity readings. An older hunter slapped the instrument out of my hand and pulled me back down the huddle. Two more landed. Most expect to marvel at the majesty of the natural world. As they squeezed themselves onto the trap like commuters on a packed train, ignorant of the clear distress of the captured three, the last two looked like a pair of fools. The older hunters rushed forward, removing the parrots skilfully, expediently. The oldest hunter rewound the adhesive and swiftly reset his trap. A while later, two hunters (one older, one younger) each captured a parrot. Then a small flock of three parrots landed once again on the oldest hunter’s trap.

It was then that the pandemonium begun. The youngest hunter breached the sharing rules during the previous hunt. They were four. He caught five. He shared two with his “likkle fren”, and gave the older hunters none. What now, goaded the oldest hunter, that the shoe was on the other foot? None of them would be there without him. He had been hunting for well over 40 years. As a child, he would accompany hunters. They hunted further west then, in a place where there was once a settlement generations ago. He found this recent hunting ground about five years ago – the younger ones joined him because catch yields were high and general interest, low. The whole party began to argue. What about the adhesive? The oldest hunter didn’t help to make it. He couldn’t even make good “tar”. Why did one of the older hunters get any at all? He joined the season halfway. He didn’t help to clear the overgrowth. He didn’t contribute any nails, make any structures, whittle any perches. In fact, come to think of it, wasn’t that one of the younger hunter’s cages he had borrowed? That
wasn’t even his caller inside it! The aggressive, prompt younger hunter disassembled his trap, rammed his cage into the chicken feed bag – which daren’t make a sound as it puckered and caught, and kicked a fire-pan theatrically out of his way as he stormed back to the village alone. It was daylight now, and the journey back was not as treacherous as it was inbound, so nobody batted an eyelid. The older hunter, who owned neither cage nor caller, slung his share of the catch all into the same plastic bag before anyone could count how many he had been gifted. The crumbled party left in pieces, each taking different routes once out of the dense forest.

Prior to that hunt, there was a certain intensity to the 2018 hunting season that I had not seen the previous year. The younger hunters had begun to dictate the pace of the practice. The bounty was full and seductive. Going thrice weekly no longer satisfied them; they continued to push the frequency. Four times a week. Five. Every day. ‘Ah everyday mi ah look fi guh nung [now], mi naah ramp [play] – who naah come, naah come’ the angry young hunter would say as he packed – eager for the means to add one more blue slat. The older hunters could not afford to hunt every day. The cost to their time and their body was too high. The older hunters could not sustain such pace and the practice could not sustain such division. The older hunters did not attend many of the remaining hunts that season. Romance does not live here – not within the walls of this depiction.

Traditional practices are not simply patient, modest endeavours, replete with conviviality, intimacy and honour. It is not always filled with ubuntu and alike perspectives of “there is no I, only we”. There is I. There is also we. Within, there are a tangle of “we”s. Throughout, there are strands of “I”s. The hetereogeneity we have begun to extend to rural communities requires further extension into the indigenous and the intricate practices that can distinguish them (this, though, will be interrogated in Chapter 4). Similarly, the use of indigenous knowledge in traditional practice is not always a plunge into the deep. Breath held
in deference. Movement, a relaxed trance. Instinct, memory and place, equalising forces against the impending call of modernity. It is scrappy, complex, calculated, incidental. It is, also still, ingrained. This is not a reassertion that indigenous knowledges are dynamic and adaptive (see Agrawal, 1995; Barnhardt and Kawagley, 2005; Breidlid, 2009; Gadgil et al., 1993; Watson-Verran and Turnbull, 1995). There is nothing systemic about the rationality people – including indigenous people – deploy during their everyday engagement with the material world. It is an unconscious response; the path of least resistance. It is a deliberate performance; itself creating paths of resistance. It is a disquieting paradox. This thesis, however, is not an exploration of indigenous knowledge. I am interested in how indigenous knowledge is used, distorted, confiscated by the spectacle of conservation. But to make such observations, one requires an inventory of indigenous knowledge in its pre-existing state. This chapter takes stock of the traditional practice of parrot hunting. First, I explore the barriers to access and participation before outlining hunting rituals in greater detail. I then situate the practice within the community, where staggering rates of sedentarisation over the past 30 years have influenced how both traditional practice and village life are determined and conceptualised. Finally, I consider the effect of inclusion and exclusion of the wider community on the practice. I reflect upon the role played by my frequent attendance of hunts, which led – over the course of my doctoral research – to a number of village members making inaugural (and, in all cases, final) hunting trips.

**Patronage**

Before the season begins, there are three things the hunters must do. The first is to organise the manufacture of the adhesive. It is made from the sap of the breadfruit tree. The village is peppered with them, yet the hunters travel hours by car to another part of the island to tap breadfruit trees. They say the trees in the village have been emptied of their sap long ago. There has always been a reason why I cannot come with them. Into this, I cannot
graduate. The sap is boiled for many hours. They add castor oil and occasionally splashes of rum as they drink it. Once, a young hunter said a few words over the substance as it bubbled and gulped. Those words whirled briefly in the air becoming poem, libation, incantation, and back as the others refilled their cups, oblivious. This endeavour is largely undertaken by the younger hunters. Sometimes an older hunter organises transportation for the clandestine tree-tapping; by and large, though, the older hunters seem to have little interest in the work. The young hunters, however, view the outsourced work as a social opportunity. They call the adhesive “tar”. At first, it had the quaint ring of local nomenclature. Once I learned of the plethora of organic material from which tar could be made, I thought it a misnomer. Tar is viscous, semi-liquid, semi-solid. It is carcinogenic and microbicidal. It is used to build, preserve, enhance, and punish. It remains ubiquitous and has been pushed into obsolescence. This substance is not tar, but there is something precise about its name.

Figure 2: A hunter removing two captured parrots from the adhesive trap
The second thing that they must do is prepare the hunting grounds. In the nine months between the end of one season and the start of the next, much of the already-dense trail has overgrown. They walk to the hunting ground in daylight; with machetes, they re-establish the path. There is a section, in the middle of the journey – right before you turn, else you reach Saucy Train. There, the topsoil is clay. By midseason, night rains have made its passage unbearable. It is slippery and pocketed and there are no trees to cling to. One summer, we happened upon a boa whose body slunk down one tree, along the wide, treeless path, and (eventually) up another. Those without skill or with inclination, have not clung to a tree since. In sections such as these, that pose problems over time, detours – alternative and merging trails – are cut midseason. Scholars concerned with the relationship between knowledge and space consider wayfinding a form of storytelling (Ingold, 2000; Lefebvre, 1991; Turnbull, 2002; 2007). Movement along paths and through space create narratives through choice and force, deviation and reinforcement. Memories are recalled, histories are retold. ‘Dem fight an win di British pon dis yah hill yah, yuh know’ pronounced the angry young hunter as he passed me in the dark, where I stood, mouth agape, the first time I encountered Long Hill.

It was almost season’s end before money, curiosity, or familiarity lured the older hunters back. The younger hunters were absent that day. Night rains were heavy and frequent and overgrowth began to reclaim the paths. ‘Nuff time dem ah come and bush now and look!’ The oldest hunter took his machete to an overhanging branch. ‘Unnuh fi clean up unnuh hallway man. Unnuh too nasty’ he spat. Different sections of the journey corresponded to different rooms of a shifting house. After stumbling and falling my way through my premiere hunt like a young toddler, I was goaded for falling once more ‘ah door mout’ minutes before we re-entered the village. They would teach the young hunters a lesson. Only barbarians
would walk through such thicket without so much as a trim-down. Not landscaping. Not clearing. Just a quick tidy. It wasn’t history, it was courtesy. The path was known. It was character that was still in question. We would block the detour back up, they mused. Let them slide in the slip. We continued on, playing a futile game of hide-and-seek; covering tracks that had been snubbed by the younger hunters since the day they were cut. Paths tell stories. They also bear frustrations.

There are two main paths out of the village into the forest interior. In the 2019 season, a number of new agricultural smallholdings occluded one path, so the hunters began to favour the other. The younger hunters had always favoured this route. It was more difficult, but shorter. Along this path is a small farm. The path winds around it and disappears into tall, thin grass – still knee-high after bending under the weight of morning dew. Behind the tall grass is an escarpment that suggests one has walked to the end of the earth. There are, however, two overlapping rock faces, between which the path continues. The farm is owned by an old deaf man, whose eyesight begins to fail him. By day, goats roam on long tethers through the tall grass, around the small, fenced plot. By night, an eerie, sad silence hangs over the garden. It has crooked yam sticks for pickets and rotten wood for crossrails. As we walked past one night, one of the older hunters dipped between the rails and entered the garden, announcing that the old man had given him permission to take whatever he needed. ‘Ah suh?’ replied the oldest hunter in veiled disbelief as he too entered the farm. Over the second half of the season, during which meals became an important feature of the hunts (see Chapter 2), the same two hunters harvested the garden of callaloo (a leafy vegetable, similar to spinach) by the bundle. No one else walked that way. No one else knew the plot was being emptied one trip at a time. Paths impart knowledge – but only to some.

Once the hunters clear the route, they must then clear the grounds itself. Each season, hunters must source a perch: a long straight branch with no more than three twigs at its tip.
As they clear the path, they search for such branches. The twigs must be perpendicular, so that when the perch is erect they lie completely horizontally with each, thus, more likely to attract a parrot to land on it. The twigs are whittled smooth so that the tar can be easily spread over and removed from it. It is the tar-smothered perch that constitutes the trap. The wood cannot be too dry or it will split when worked. The perch is then nailed to another tall branch, so that it can emerge above the canopy. Each hunter has their own tree in which they set their trap. If there is enough tar and inclination, a hunter may maintain two trees at once. The lower branches are cleared and loose or broken rungs, nailed to the trunk for access, are replaced. Next, they take inventory of the cooking supplies – pots, pans, utensils. They assess the fire-pans: old disused pots with wire handles added, that holds a portable fire which produces enough smoke to repel mosquitoes. The mosquitoes in the forest are big and relentless and pierce through one’s clothes. There is no sharing fire-pans; there is no confusing them. Arguments have erupted when one hunter attempts to use another’s (or mine). We protect our fire-pans fiercely, choking gratefully on their fumes as we draw them nearer.

The final thing they must do before the season starts is secure a **caller**. Caged birds are hung on branches under the perch – they must be heard but not seen. Their calls lure parrots to the trap: they are the **callers**. Hunters save at least one parrot from last season’s catch for this very purpose. Once the season is underway, the caller is immediately replaced. The call of older birds are less attractive than the cry of another naïve young fool. The angry young hunter tells me callers attract their conspecifics and that is why they catch no black-billed parrots. My first season, though, they seemed much more adept at attracting congeners. The angry young hunter’s two hybrids, on the other hand, did not seem particularly capable of luring anything. It never seemed to be his season, try though he did. He often had no leftover parrots from the last season – he had to sell the few that he caught. Every season,
another hunter loaned him one caller. One was the bare minimum; two callers, in a single but partitioned cage, increased one’s chances immeasurably. As a parrot came to the cry of the lone caller, it would hear the louder, more confident calls of a pair squawking at each other a few trees down, and it was there that it would land. One can’t maintain multiple trees with a single feeble caller. One cannot swap out one caller for another if it does not perform well. A hunter without a supply of callers has no choices, they are at luck’s mercy. The single loaned caller was like a single mum in a high-rise flat: yes, there were still chances for success, but they were slimmer than those of the terraced house a few streets down.

There is no way to break into the practice without the patronage of an established hunter. Raw materials such as parrots, wood, nails, pots, sap, a vacant tree are all required before even arriving at the matter of knowledge or skill. Technically, any villager can participate in the hunts. That the forest belongs to all Maroons is a core tenet of their beliefs. There is a sense of freedom within the village that I have perceived nowhere else before or since. Turn up to a hunt uninvited – or even unsupported, however, and it is a fumble in the dark. Long Hill may be summited, but there is still the matter of these raw materials, without which one cannot hunt, one can merely spectate. The patronage does not end there. There is the matter of storage and husbandry. Younger hunters store their catch in the transport cages. Often parrots are sold in these cages, particularly where buyers must transport them or have yet to obtain pet supplies. These cages must therefore be manufactured throughout the season to satisfy increasing demand and replenish depleted stock. Three of the four older hunters have coops. Coops require much raw material, a second pair of hands and at least three free days to build. Each year, the younger hunters make plans to build one. Each year, they build cages, as needed, instead.

Husbandry is also resource-dense. Parrots kept together in confined spaces are likely to maim and kill each other; they require either sufficient space, or some form of partition.
Unlike chickens, parrots are not given designated feed; they are given table scraps. Their nutrition depends on the owner’s nutrition. Older hunters, whose meals are prepared by other members of the household are able to feed their parrots bananas and ackee: similar to their diets in the wild. Younger hunters, who often eat their main meal at their girlfriends’ or mother’s homes, feed their parrots cakes and bread. General upkeep includes monitoring parrots for parasites and sprinkling water on coverts to encourage feather-plucking which improves plumage. This requires significant time investment. For older hunters, husbandry can be absorbed into household division of labour – particularly where livestock is reared. Older hunters, with greater assets, are better able to store and care for their catch. Younger hunters, though, are better connected to networks of buyers and distributors and are able to sell a significant proportion of their catch during the season. For the young hunters parrots can provide instant cash. For older hunters, they are another asset.

It is not difficult for hunters to leave and resume hunting. An older hunter returned to the practice in 2018 after several summers as a migrant worker for an American agro-business. The oldest hunter, who had hunted with him for many years prior, lent him a caller, a cage, and tar. Halfway through the season, the older hunter – one of the few villagers with a car, paid for with years of migrant labour – took the younger hunters to the unrevealed tree-tapping location. Patronage made his return possible. As long as you paid into the system, social security provides just enough support to access the season’s hunts. One caller. One cage. Tar. It may not set you up for success – welfare rarely does. The older hunter’s yield was almost as paltry as the angry young hunter’s. It does, however, keep the hunters suspended in a very exclusive (secretive) social matrix that sustains both the practice and the opportunity for success.
Rituals

Each season, one hunter assumes the position of group secretary and orchestrates the call-around. Without being part of the call-around (as I was not until mid-way through the second season after several scoldings from the village mothers), one will not know whether the hunt is on or not. Plans made the day before carry neither meaning nor weight. Whether the hunt goes ahead, who goes, and where the group meets is determined between 3.00am and 3.30am via phone. Rarely do men in the village have the phone number of their friends or family. Though most people own a mobile phone (few own smartphones), communication still largely relies on bursting unannounced into homes, farms, or building sites. When the phone rings with brazen urgency and the recipient wonders how company and mobile service found them this deep, it is usually recognised as their wife’s call. For your number to be saved, let alone called, is a meaningful and deliberate act. It is not just the journey that demands the early start. A number of tasks must be done before the crepuscular activity of the birds starts up. Firewood must be collected and the fire, made. More wood must be gathered for the fire-pans. The tar – solid at rest – must be heated and wound onto the perch. Necessary repairs must be made to the tree. The trap must be erected. It cannot lean and it should face the right direction. It is hard to see if it is done properly from underneath one’s own tree; they must be guided by the others. The callers must be unsheathed and then hung. This must be saved until last. Everything must be prepared before the invitation is sent out.

Then it is time for tea. Offerings of ingredients and snacks emerge from backpacks. Spices, water, flour, oil, salt, stolen callaloo, crackers. Everyone waits to see who takes up the mantle as cook that day. They hope it is the angry young hunter – he is the best cook. If he does not volunteer (he often does, it is an opportunity to pay his taxes), one of the older hunters will begin to sift through the ingredients and plan the day’s breakfast. I tried to pay my dues once. ‘No, no. Mi know seh yuh can cook but woman nuh fi cook ah bush. Ah only man fi cook’ an older hunter interjected. ‘Ah just suh it guh’, he added, anticipating my
question. Preparations pause when there is a catch. The trap is indiscriminate – anything can, and does, land on the tar. Hopefully it is a parrot. Better yet, a pigeon. It can be a late addition to the day’s menu.

As parrots are caught, they are slung in plastic bags to be processed and distributed at the end of the hunt. The sharing rules are such. If a hunter catches a single parrot, it is theirs to keep. No one expects the shirt off another’s back. If as much parrots are caught as people present, then regardless of who caught what, every hunter must leave with a parrot. If a hunter catches multiple parrots, then his first obligation is to his creditors. There is a particular order of compensation. If he was given a parrot the previous hunt, this must first be reciprocated. Then he must repay the caller he was given. He must not return the old, tired, overworked caller – that can become someone else’s social security. He must replace it with interest in the form of a bright, new, shiny-eyed parrot. Then he must repay the tar. This cannot be forgotten, especially if he is not particularly good at making it. This is critical patronage. Cages are usually repaid with other cages, however if attendance is few and the catch is plentiful, this too will be repaid. If a hunter catches multiple parrots and has reimbursed the patrons, then priority is given to those with the smallest overall catch yield.

If a hunter does not attend the hunt, he is not strictly entitled to anything, however this is no excuse to fail to repay one’s creditor. One cannot expect patronage to continue if one does not appear to be making unconditional efforts to repay the debt. The distinction between sponsorship and loan is fluid. There are no explicit stipulations of repayment placed on any of the donated items. The recipient may not capture more than one parrot each hunt. They might not catch a parrot all season. There are no hard and fast “debts” accrued, and tabs are not kept over different seasons. At the same time, the recipient may catch a single parrot every hunt, building up a respectable yield over the season. They would be expected to contribute. This is an exposition of livelihoods, but these are not fiscal policies, they are
moral codes. One cannot claim benefits when down and exploit tax havens when up. There is a civic duty to “pay in” to the system. The debt is not to the individual patron, but the hunt.

My presentation of these sharing rules might suggest that they are doctrine, carefully passed down over generations through oral histories or performance. That one warm evening, an old hunter pulled me aside and explained it all. I would sit cross-legged like a child. My eyes would trace the creases of his face, lit orange by the fire, and I would listen, transfixed, to his smooth gravelled voice. Social science literature that has been instrumental in prompting conservation’s current interest in indigenous knowledge can often present it in this way. The elder walking bravely towards the caribou as his sons watch on in bemusement (Barnhardt and Kawagley, 2005). The soft knock on the door by a village child, carrying medicinal plants – all of which, she is able to name (Hunn, 2002). The will of Mother Earth – Gaia – carried by the wind, bringing entire forest communities into spiritual and practical synchrony (Berkes, 2008; Lovelock, 1991). I, in fact, deciphered these rules one conflict at a time. A tantrum from a hunter who received no parrot despite having caught none all season. The eruption of a snubbed patron. Rants from those discontented with others’ hoarding and refusal to pay dues. Honour did not communicate these rules. It was not outlined by the spectacle. If I asked each hunter what the sharing rules were, I would get eight different answers – each optimised for their own current situation. The shape and form of these “rituals” was defined through the jealousy, rage, retribution, and transgression embedded within sets of relations. To an anthropologist, this is obvious and expected. To a conservationist, it is confusion, a betrayal, inauthenticity. Proof that culture is already lost or is too flimsy and incidental to preserve. ‘Cultures are subject to change and are not discrete entities’, argue Dickman and colleagues (2015); it is therefore ‘valid to promote such change in the interests of biodiversity conservation’ (ibid.; emphasis added). Such cynicism and
determinism emerges from conservationists’ encounters of the granular, quotidian, and the contradictory. The distinctly unspectacular, and the crassly lived.

Hunters return to the village by noon, in full view of villagers. At this time, the older hunters all peel away, one after the other, en route. One will go to his farm. Another disappears over the hill behind the new agricultural plots. The third may take the winding path beneath the cobbled incline by the “door mouth” that led to a small trail by the side of the village. A fourth just seems to vanish into thin air. There are two main paths out, but there are capillaries of concealed trails through which one could return undetected. By the final fieldwork season, absent of young hunters, I walked alone along the main route of my choosing, re-entering the village square alone. The evasion, I later realised, meant that villagers could not count the plastic bags that dangled from triumphant fingers. A hunter’s tally was the most exclusive feature of the hunts. Younger hunters ordered me not to divulge the day’s yields; not even to absent hunters. Older hunters were less direct. Hidden passage provided no corroboration, reducing my forest testimonials to village gossip. Paths themselves may be a ‘spatial co-production of knowledge and material’ (Turnbull, 2007), but they also carve spaces up into areas of knowing and unknowing, material and immaterial.

**Bridged spaces**

The communal land tenure system in the village is distinct from even other Maroon societies, where there is some degree of private ownership (Barker and Spence, 1988). During the 18th and 19th century, such a system allowed economic activity – then, agriculture and hunting (particularly for wild hogs) – to be undertaken, unencumbered, across Cockpit Country. By 1941 (in a traveller’s account of their month-long excursion to the village), though subsistence and cash-crop agriculture remained a principal economic activity (as it does today), hunting had waned. In a survey conducted in 1983 of village farmers, the “action space” in the village had contracted in size significantly over the past three decades (Barker
and Spence, 1988). In the 1950s, villagers would frequently make 20km round trips to sell surplus crops. The nearest small shop was over 3km outside of the village, and there was a greater reliance on subsistence farming. Thirty years later, waged labour among farmers increased from 7% to 100%, marijuana cultivation had siphoned many young men from both household labour and traditional agricultural practices, and most households could no longer cultivate enough crops for their subsistence.

Whilst land tenure remained communal, most economic activity was restricted to four agricultural zones. The first zone, “food forests”: similar to African kitchen gardens, was located in the centre of the village. Zone two, on the periphery, was comprised of ground provisions, such as legumes, yams, cassava, and sweet potato. Zone three was further out; there grew cash crops such as sugar cane and bananas. Zone four, further still, was pasture land in a place called Saucy Train. Today, zone four is a wrong turn. I walk wearily with hunters over the abandoned overgrowth of zone three, mentally preparing for the grey incline of Long Hill. Zone two is now a patchwork of private (but not privately-owned) spaces, in which unknown and undisclosed activities occur. Communal-but-private practices now characterise all activity outside of the village centre, from an old man’s farm to the hunt itself. These spaces are bridged by particular social ties.

By the first bend of the road away from the village square stands a large house. It is cream with pearl white finishing and a red zinc roof. The bottom storey is built at basement level. A small steep path leads from the road down to the front door. The second storey is flush with the road. A marbled bridge with ornate metal railings connects the upper floor to the bend. The garden is studded with large black drums, intricately networked through a series of troughs and pipes. When full, it can provide a family of four with water for at least a month. It is a remittance mansion. The matriarch goes back and forth between the village and the States. The adult daughter lives in the house with her five children. The oldest is a
teenage girl. There are whispers of an affair between the girl and a young hunter. There are other whispers about why this is taboo. These join the walls of whispers that encase the matriarchal compound. During the day, the daughter sits, door ajar and peers through the wall out onto the open road. She awaits her oldest three as they return from errands. Sometimes villagers stop by for a while. She is charming, funny, attractive, and rather liked. Inside her walls of whispers.

Other non-hunters have attended a hunt. The year before I began fieldwork, the young hunters invited the CEO of a Pan-African cultural NGO (based in America) to one of the hunts. His teenage son attended the inaugural hunt of my final field season. He was patiently escorted by the young hunters, all wearing brand new field boots. After my first season, a female cousin of one of the young hunters asked to join a hunt. They caught multiple that day, so she was given a parrot. The next season, the teenage girl then asked to join a hunt. She too, then, would get a pretty parrot. It would sit in the pretty house and provide constant companionship. She would go with another teenage girl, some houses down. I had already organised the weekly shopping trip with another mother – I would be absent that day. The following hunt, I was met with unusual warmth and praise. They could not believe, said the hunters, how difficult girls so young would find the journey. Look, they said, at the British, formerly-fat, not-particularly-young, single mother, who could (now) make multiple hunts a week whilst juggling other endeavours. Some of these girls didn’t even make it the whole way. We had to call so-and-so [one of hunters, who had taken the night off] to get them and take them back to the village. Ego massaged, I began to wonder who attended, and who didn’t make it.

The hunters were vague and evasive about the events of the hunt. Driven by pride and curiosity, I tried myself to identify who fell victim to the journey. I visited the family shop of the teenage friend down the road. A small wooden structure at the edge of the porch, where
the gate ended; there were now around ten small village shops like these. Perhaps I could strike up a conversation that ended with her admitting her shortcomings. She was not there. I bought a loaf of bread and turned to leave, when I heard a familiar squawk. In the recess between the wooden shop and the concrete house sat a parrot in a cage made of reinforced steel, worked into ornamental design and painted white. Later that week, I visited another mother at her house. In the porch of the house opposite, was the same heavy, ornate, white cage. In it, sat a parrot. Among the whispers, grew the suggestion that it was the teenage girl who had forfeited the journey.

All season, I had avoided the cream house with the white fixings and red zinc roof. The year before it was one of my refuges. I told myself I was too busy with work now; I hadn’t come all this way to keep company. But it was the whispers. The more I heard, the greater and higher the walls, once invisible to me. It was deafening to walk through. I could not spend the afternoon chatting with her, door ajar. I was too ashamed to visit. Ashamed of her, but even more of myself. I hoped to see the teenage girl on her errands, but my hours were abnormal and her trips infrequent. One day, I decided to take the first bend of the road. There it sat, behind the walls, hanging from the tree in the front yard like success. The parrots in their pretty white cages represent communal in the private. The sojourns amidst the avoidance. The bridge between spaces. Social wind chimes, they speak to the network capacity of teenage girls, and those alike, who form invisible paths between contracted spaces of action and tradition.

‘I’m not coming tomorrow’ I said, the eve of one hunt before turning from the young hunter and sulking off. The little village girls, yes. I was a pioneer. It was because of me – my courage, my dedication, my commitment, all that discipline – that these girls could visualise themselves taking on such a feat. I had stumbled so they (or, at least some of them) could walk. I was the first woman in living history to make the journey. Of this I was convinced.
Living history. As if I was some kind of suffragette, furnishing village women with the right to participate. The oldest hunter may have been hunting for over 40 years, but they had only started visiting the current hunting grounds four years prior. The constitution of the current group was even more recent: the youngest hunter joined the year before my first arrival; an older hunter returned, after decades of absence, partway through my research. Things change with each season. I wasn’t the change, I was a change. The conceptual space of parrot hunting might be centuries-old, male, and traditional, but the many paths (conceptual and physical) that connects that space to others are contemporary, neutral, complex, evolving, incidental, and replaceable. It is why paths warrant more analytical attention. I was no pioneer, but merely another path – to the outside world. And I soon found out just how unspectacular and duplicable paths are when a pair of pretty little city-slickers with a travel and lifestyle blog were invited to a hunt later that year. One was a biracial writer who lived in Kingston. The other was a black American filmmaker who, earlier in the week, had subjected the village to a viewing of her hour-long snooze-fest of a film on the journey of a small group of “inner-city” black American youths to an Ethiopian village. The narrative was predictable, her hands could barely hold the camera steady, the community organiser lost everyone’s passports, and the youths seemed almost as bored with the endeavour as the audience watching. It was a disaster and they were a disgrace. Contemptible, pretty little magpies, attracted to anything shiny and black. They were the kind of girls that doted over your beauty knowing full well they were far prettier. ‘We want to Uber-ise National Geographic’, the black American girl said to me, describing their venture. ‘Mmmmm, fun!’ I rasped, through clenched teeth. Jealousy cascaded from my pores like bile from liver.

Later that evening, one of the village historians – a close interlocutor – knocked on the door and handed me his phone. The black American girl was on the other end of the line, asking to borrow my long-range camera lens to take on the hunt. Oh no, I advised warmly,
the journey’s far too treacherous for that. One can barely carry themselves, let alone anything else. No, the lens is far too heavy. For that matter, so is the camera. Do you have anything more portable? A small point-and-shoot? I know the quality isn’t there but it’s better than nothing, right? Also, do you have the right footwear? No? Shame we’re not the same size.

The following hunt, eyes fixed to the ground, I asked the hunters how it went. The filmmaker did not go, only the writer. She had to make multiple stops along the way and only took two pictures on her phone. ‘What a shame’ I consoled. I couldn’t raise my eyes. Their stares pierced my skin. I felt diminished to the level of the coloniser-cum-academics for whom I had so much contempt and whose harm I sought to undo through my work. ‘Shame yuh backside. Yuh too jealous’ replied one young hunter. ‘Jealous of what? I’m a researcher. I’m not here for some blog. I’m actually trying to make a difference. I don’t owe her anything. Tell me, when did she lend me her lens?’ I knew how unhinged I sounded. I de-escalated my rant to a series of grumbles that included how ethical I had been and what pains I went through not to show anyone’s full face in my careful films, produced in reverence with steady hands. ‘Mi nuh too like mi face deh pon nuh screen yuh nuh. Ah true’ the oldest hunter replied. I thought I had “de-gendered” the space. This is what I wrote in the first iteration of this chapter after my second field season. It is what I told one of the National Geographic directors after receiving a grant, for which I had the inexplicable urge to apply after returning from the field that season.

The hunting grounds are a male space of traditional knowledge. So too are the unknown spaces in which craftsmen source timber, shells, and medicinal seeds. So too are the caves in which old traditional farmers harvest bat guano for fertiliser. Sometimes parrots are trapped in the village, the oral historian divulged near the end of my second fieldwork season. Devastated, I asked him to elaborate. Black-billed parrots occasionally flock to ackee trees in the village, long after the hunting season. Villagers use the sticky discharge of fresh jackfruit,
smeared on twigs as a makeshift trap. It was the youngest hunter’s first introduction to hunting, there in the ackee tree outside of his mother’s house. One villager still traps them often in the village, the oral historian told me. I approached the villager with the same witty exchange as usual. He would make unsolicited comments about my appearance and ask me out, I would roll my eyes at him as though he were a precious, deeply-misguided soul. He was lascivious, I was complicit. Why was I traipsing all the way to bush, I teased, when according to the oral historian the action was here the whole time. Betrayal flashed across his face. ‘I don’t hunt’. He walked off sullenly. The youngest hunter, too, was reticent to refer to his early endeavours as hunting. ‘Mi jus did ah play ‘bout dem time deh’ he replied when I asked.

Space is produced. Doreen Massey argues that the physicality of space is fetishized amidst calls for the reconceptualisation of space as sets of social relations (1994: 19). Trapping may take place in the village, however the village is no hunting ground. The village is not a place where traditions are practiced, it is where surroundings are exploited. Nobody forages in the village, they pick. No one cultivates, things grow. People don’t hunt, they merely trap. Traps give material form to the knowledge of hunters and are themselves paths – between meaning and materiality (Jimenez and Nahum-Claudel, 2019; Nahum-Claudel, 2019). When placed in new settings and deployed in different contexts, they take on new roles that bring with it new sets of social, epistemological, and material relations (Swanson, 2019). Traps, and the space in which they operate, both engender and reveal political economies, hierarchies, social structures, and relations of power (ibid.). Deliberate, skilled, gendered practices and resource use happen beyond zone two; opportunities to exploit resources are happened upon in the village.

Space is often dichotomised by gender. The public space is masculine, it is outside. A place for economic and political productivity. The private is feminine, it lies indoors,
domestic. A place of leisure and consumption (Abraham, 2010; Freidus and Romero-Daza, 2009; Sultana, 2009). In rural Bangladesh, girls and women are instructed by heads of households to get water from tubewells close to home (Sultana, 2009). It can bring shame to the family if women are seen travelling in public with water. They can be approached by men, and carrying multiple pails of water leaves no free hands to veil their heads with the ends of their saris. In the walled city of Bikaner, west Rajasthan, there are similar veiling regimes. Men congregate on patas, raised wooden platforms. There, boundaries such as public and private do not exist. On hot nights, men sleep on patas, eat dinner on patas, conduct business on patas (Abraham, 2010). Women must take particular care to veil their heads with the ends of their saris as they walk past. Conversely, in Hausaland, northern Nigeria, where married Muslim women live in multigenerational walled compounds (gida), the entire courtyard is a female, domestic space (Robson, 2006). Cooking and caring for children, the elderly, and the infirm, all take place in the madafa (cooking place). Co-wives exercise power through the foods they prepare (favoured or disliked), the timing of meals, allocation of portions, and by spoiling the food of junior wives with uncooked rice grains and kerosene.

Scholars have argued, though, that these spaces are often contested and occupied in simultaneous and paradoxical ways (Freidus and Romero-Daza, 2009; Rose, 1993). The production of these spaces in everyday life cuts across class, race, social ties, hierarchies, and power. Many small villages in rural Bangladesh cannot afford (even between them) the tools and labour to dig deep for groundwater; shallow water contains elevated levels of arsenic. The women of wealthier households leverage this health consequence by demanding investment in deeper tubewells. The more accessible source then makes it more reasonable to call upon another family member to fetch water, freeing up the designated water-fetcher’s time (Sultana, 2009). Access to patas are determined not just by gender, but by age and caste.
Younger men must sit on the periphery, moving closer as they age (Abraham, 2010). Priority is also given to the dominant caste of the *mohalla* (neighbourhood). Women often run successful food businesses from their *madafa*, turning many *gidas* into economic hotspots (Robson, 2006).

Space is produced, negotiated, defined, and redefined. So too are the actors that bridge these spaces. Arsenic becomes the “ally” of poor women whose household or village cannot fund deeper tubewells. Necessity affords them greater mobility, as they frequent public tubewells, socialise with friends, and carry multiple pails of water while the ends of their saris slip off their heads and onto the floor (Sultana, 2009). Though women must shuffle in reverence past *patas*, their demeanours change as they approach their natal *mohalla*. They throw their heads back in laughter, sari ends once again falling carelessly past ankles (Abraham, 2010). Male and female Hausa children are highly mobile, traversing public and private spaces as they undertake domestic work (such as taking grain to mills) and labour-intensive agricultural work. Children represent a significant proportion of the hawkers in Zarewa, Hausaland, selling meals, snacks, and ingredients in markets and to households. Through trade, they connect individual food entrepreneurs in *gidas* – the cells of a “honeycomb market” (Robson, 2004). Arsenic, kinship, children all connect and redefine physical and conceptual spaces. Parrots in white cages, teenage girls, and wide-eyed foreigners all connect and reshape a traditional space bound by patronage and defined through conflicts with exterior spaces.

The spectacle, Gaston Bachelard argues in his seminal work *The Poetics of Space* (referring to it as poetic images), reverberates through physical space (1994: xvi), both illuminating and characterising space with its own echo. Take, for example, the house, that ‘furnishes us dispersed images and a body of images at the same time’ (1994: 3). The way each room is designed, created, and inhabited is guided by the spectacle of what that room
should be, how it should function in the home, how its inhabitant should function in the world. It is then untidied and undesigned by the everyday actions of the inhabitant in their actual function. The consequences of the everyday are then cleaned up, tidied, even modified, as the home is put straight and redesigned whilst the spectacle is reproduced each and every day. Once the slightest shelter is found, the spectacle, illusions of stability and safety (as interpreted by individual consciousness through associated memories), transforms and inhabits space (1994: 5-17). In fact, Bachelard argues, the house shelters the spectacle as much as it does the inhabitant, who is furnished with the means to reproduce it: ‘the house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace’ (1994: 6).

I would like to expand this notion, for it is not only shelters that house spectacles. The spectacle is also housed and reproduced by physical space more generally – defined not as the roof over one’s head or the site of related social actions. But, as developed over the next two chapters, the spatial enclaves in which forms of capital settle. Where they rest and take pause in order to accumulate and provide the means through which the spectacle may reproduce itself, resolve itself, reconcile itself, rationalise itself, for ‘in the realm of images, there can be no contradiction’ (1994: 203). When capital stops moving, we are able to intimately engage with the spectacle. We let it touch us, shape us, change us, transform us. We show it where we fall short and plead with it to soften and melt for us. The spectacle is not just a public entity that lives outdoors, in the bright lights of the big city. It, too, is communal but private. It sits next to us. It slips into us, wearing our tattered bodies as its finest cloth. So wide and yet so small. Both the air and the single breath. Spaces – defined, delineated, spatial units of social action in which forms of capital (economic, social, cultural, symbolic, political) accumulates – hold spectacles. It holds it so intensely that it becomes difficult to disentangle the spectacle from the everyday. The paths that bridge these spaces,
however, are different. As we walk down the corridor towards a bedroom, we are filled with expectation. We know this because our expectations are so violently confronted by reality once we open the bedroom door. Where capital flows and expectations hover, there are few concrete surfaces off which the spectacle can bounce. It is from this vantage point – the path between spaces – that I situate myself during the course of my analyses as I watch reality confront expectation and the spectacle soften and compromise with everyday actions. It is from here that I examine the spectacle of conservation, as pretty girls hang pretty parrots and grown men raid cabbage patches.

There are spaces in the forest in which traditions and knowledge are created, practiced, and performed. They are private and communal. They are contemporary and historic. They are distinct not just from the wider world, but from themselves and the village. They are defined as much by exclusivity as much as they are activity. Spaces are produced and reproduced, negotiated and renegotiated by the performance of necessary actions and the replication of the spectacle. The paths, trodden and invisible, that lead to and from them are also produced and reproduced but by the movement of capital. Patrons connect disadvantaged hunters to the practice. Teenage girls connect hunting grounds to cream houses with white trimmings and red roofs, stocked with water and shrouded by rumours. Parrots in white cages connect ostracised women back to their community. Interested outsiders connect young ambitious hunters with global audiences. These paths connect people to each other in everyday life and they connect representations to expectations in the spectacle. Sometimes they transform the spaces they connect, sometimes the spaces transform them. These paths can be rediscovered; becoming more visible as overgrowth is hacked away. Paths can be made invisible again. They can be blocked, erased, and left to overgrow; these also shape the spaces they do not connect in profound ways. Researchers disconnect other observers. Rituals (call-arounds, abstaining from headlamps) disconnect unwanted visitors from hunts. Hunters
disconnect villagers from specific knowledge. As the following chapter shows, they also disconnect each other.
2. Hot Tar

“Backside!” lamented an older hunter as the party watched a parrot escape from the trap. Without struggle or effort, its foot effortlessly popped free of the tar, hanging in a delicate slack like a hand in marriage once the bird took flight. It was an unprecedented start to the 2019 season. If a parrot escaped, it was because of the sheer will of the parrot. The previous season, one bit a younger hunter then dived headfirst into the brush, where it was never recovered. It rarely escaped from the tar itself. Under the late-morning sun, the tar became particularly viscous. It would lurch between toes, expanding and surrounding the claw like sinking hands into ample flesh. The tar slinks into crevices between pads and within webs, then slips itself around talons. The foot is engulfed but the parrot feels nothing. The parrot takes off, but the tar holds it tightly. It recoils violently with the backwards jerk of a child whose mother snatches it out of the road. Once pulled from the sky, the parrot is wrapped in the tar’s warm, secure embrace. The parrot thrashes and writhes, but the tar spreads faster, clings tighter, goes deeper. Together they fall off the perch and tussle to the ground. We sit watching, like voyeurs. The dull thud of the fall breaks our trance and a hunter recovers the parrot, immobile and enveloped by tar, at the base of the tree. This was the thwarted escape to which we were accustomed – if the parrot dared escape at all.

Now the tar encased the perch like a tomb. Its once silvery, speckled, seductive form now, most mornings, lay lifeless. It seemed apathetic, despondent, disinterested in the formation of any unions. When it held, it did so with one limp hand, as if its thoughts were elsewhere and anything in its grasp could slip out unnoticed. We were denied its majesty and ferocity. We had been abandoned, and not just by the tar. The young hunters grew impatient with the season’s slow start and resented the defeated march back to the village empty of the plastic bag that signalled success. After the first hunt of the season, they turned their attention
to other livelihood opportunities. The youngest hunter, who had been struck with such fortune the previous season, was now occupied with preparing land for a state-endorsed agricultural development project. The remaining young hunters were involved in some cultural endeavour that they appeared to go to great lengths to keep secret. Nobody outside of their household seemed to know what it entailed or how it was funded, but the young hunters were making money. They were too flashy to be able to keep that secret. New clothes, new attitude, new motorcycle tearing through the village at daybreak.

For the past five years, the village’s Youth Council – in which the young hunters held senior positions – have hosted an annual Culture Camp. It is an opportunity, at the start of the summer holiday, to provide a dedicated forum through which children can be taught traditional knowledge and Maroon heritage. At some point the endeavour was upscaled and busloads of children from neighbouring villages who may or may not have a Maroon parent were also invited to attend. In all, over 150 children – only half of which live in the village – attend the free two-week camp. The funding of the camp is a source of great tension in the village. One Maroon activist, who lives outside of the village and runs a podcast on black liberation and history, argues the camp was his idea. A labour of love he self-funded until the young hunters seized control. The Colonel – the chief of a Maroon village, so named because of the historically militaristic nature of their leadership – was always notably absent from the entire affair. He once pledged to support the camp, however this failed to materialise. The young hunters remain very vague about the source of funding and the nature of their relationship with the funders.

One funder, I learned, was the CEO of the American-based cultural NGO. By 2019, according to village rumours, the founder had developed other business relationships with the young hunters. The first, a “natural health” farm, where herbs such as moringa (not well-known or used in Jamaica but considered a medicinal plant among black diaspora wellness
communities) and aloe vera were to be cultivated. The second, a programme of traditional drumming performances around Jamaican tourist areas. Both have created muted controversy. The former has raised questions over distinguishing transactions for the farm from donations for the community camp (both of which appear to go through the young hunters). The latter, around legitimacy and expertise. There is a rich heritage of drumming in the village. Few, specific members of the community (mostly from older generations) are regarded among the village’s skilled traditional drummers. Few instruments are regarded part of traditional Maroon drumming. The Gumbeh drum, a short square drum that looks somewhat like a footstool, and the rackla (see Figure 3) are the main features of Maroon drumming. They both require extreme skill to make and to play. Djembe drums, the goblet-shaped drums used worldwide for African drumming, are used sparingly. Normally struck by hand, in many Maroon performances it is played like a gong: struck infrequently with a large wooden stick to produce a single sonorous note. In the series of drumming performances, however, the djembes are played by hand with a choreography of complex strikes. One afternoon, returning from bush, I detoured through the school grounds. Outside, the young hunters and the founder were restringing a djembe. It stood tall and heavy, with thick black rope and black etchings burnt into the side. It was unrecognisable, standing brazenly in the dusty courtyard of the closed school. ‘Oh, so this is where you’ve been!’ I joked to the two absent hunters. They laughed nervously and thinly, squirming as they avoided my gaze.

These enterprises – and the foreign drums and medicinal plants on which they rely – represent paths negotiated and produced under the auspices of and in conflict with tradition. They also represent the desertion of another path, left once again to overgrow as young hunters abandoned the season. These paths had a number of socio-environmental consequences that transformed catch yields, consumption habits, and the “practical kinship” amongst the hunters. This chapter documents these transformations. These sudden and
emotion-filled departures from the sets of conditions presented in Chapter 1 challenges the decay of culture often portrayed by conservation as well as providing another problematisation of the tradition/modernity dichotomy. First, I present catch statistics across the 2018 and 2019 hunting seasons, demonstrating a substantial decline in catch yield, further compounded by unprecedented trap failures. There are two categories of successful trap events: target catch (of yellow-billed parrot and, very infrequently, black-billed parrot) and bycatch. Bycatch, ‘the incidental take of other non-target species’ (Lewison et al., 2004) occurs regularly as the trapping mechanism is indiscriminate: other bird species are lured to the tar-smothered perch. In fisheries management, bycatch has emerged as an area of significant conservation interest because of the impact on marine mammal and pelagic bird populations (Norman, 2000; Sonntag et al. 2012). It has gained no traction outside of that space.

Figure 3: A rackla drum made by a 90-year-old Maroon villager (one of the few remaining makers of this drum). Taken by author outside of the 2019 culture camp, where he demonstrated the manufacturing process and made several drums for the children to play.

Second, using in-situ readings from an installed data logger (for the 2019 season) and a handheld hygro-thermometer, I analyse temperature and humidity at the time of successful
and failed trap events to establish the role of environmental conditions on the tar’s adhesiveness. Using weather station data, paired with available in-situ readings, I then analyse hourly temperature variation over the course of both the 2018 and 2019 hunting seasons to determine shifts from one season to the next that may explain the decline in catch yield. Finally, I look at the increasing importance of bycatch in sustaining hunters’ motivation over the difficult and sparsely attended 2019 season. I examine literature on social capital, often entangled in the language typically used to describe relationships between local community members, common-pool resource users, wild meat consumers, indigenous knowledge holders, and traditional practitioners. As I investigate the threads that somehow hold together this declining practice, it is neither social capital, nor the creation of paths, that sustains the hunt, but rather symbolic capital and the restriction of paths that sees the season endured.

**Catch statistics**

Across the 29 hunts observed in 2018 and 2019, all parrots trapped were yellow-billed parrots (N = 70); no black-billed parrots were trapped (in either successful or failed attempts). More widely, hunters reported catching only three black-billed parrots across all hunts between 2018 and 2019. In 2019, no parrots were successfully trapped until midway through the hunting season (from the 12th August). The catch yield until this time was comprised entirely of bycatch, which accounted for 36% of the total catch yield of 15 hunts observed in the 2019 season (N=36). The majority of the bycatch was consumed as wild meat. This consisted largely of pigeons, but also of smaller birds such as Jamaican vireos (*Vireo modestus*) and bananaquits (*Coereba flaveola*) which were thrown onto the fire and consumed as snacks, rather than prepared as part of a larger meal.

Of the bycatch not consumed, were three plain pigeons (*Patagioenas inornata*), that were kept and bred. No hunter had ever before encountered plain pigeons, on trap or in the
wild, in the 43 years that the eldest hunter had been hunting. The two older hunters emerged from behind the trees holding the catch. One, whose trap it was, trailed behind, staring inquisitively, as he sauntered along, at the single pigeon he held. ‘A different species dis’ he concluded as he returned to the log upon which we sat. ‘Here Lyddie, come tek two picture – yuh did bring yuh camera?’ We gathered, us five: three older hunters, the young angry hunter and I. “Look how dem foot big!”, “watch ee blue ring inna di eye”, “dem brown eh!”; giddily we inspected the birds and how they differed from the ring-tailed pigeon (*Patagioenas caribaea*) that we first mistook it for.

![Figure 4: Bar chart of successful and failed captures in 2018 and 2019 of parrots and pigeons combined (above) and parrots alone (below)](image)

During the 2019 hunting season, hunters perceived a radical shift in the composition of their catch yield; “ah weh all dis pigeon ah do pon di tar when ah parrot mi come here fi catch?” exhorted the eldest hunter one hunt. There was, however, no significant difference between the proportion of pigeons and parrots in 2018 and 2019 yields (Fisher’s exact: *p*=0.17). The meaningful change experienced was the significant difference in trap failure – where a bird landed on the adhesive but was able to escape – between the 2018 and 2019
hunting season (Fisher’s exact: p=0.04; Figure 4). The failure rate rose from 7.5% across the 14 hunts observed in 2018 to 25% across the 15 observed hunts in 2019. This shift in fortune exacerbated the 24.5% reduction in birds lured to the traps between the two seasons. There was no significant change in failure rate in pigeon captures (Fisher’s exact: p=0.14). Instead, 2019 marked the first year that the traps began to fail in the capture of parrots (Figure 4), leading to a significant difference in the success of parrots captures between the two years (Fisher's exact: p<0.001; Figure 4).

Though there were less hunters frequently attending hunts during the 2019 season (for reasons discussed below), each remaining hunter would often use an absent hunter’s designated trees, setting multiple traps, rather than a single trap, per person. The number of traps set across both years, therefore, were comparable if not identical. What may be different, however, is the environmental conditions under which the hunts took place. To understand the possible effects of environmental conditions on trap success, air temperature and relative air humidity in the hunting ground were measured using a data logger (Tinytag Plus 2; TGP-4500) during the 2019 hunting season. Hourly measurements of maximum temperature and minimum humidity were taken between 3rd August and 3rd September. The logger was tied to the trunk of a tree at 1.5 metres above the ground (see Figure 5). Shade from the tree, surrounding brush, and discarded cloth were used as radiation shields to reduce radiation error from warm ground temperatures (Wason et al. 2017).
During the 2018 hunting season, I used the handheld thermometer-hygrometer that was frequently slapped from my hand when a large flock of parrots circled overhead. This and the absence of failed traps in 2018 leaves me unable to compare environmental conditions across both years. Restricting analysis to 2019, then, there is no significant difference in humidity between successful and failed traps (one-way ANOVA: F=1.74, p=0.20). There is, however, a significant difference in air temperatures between successful and failed traps. This difference is not significant across the season’s total catch yield (one-way ANOVA: F=3.77, p=0.06), but is significant across parrot captures (one-way ANOVA: F=4.68, p=0.04). Successful parrot captures occurred in hotter air temperatures (mean = 25.38°C), whilst failed parrot captures occurred in cooler temperatures (mean = 22.96°C). Further research across multiple years is required to analyse climatic trends. These results do show, though, that the tar’s temperature-sensitivity extends to the ambient temperature of the air, rather than just the direct application of heat upon use. Its efficacy, therefore, has the potential of being affected by changing environmental conditions and the unprecedented trap failure may be an example of locally-experienced climate change. Or so I thought.
**Tar properties**

Curious about the adhesive properties of the tar, I consulted a UCL Mechanical Engineer whose research interests included the bond strength of adhesives and its cross-disciplinary applications. I showed him a short film I had made about parrot hunting and handed him a sample of the tar that I had brought back from my last fieldwork trip. ‘It’s some kind of polymer’ he said bringing the sample up to his nose. ‘Probably oleophilic’, he continued, explaining the manufacturing process as hunters added the castor oil to the boiling tar, ‘it’s the same thing with rubber – the sap has to have all the water removed from it.’ ‘Wait, is it hydrophilic then?’, he considered, upon seeing one of the young hunters throw a capful of white rum into the makeshift pot. Perhaps water fused with it on a molecular level, he wondered. Perhaps one end was hydrophilic and the other oleophilic – like soap, he offered. It would depend on what could dilute the tar and could clean it off their hands. I told him what I knew: the hunters added oil to make tar easier to spread, they used oil to clean their hands, and they wet their hands with water before applying the tar to the perch. ‘Ah so it is oleophilic then! So what’s the ethanol [rum] for? I don’t see what good that would do. Maybe it’s just’ he paused, searching for the right word ‘... ceremony – like the prayer.’ ‘I never expected it to be hard. Looks completely different in the film though – look how grey it is!’ ‘Geez, it really is stretchy’ he remarked as the tar clung to both the perch and the parrot like mozzarella as a hunter removed his catch. He had been playing with the sample as we spoke, slipping the cling film back and forth through his fingers so that it rubbed against the hard, black, shiny tar. As he looked down at it again to confirm the difference between live and screen version, he noticed the tar had begun to change, ‘wow, look how different it’s got just in the time we’ve been sitting here!’ No longer the inert artefact I brought to the office, the tar slowly roused, becoming viable, functioning, almost conscious, bearing resemblance to the technology we had both just seen in action. ‘When
people first realised you could impregnate cloth with rubber’ started the Mechanical Engineer,

‘it wasn’t incredibly successful, because when it got warmer, wellies and macs began to stick together. They realised they needed to add sulphuric acid and potassium dioxide to fuse the rubber to the cloth on a molecular level and create these permanent cross-chains. Might be the same with this here – gosh look, it’s changed quite radically already from just the heat of my hands! Chemical engineers would love to get their hands on this material.’

The mechanical engineer explained that there were two potential types of failure: one of adhesion – the attraction of molecules of different substances (i.e. the tar to the parrot’s foot) or one of cohesion – the attraction of molecules within the same substance (i.e. the tar to itself as it is stretched between the parrot’s foot and the branch on which it was smeared).

‘Now if it’s an adhesive failure, then the surface area of the contact is important... and the humidity would really matter, because that affects the point of contact. If the failure is cohesive, then that’s probably very temperature dependent’ explained the mechanical engineer.

The mechanical engineer and I went so far as to design a set of experiments that would test the effect of temperature on the bonding strength of the tar, before a series of strike actions and the subsequent lockdown response to Covid-19 made it logistically impossible to schedule. I had come to see the large basement laboratory and the machine that would measure the bond strength of the tar. ‘See if it’s an adhesive test’ he proposed after showing me around ‘we would need to take into account the surface area and substrate type. Ideally, we’d need a parrot foot and a branch to replicate it. What do parrots’ feet look like?’ I shrugged. It had never occurred to me to look at their feet. In fact, I have never even handled one. They were notorious biters, and I was always more interested in the action.
around the parrots than the birds themselves. Embarrassment began to warm my body. In an attempt to present myself as a fellow scientist, I had introduced myself not as an anthropologist but a Human Ecologist. Yet any ornithological question he posed met glazed eyes. Were the feet made of keratin? Do the flight mechanics of pigeons differ from parrots? Are they active at different times of the morning? I smiled politely, hoping he would attribute my stupidity to my gender or my race. ‘Hmmmm’ pondered the mechanical engineer, slightly taken aback by my ignorance, ‘for a cohesive test, the substrate wouldn’t matter so much. The real key would be having something flexible that could peel back on itself so we could replicate the motion of the parrot’s foot peeling off at an angle as it took flight.’

Despite the experiment’s cancellation, I present my discussions with the mechanical engineer for two reasons. The first is to show the capacity of ambient air temperature to transform tar (and similar material): the malfunction of early models of wellington boots in heat and the failure of traps in cold. The statistically significant difference between air temperatures during successful and failed trap events is not just a correlation; temperature difference is likely the causal factor of trap failure. The second is to reject, outright, any conception of the tar as an unreliable local ingredient whose inevitable limit has now been reached. It is indeed a spectacle. A technology. A material of great engineering interest. Its form and function could drive innovation and further knowledge of flight mechanics, molecular stability, and changing environmental conditions. It is also an everyday feature of the hunts. It is the ground one assumes is there as the next step is taken. It was an extension of the hunters; their right hand. It carried out orders, lying in wait and then executing. The surety was gone. There was no public or ritual mourning. There was no mention of the tar nor changes to its preparation. But there was shock. Then despondence. Then loss. All palpable and expressed through things hunters did and did not do across the season. It is now clear why the traps failed, what is not clear is why now.
Air temperature

Temperatures can vary significantly across a single forest landscape (Chen et al. 1999; Davis-Colley et al. 2000; Pohlman et al. 2009; Sundberg et al. 2006). Forest interiors are cooler than the edges during the day and warmer at night, as shade from the dense canopy maintains a smaller diurnal range of air temperature (Pohlman et al. 2009; Sundberg et al. 2006). Temperature variations across a forest can be exacerbated by complex and heterogeneous topographies, such as mountains, fragmentation, or water bodies (Ayugi et al. 2019; Chen et al. 1999; Davis-Colley et al. 2000; Hennenberg et al. 2008; Wason et al. 2017).

Microclimates – climates at small scales of between 100m to 1km – are likely to occur within each niche (Davis-Colley et al. 2000). Hilltops can serve as “heat islands” at night (Sundberg et al. 2006), riparian zones (ecotones, or transition zones, along rivers) can provide cooling wind funnels (Chen et al. 1999) and hotspots can be found under breaks in the canopy. To investigate these differences, weather station data is often used in conjunction with in-situ measurements to inform both fine-scale temporal variation as well as broader-scale climate trends.

Davis-Colley and colleagues (2000) examined average diurnal temperature patterns across an Australian forest and a nearby pasture using hourly readings from both nearby weather stations and a mobile data logger. Temperature ranges from weather station data were similar to in-situ data logger readings. There were also similarities in the diurnal patterns between the forest and pasture during overcast days and non-daylight hours. Hunting activity takes place across pre-daylight and daylight hours; though Cockpit Country has complex topography, microclimatic differences across the forest may be less extreme during the time of day in which hunts take place and the tar is exposed. Wason and associates (2017) compared data from 36 weather stations with readings from Tinytag data loggers deployed along a series of mountain inclines in the northeastern US to explore montane microclimates.
and the refugia provided by mountain ecosystems. Temperature differences across all measurements and inclines were significantly less extreme in summer months (July and August). Weather station data may provide useful supplementation of temperature changes across multiple years given the seasonality and timings of hunts.

Figure 6: Map of forest reserve in Cockpit Country (as Figure 1; see Introduction) with the location of both weather stations (Appleton and Hampden) added. The hunting ground is within the forest reserve; it has not been mapped to further protect the anonymity of the village.

Jamaica Meteorological Service (JMS) operates two weather stations around the Cockpit Country region; they are almost equidistant from the forest interior (in which the hunting ground is located; Figure 6). JMS generously provided me with excel spreadsheets of hourly temperature readings from each weather station: from December 2012 to March 2020 for Appleton weather station; from December 2017 to March 2020 for Hampden weather
station. Spreadsheets included average, maximum and minimum hourly temperature, recorded under the top of each hour. Maximum temperature was selected as it a) offers easier comparison with data logger measurements, also taken at maximum temperature, b) provides more meaningful analysis of the time of day when the tar has sufficiently high bonding strength, and c) has greater consequences to different niches, habitats, and species behaviour, compared to average temperature (Wason et al. 2017). Some readings were absent due to battery failure. Others were unfeasibly high or low (e.g. ± 67.8°C) and mostly occurred either side of battery failures; these values were removed. A handful of readings recorded were not top-of-the-hour (e.g. 00:09), these readings were also discarded. In total, less than 200 readings were removed from the Appleton dataset (N=62,063) and approximately ten were removed from the Hampden dataset (N=17,601).

Figure 7: Line graph of average hourly temperature (using in-situ and weather station data) for the month of August. The time of day (dubbed Goldilock hour) and the temperature from which traps are successful have been annotated

Similar to Davis-Colley and colleagues (2000), I plotted average hourly maximum temperatures across August 2019 to establish diurnal patterns during the month in which most hunts take place (Figure 7). Data from the catch statistics show that the temperature window of trap success (23.18°C to 31.75°C) slightly overlaps with that of trap failure
(21.92°C to 25.88°C). Without the temperature-controlled experiments that control for the few environmental conditions that can be replicated in the lab (for many of them cannot), a fixed trap failure temperature cannot be established. Nonetheless, average trap failure temperature (22.96°C) furnishes me with a rudimentary yardstick that can indicate likely trap malfunction. It has been used in Figure 7 to annotate trap failure (red horizontal dashed line) and I refer to it hereafter as the calculated trap failure temperature (CTF temperature).

Figure 7 offers three important insights. Firstly, it supports the use of weather station data as a proxy for forest interior temperature during hunts (which take place between 6am and 10am), as weather station and in-situ measurements are closely aligned.

Second, the figure shows the time from which the air temperature is above CTF temperature. 7am serves as the “Goldilock hour”, when the air temperature is neither too cold nor too warm (though the hunt ends before the air temperature gets particularly high) and the tar is neither too solid nor too liquid (hunters allow the tar to cool and harden slightly before application for this very reason). Applying this to the catch statistics of the 2019 season confirms a significant difference in the number of failed trap events (for parrots) before versus after the “Goldilock hour” (Fisher’s exact: p=0.05): 7 out of 8 of the season’s escapes occurred before 7am. The Goldilock hour is itself not another fixed cut-off; in the 2019 season, almost as many parrots were caught before 7am as were caught after (N=10 and N=13 respectively). The difference in success and failure before the Goldilock hour is still temperature dependent (one-way ANOVA: F=10.92; p=0.005), with successful captures occurring at an average temperature of 23.23°C and failed captures occurring at an average temperature of 22.54°C. Success and failure lie within less than a degree Celsius of each other, either side of the Goldilock hour – the time at which air temperature is able to sustain the tar’s stickiness, which changes slightly every day.
Finally, the figure potentially reveals Cockpit Country as anomalous to other dense tropical forests in its diurnal temperature patterns. Where the microclimates of forest interiors often feature cooler diurnal and warmer nocturnal temperatures compared to their edges, Cockpit Country lacks such inversion. Traps erected during the particularly cool dawn of the forest core, sit in a more-intensive “cold pocket”: during this time, the tar has the opportunity to harden and become less responsive. This lack of inversion may be new to 2019. Otherwise, temperatures across the entire region may have shifted, possibly cooled – such a cold pocket may not have existed in 2018. Both scenarios would explain the emergence of trap failures. In-situ data logger readings from previous years (which I do not have) would be required to confirm the former, but weather station data can help to confirm the possibility of the latter.

![Figure 8: Line graphs of average August diurnal temperature (using hourly weather station data): (a) August 2019 (as in Figure 7); (b) August 2018; (c) August 2013 – 2019 (Appleton only). Calculated trap failure temperature is denoted by the red horizontal dashed lines, and the potential Goldilock hours are denoted by grey vertical dashed lines.](image-url)
Weather station recordings suggest that the Goldilock hour across the 2018 hunting season may have occurred later than the 2019 season: between 7:00am and 7:30am (Figure 8(b)). In the absence of temperature inversion, the cold pocket may have been even colder and longer in 2018 than 2019. Figure 8(c) suggests that 7:00am and 7:30am represent the upper and lower bounds of Goldilock hour, given annual temperature fluctuations. If the diurnal pattern of August 2019 falls within expected limits of longer-term patterns, Figure 8 by itself offers no explanation of the traps’ vagaries. A possible answer may lie in the combination of the social and environmental contexts.

The older hunters had waited for the younger hunters to begin dedicating themselves to the 2019 season. The tar was made and shared. Callers had been borrowed. Yet none had stepped foot into the forest interior. They waited so long that the hunting grounds were prepared on the first hunt. Without the dedicated preparatory trip, the season felt listless and hampered by delays and false starts. I had long returned home from the season before realising the first hunt was the same date as the previous year. We had waited an eternity in our minds. We waited for the two young hunters to finish their drumming. We waited for them at the top of the sea – the four hunters and I – but we held privately our individual disquiet. The oldest hunter held his disappointment close. Behind the episodic grumbles of another, seemed a lasting grief. A third became quiet and pensive. The remaining young hunter bought not a slat, but a puppy to accompany him on hunts; its carriage making Long Hill all the more treacherous. One of the young hunters asked me to buy him a pair of new boots to wear hunting. His field boots had become worn and tattered, he said. I was outraged to be treated like new money, given old ties.
A few hunts in and we waited no longer and compromised no more. No longer would we scurry through the forest as the shapeless dark began to take form under first light. No longer would we scramble up the grey daggers of the final ascent. We began to leave earlier and earlier. Almost out of spite. We enjoyed a pace so slow that often I would wait for the others at the valley beneath Long Hill. ‘Ah wah time?’ asked the oldest hunter, setting down his gear upon arrival. ‘4:36’ replied another. ‘Wah! Ah suh it early?!’ exclaimed the oldest hunter. Contempt. That was the difference. Not the temperature, not the parrots, not the number of traps. In the absence of the young hunters, many of the older hunters began to maintain two trees: their own, close to camp, and the more fruitful ones, to the north. Timing was not the difference: the early starts did not impact the timing of first catch. The previous season, traps were hastily erected; no opportunity to take advantage of crepuscular activity was missed. Catches were recorded as early as 6:17am during the 2018 hunting season, similar to the 2019 season. Similar proportions of trap events occurred before and after Goldilock hour in both seasons. The season’s early starts impacted the length of time the trap spent in the cold pocket. Dawn broke by 5:30am. The hunters needed the light to prepare. Once light broke, traps were erected – without hesitation, with contempt. Offerings produced, with contempt. Water boiled, tea sipped, meals prepared – all with contempt. In this time, up to an hour before first catch, the thinly spread tar had greater opportunity to cool and harden in the cold pocket than ever before. It too sat, in contempt, losing lustre, interest, function.

This was no reversion to old ways. The hunters had never arrived this early before; they responded to the extra time with awe and unfamiliarity. Neither was it a natural shift. One morning, one of the older hunters ran late. It happened to also be the morning that a small bus load of villagers, which included the young hunters, were returning from a party. ‘Suh a yah suh we ah guh mek dem catch we?’ cried the oldest hunter. We agreed to begin and meet the older hunter at the old man’s farm. ‘Sumady [somebody] call him quick and tell
him, mek we guh.’ Contempt tilled the soil which made way for the slow erasure of the path between the young hunters and the practice. Contempt exposed the remaining hunters and the tar to a new set of environmental conditions which led to unprecedented malfunction and furthered decline in interest. Two of the older hunters had started new marijuana farms, another had invested in additional smallstock. The practice began to implode.

Capital

The notion of social capital has been used with growing conviction in development and conservation literature as a method of encouraging community-based systems that can build empowerment, broaden capacity, and develop contextual and local interventions (Wakefield and Poland, 2005). Social capital has been credited with improving health outcomes of disadvantaged groups by widening their social support system (ibid.). Community-based organisations can induce social capital that furnishes members with support during emergencies, greater acceptance within their communities, and increased access to resources through contacts with external agencies (Adhikari and Goldey, 2010). Social capital has been charged with the ability to improve biodiversity outcomes by providing a durable and easily-expanded network through which knowledge can be disseminated and social norms changed (particularly once incentives have ended and where regulations are no longer enforced). Pretty and Smith (2004) argue social capital bridges farmers and agricultural practices in ways that promote sustainability and protect ecosystems. Farmer field schools in Asia have reduced the amount of pesticides used in rice cultivation through the use of beneficial insects and reintroduction of fish to paddies (ibid.); the scheme has been credited with promoting widespread behaviour change as farmers return to their communities and teach others organic methods of pest management. Further examples are given of how social capital can positively transform rural practices: the adoption of soil-
improving legume-based systems in Guatemala and Honduras, which encourages farmers to disengage from shifting agriculture and slash and burn systems; “socially inclusive cooperatives” in Mexico that now adopt organic methods; the introduction of tree fallow systems to monoculture farms in Zambia and Kenya to increase diversity and soil fertility; incorporating fish and shrimp aquaculture to rice farming in Mekong Delta of Vietnam. All cases – whether the reintroduction of centuries-old practices or the adoption of contemporary approaches, as long as they fit within conservation’s narrative of sustainable agriculture – are portrayed by Pretty and Smith as positive transformations made possible by the strength of social networks.

Such literature often makes use of Bourdieu’s definition of social capital in his 1986 book chapter, *The Forms of Capital*, where he briefly outlines three different forms of capital: economic capital – institutional form, property rights; cultural capital – institutional form, education; social capital, comprised of social obligations – institutional form, titles. Here, Bourdieu defines social capital as

‘the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalised relationships of mutual acquaintance and recognition – or, in other words, to membership in a group – which provides each of its members with the backing of the collectively-owned capital, a “credential” which entitles them to credit, in the various senses of the word’

... through ties which exist either in practice (e.g. kinship) or in the material or symbolic exchanges through which they are maintained (e.g. marriage or labour; 1986: 21). Many development scholars concede that there is a “downside” to social capital. Drawing from political scientist Robert Putnam’s extension of the concept, social capital is described as the strong “bonding” ties within defined groups, where levels of interpersonal trust, reciprocal norms, and networking are high (Adnikari and Goldey, 2010; Wakefield and Poland, 2005).
These same ties have the ability to further weaken the “bridging” and “linking” ties that occur between such defined groups (ibid.). Where there is inclusion, they argue, there is (by default) exclusion.

Commentaries in the journal Anthropology News have questioned the use of social capital in anthropological analysis. In a 2002 issue, economic anthropologist Paul Durrenberger described the use of the term as “a bad idea”. ‘I have no quarrel with the idea that social connections have economic value’, Durrenberger explains, ‘my quarrel is in calling that “social capital”.’ Durrenberger continues:

‘If everyone has social relations, then everyone has social capital. This metaphor tells us that everyone controls capital. That’s the sleight of hand that makes classes disappear... If we all control capital, then we can’t distinguish classes based on who controls it and who does not. Classes become invisible.’

The concept of social capital can only function if the capacity to accumulate is moderated by the capacity to restrict and dispossess. Without an account or acknowledgement of the gatekeepers that counteract, funnel, and shape access to and control of capital, analyses that apply the notion of social capital to rural spaces launder them clean of hierarchies and inequalities, flattening and depoliticising complex and heterogenous interactions. They prime communities to become willing receptacles of romanticised and disempowering representations of themselves, prepared to accommodate and reproduce the spectacle.

Jo Anne Schneider, an anthropologist in an interdisciplinary department, argues that conversations, discourses, and theoretical engagement within anthropology were narrowing and becoming increasingly introspective. This, Schneider (2006) asserts, prevents the discipline from making greater theoretical contributions to wide-reaching cross-disciplinary concepts such as social capital. Durrenberger’s critiques, Schneider assessed, ‘pay scant attention to the evolution of the concept as used by political scientist Robert Putnam or other
social scientists.’ While much scholarly engagement with Putnam’s work conflates ‘generalised trust in society’ with ‘specific trust in members of a particular network characteristic of social capital’ and ‘often ignores inequalities’, the concept has made many unnamed appearances in anthropological work, where it is often considered in tandem with the cultural and economic capital also generated by webs of social relations. Emma Gilberthorpe and Paul Sillitoe, anthropologists researching development and resource extraction in Papua New Guinea, argue in their commentary that in rural Papua New Guinea, where many communities are experiencing transitions from non-market to cash economies, upheavals of exchange systems have tightened and reinforced certain social ties whilst dissolving and weakening others. This, Gilberthorpe and Sillitoe (2009) conclude, has reduced landscapes of social relations to few strong ties (typically confined to immediate kin) and an abundance of time-sensitive, self-interested, weak ties reliant not on ‘the “trust”, norms and networks’ that Putnam claims make up … social capital’ but positions that maximise personal gain. In the well-cited chapter, Bourdieu introduces capital in all ‘its objectified or embodied forms’, as it is accumulated and inherited, reproducing itself, being repressed or dispossessed, as providing a snapshot of reality at any given time:

‘the structure of the distribution of the different types and subtypes of capital at a given moment in time represents the immanent structure of the social world, i.e. the sets of constraints, inscribed in the very reality of that world, which governs its functioning in a durable way, determining the chances of success for practices’

(1986: 15)

Much of the critique around social capital comes from the failure not of the concept, but of its application which fails to acknowledge its enmeshment in other forms of capital. Some scholars have attributed the current use and application of social capital – analysed in isolation from other forms of capital, stripped of context and constraints – to its central role in
economic and public policies. In the hands of international organisations such as the World Bank, social capital is a prop for market failures and state interventions, as obligation, networks, and social ties provide a matrix of poverty alleviation (Smart, 2008; Whittaker and Banwell, 2002). Through social capital, in its alienated form, spaces, practices, and communities are defined and understood – both conceptually and technically (Li, 2006; Smart, 2008). In these diagnoses of societies, structures are made visible and people legible, behaviours are pathologized, and problems rendered “technical and manageable” (Li, 2006: 4-7). The collapse of multiple forms of capital into the single entity of social capital has, some argue, reduced their potency as analytical tools to vague “figures of speech” (Smart, 1993).

McMichael and Manderson (2004) explore the application of social capital to Somali immigrants in Melbourne, Australia. Gossip and food sharing amongst women help to maintain social networks between households; social capital did not, however, account for all aspects of resettlement life. Lack of economic capital constrains the ability of many Somali immigrants to invest in practices that maintain social ties and a sense of community. The assumption – held largely by local government who provided inadequate social security – that Somali households would naturally and automatically support each other was itself unrealistic, one of their informants explained. In Somalia, social ties occurred within kinship groups, tribes, and clans or between close neighbours – it did not simply wash over large impoverished regions. The civil war, from which many had fled, transformed and dissolved many alliances. The economic and social capitals that are lost and retained among migrant communities are artefacts of their current social worlds: the networks found through halal butchers and Somali credit associations, or “banks” as well as the loneliness, isolation, and disappointment that arises from the lack of ethnic solidarity.
Reframing analyses in a way that disaggregates and teases apart forms of capital for individual inspection, placing focus on their distinct redistribution, movement, and accumulation across social landscapes, can disinvest social capital of the spectacle of conservation and the spectacle of poverty. Rice farming in Mekong Delta that has been transformed by the reintroduction of aquaculture in paddies is once again transformed when social capital is disaggregated from cultural capital (in the form of knowledge transfer in shared agricultural practices) and economic capital. Fly (2016) explores the rise in the transformation of multigenerational households into elderly-only households in shrimp farming villages in Mekong Delta. Economic reform in the 1980s decentralised Vietnam’s economy; rural and coastal populations (as in the Mekong Delta) became increasingly poor as larger local economies resulted in land degradation, volatility in market prices, and large household expenses associated with shrimp aquaculture. High costs of living and mounting debt gutted these communities of their working age population, who out-migrate to neighbouring cities for wage labour. Of over 700 households sampled across three hamlets in the delta, almost one in ten were elderly-only households. Elderly residents, unable to work and with little remittances, rely on neighbours, friends and distant relatives for donations of food, without which they would have no food security.

Similarly, Gowlland’s exposition of Chinese pottery craft can be better understood when capital is disaggregated into its cultural, social, and economic forms. Dingshu, in the Jiangsu province of rural China, is considered the “Capital of Pottery”, famous for zisha (purple clay) ceramics. Zisha is revered in Chinese tea culture for its superior quality and aesthetic appeal. The clay starts as a slab of rock (rather than mud); wood, metal, bamboo, and buffalo horn are used to slowly carve and manipulate the clay by hand (rather than with a pottery wheel). Craftsmen improve technical knowledge and forge new business relationships through Lai baixiang: “passing time” at the homes and workshops of other craftsmen,
participating in sets of informal interactions that include playing cards, drinking tea, and talking. Gowlland (2012) sets this social practice within a broader landscape of shifting economic practices. Artisans once learned the craft from apprenticeships at one of the region’s main cooperative factories, which served as a teaching college. These factories began to collapse in the late 1970s, as economic reforms and the end of the Chinese cultural revolution led to transitions to private enterprises. Factory workers established their own private workshops and hired apprentices, not through the rigorous entry criteria of the cooperative factories but as part of social obligations and through family ties. As a result, less of the apprenticeship was dedicated to learning the craft: the 14 – 16-year-olds carried out household chores and in return were given basic instruction on zisha craft. Changes to economic and cultural capital necessitated the social and cultural capital acquired through the complex practice of Lai baixiang.

Siegelman et al. (2019) argue that social capital is ‘a process of exchange and accrual – often drawing on other forms of capital’ which requires a more holistic evaluation of its dynamic and changing nature, particularly in the consideration of common pool resource extraction. In San Evaristo, Baja California Sur, Mexico, fishermen use “playful lies” as a form of social capital. The small fishing village of 100 people, connected by blood or marriage, is located in a marine biodiversity hotspot: the subregion has the highest revenue small-scale fishery in Mexico. The community does not own land; the “fishing camp” relies on squatters’ rights. With high competition from outside fishermen and the absence of a permanent physical “community” with ‘formal dispute resolution mechanisms’, San Evaristeños rely on a “peace-at-any-price culture”, concealing anger, frustration, hierarchies, and friction. This builds the necessary cohesion to safeguard shared resource access through patronage (in the form of gasoline, fishing gear, access to boats).
San Evaristeños joke/lie about their catch yields to deflate debts to patrons or to improve fishing reputation. These fabrications are considered harmless and result in eruptions of laughter. They also signal membership to a community built on “harmony ideology”; as one respondent describes: ‘We tell each other lies to build trust’. With economic capital concentrated in such a small, impermanent, informal space, its distribution becomes intimately entangled with social capital. Siegelman and colleagues argue that although ‘some researchers argue [social] nuance is not translatable precisely because social capital as a concept has been used to neutralise the political content inherent within all social networks’, considering social capital as a series of performances – something that is “earned” and “done” – can showcase its dynamism as an entity that can be both accrued and diminished.

“Playful lies”, however, is not the social capital here. Capital itself is not a performance. It is the power, the access, the convertibility into labour, production, and money. Access in San Evaristo is not gained by tricks, it is gained by membership. Siegelman rightly ascertains that where access is reliant on patronage and activities take place in spaces that are communal but private, membership must be subtly but consistently communicated or performed. It is fleeting and under continuous review as forms of capital remain in dynamic states of redistribution and reapportionment. Whether a fisherman chooses a different boat, or a hunter chooses a different summer activity, paths between spaces of production are continually reassessed, forged, and erased by and through practice. ‘Social capital consists of claims to reciprocation and solidarity from particular others. What is fundamental to social capital, however, is that explicit claims are normally excluded from the performances within which they are made’ (Smart, 1993). How are these claims then made? How are paths cut or left to overgrow? In his well-cited chapter, Bourdieu briefly mentions a fourth form of capital, one that is largely overlooked, but is developed in greater detail in his earlier work *Outline of a Theory of Practice*. Symbolic capital, often ‘unrecognized as capital and
recognized as legitimate competence, as authority exerting an effect of (mis)recognition’ (Bourdieu, 1986: 18), is the gatekeeper of other forms of capital. It determines membership, assesses status, clears and erases paths. If social capital is obligation, and cultural capital is knowledge, symbolic capital is legitimacy (Smart, 1993). It is the mechanism through which access is gained to other forms of capital. It is the form of capital that is almost universally overlooked yet it is the invisible turnstile holding back masses of poor and marginalised from the resources they are imagined to have. It is the missing bootstrap by which they must pull themselves up. The clean, pressed uniform a child does not have to attend the school they cannot afford (either in money or time) to go to. It is the wealth one cannot marry into. The patronage a villager will not receive to engage in a tradition they have no skill to pursue. Symbolic capital is the pulse of opportunity that has long since flatlined in the veins of poverty. Social capital (as with other forms of capital) works hand in hand with symbolic capital to slow down the movement of capital, keeping it in the hands of the few and out of the arms of the many. This kind of granularity and reality is simply not recognised by the spectacles of conservation and development that rely on flat, apolitical images of rural poor communities.

**Wild meat**

At the outskirts of the village, where the two routes meet, is a wooden hut. It sits on the edge of the plateau where the narrowed path opens out to the mouth of a precipice. Behind it is the dense forest; waves of green, undulating carpet. The hut is a pit stop, separating the seemingly hard from the positively treacherous. A series of rocky descents, hidden behind a giant boulder traces a path between hinterland and wilderness. It was a blue-black pre-dawn morning in late August – vibrant and alive like dark skin. We moved in uniform silence as we approached the wooden hut. An older hunter stopped at the puckered mouth of the trail, leaning his machete on the picket of the balcony rail. His backpack felt
wet, he said. Perhaps the water jug had sprung a leak. With bowed gaits we gathered around him, our beams of headlights shone into his bag to help illuminate its contents. Afar, an orb of light danced around in the blue-black. It jittered and jerked up the narrowing path like a broken toy, following the pattern of uneven staggered footsteps.

‘Ah who dat?’ wondered the oldest hunter aloud, ‘an ah wah dat next to him, goat?’ The angry young hunter walked towards us without slowing, brand new puppy at his heels. ‘Suh ah weh yuh ah guh?’ asked the older hunter as he tied the mouth of his backpack. He was going to the summit before Long Hill, partway between the turn before Saucy Train and the hunting ground. ‘Ah deh suh mi ah set up, mi naah follow unnuh.’ As he walked past, our resolve was pulled from us into his determined stride. Each silhouette slumped in turn. ‘Me... mi would ah neva guh ah bush me one’ said the older hunter as we arrived, shining his headlight at the base of his backpack, feeling for dampness. ‘No sah!’ replied the oldest hunter. Saudade filled the air and made it heavy. Heavy but empty, like the air at your grandmother’s house that carries wafts of medicine, her infamous but undeciphered recipes, and loneliness. He had left us too. The previous hunt was more than most could stomach. All but one parrot escaped. They broke free of the trap. They fled from the ground. One gnawed its way out of the plastic bag and flew from the angry young hunter’s cache, leaving its mate behind. It was yet another unprecedented phenomenon (to be discussed in Chapter 5).

Now we were four, sitting dispirited on felled logs and stumps like discarded, outgrown toys. The water had just gone on the fire for morning tea when a parrot landed on the oldest hunter’s trap. He looked up nonchalantly and remained seated. The rest of us watched him, bemused. He had no interest in the struggle. Not once did he turn his head to see the flirting glint of the tar as it wrapped itself supplely around its prey. There was no arousal, no hysteria, no joy. After the tussle had subsided and the parrot hung defeated on the perch, the oldest hunter slowly stood and went to retrieve the parrot. ‘Ah wah mek yuh tek suh
long? ’Mi nah run up deh suh guh shame up miself fi unnuh laugh after me like yest’day  
morning’ the oldest hunter replied. That hunt, three more parrots landed on the oldest  
hunter’s trap – enough for each of them. All the same, the retrieval was just as mechanical  
and the observance just as muted. As we packed and prepared for the return journey, the  
oldest hunter reasoned aloud: ’might cut it short dis year. Mi nuh feel seh next week ah guh  
catch me up yahsuh’

A few days later I joined another hunt – surprised but relieved it was still underway. I  
had to retrieve the data logger. I also hoped to return the following day – my last full day in  
the village for the season and, consequently, the only opportunity – to redeploy it so I could  
monitor temperature patterns over the year. Spirits were higher. The angry young hunter had  
returned. We had a bagful of callaloo from the old man’s farm and each a long stalk of sugar  
cane, carried not as a cane, but a staff – a phallus not a crutch. It wasn’t hope that energised  
the air, but a form of pride not familiar to me. Perhaps Maroon. Perhaps male. Perhaps  
something distinctly their own. The hearth became a kitchen once more, we all busied  
ourselves preparing a modest meal. The oldest hunter stopped peeling the wild pine he had  
foraged on the way back from his farm the day before and looked up behind him. ‘Coo yah  
[look here]!’ he whispered, pointing to the trapped pigeon not with a finger, but his pursed  
lips, the way Jamaican mothers do when they send a child to fetch an ingredient their floured  
hands cannot. The oldest hunter and another rose dutifully to collect the pair of parrots. As  
they crossed the path, the other motioned excitedly at the other end of the grounds. ‘Yo, pon  
yuh ’tick’ he shouted to the angry young hunter.

The young hunter sprung up and bounded over to the tree, calling behind him for a  
bag. The tree, belonging to one of the absent young hunters, was particularly tall. Lopsided  
rungs snaked halfway up its trunk, just far enough to retrieve the perch from its base. It took  
both hands to climb the “ladder”, so catch had to be thrown to the ground, usually at the feet
of a waiting hunter. The other hunter placed the bundle of callaloo that he had begun trimming on the plastic bag in which it had been transported and ran to the young hunter’s aid. A small frenzy began around the kitchen. The hunter returned to the callaloo, trimming, now, at pace. The oldest hunter and his colleague hastily clipped the parrots’ wings, threw them into the plastic bag, knotted it and hung it on one of the nails that had been hammered into the trunk of a nearby tree. The youngest hunter flitted around in excitement. It was his first pigeon catch. The oldest hunter took the pigeon from the young hunter and began to prepare it (see Figure 9).

Figure 9: White crowned pigeon prepared for in-situ consumption. Feathers are plucked (top), bird is cleaned and butchered (bottom left), cuts and offal are fried with herbs, salt, hot peppers, and green onions (bottom right).
Within half an hour a feast had been prepared, drinks had been made, individual snacks became shared appetisers, and the hunters had gathered around the hearth to share a meal. Much was discussed. The oldest hunter began to plan to schedule next week’s hunt, noting everyone’s availability. Some hunters had village gossip to share. Did they hear what happened with so-and-so over there at the cream house. With the white trimming and the red roof. A shame, one said. They’re good people. Tough. You can always have a laugh with the mother. Not stuck up like some of the other people around here. The young hunter spoke of adding farming to his resume; some hunters shared farming tips, another offered him seeds. No less than a week back, an argument had broken out between the seed-sharer and the young hunter over the absent young hunters. The older seed-sharer had called the absentees greedy and selfish, they weren’t “real Maroons”. The angry young hunter had called the seed-sharer jealous. Some people in this village don’t like to see others succeed, was his rebuttal. That’s why the youngsters had to go and do their own thing. Make their own way. Now as the hunters sat cleaning meat from bone, the seed-sharer broke the contented silence. “Him nuh s’pose fi be nuh lead drummer, caah him nuh know how fi drum.” A series of nods went around the hearth. ‘Ah nuh even Maroon riddim him ah play – a different sound him go learn’ another replied. The angry young hunter was notably quiet, gulping down another cup of juice. ‘All now dem boy deh nuh gimme mi share [of earnings from one of the cultural performances]’, he finally mumbled glancing furtively at the instigator.

Two of the older hunters began to joke about the many ways in which the traps had failed over the season. Remember, the oldest hunter said to the other, how you laughed at my tar? How you said it could never be your stick that any parrot could moonwalk off like that? Remember how the parrot popped off your trap the very next day like a flamenco dancer? Laughter erupted around the campfire. Perhaps, said the oldest hunter, he would come tomorrow. Lydia needs to put up her government-spy-tracking device and we need to give
her a send-off (which entailed me bringing rum that I did not drink and, if we were lucky, watching them prepare meat that I did not eat). In fact, the oldest hunter reasoned aloud, maybe he would give the season one last go. He might come next week after all. Another older hunter tried to conceal a wry smile. The hunts would continue.

The consumption of wild meat is widely recognised has having diverse values. For instance, it is seen as a primary source of protein, micronutrients, and income for rural communities (Davies and Brown, 2008; Foerster et al., 2012; León and Montiel, 2008; Milner-Gulland and Bennett, 2003; Sarti et al., 2015; Wilkie et al., 2016), as a living “food bank” during lean seasons for low-income groups in the global south (Bennett, 2002; Davies and Robinson, 2008; Schulte-Herbrüggen et al., 2013), and for its ceremonial and medicinal uses (Davies and Brown, 2008). Secondary benefits, such as pest control or creating a livelihood that is a labour-intensive alternative to arable farming, have also been noted (Cowlishaw et al., 2007; Kümpel et al., 2010; Solly, 2008).

Recently, wild meat studies have begun to broaden their scope of inquiry and analysis to include a more diverse range of factors. Analyses of wild meat consumption were typically framed along axes of poverty alleviation and nutrition supplementation (Bennett, 2002; Cowlishaw et al., 2005; Milner-Gulland and Bennett, 2003). Now, greater consideration is given to cultural factors, which, in some cases, are the most influential factors governing wild meat consumption (Morsella et al., 2015). Specifically, there is recognition that wild meat consumption widens social networks and strengthens social bonds between poor rural communities, generates cultural prestige amongst hunters, and increases social capital among urban and diasporic indigenous families (van Vliet, 2018; van Vliet et al., 2017; Watkin Lui et al., 2016).

Within the Maroon village, contemporary wild meat consumption is largely restricted to those engaged in traditional practices and forest use (Gibson, 2020). Of the sample of
villagers interviewed, most over 55s had eaten wild meat historically, when the village’s cash economy was small and its “action spaces” expansive. Current wild meat consumption patterns are dependent on forest use: interview participants who had wild meat in the past year were also involved in activities that took place in the forest interior. These were not just hunters, but craftsmen who foraged medicinal seeds for jewellery or hardwood for furniture and traditional farmers who sourced yam sticks for the community or collected bat guano as fertiliser. In the context of Cockpit Country, wild meat consumption does not widen social networks and bonds, rather it delineates these social ties into their sets of interactions occurring within communal-but-private spaces. Within these spaces, wild meat consumption creates solace and improves wellbeing (Gibson, 2020). For the hunters, it also counteracted saudade and defined a new subgroup of hunters who, together, had weathered the storms of the 2019 hunting season. Yields were low, the tar was hard, strange red pigeons had appeared, and there was even more work to do at the end of our shifts. The hunts, however, were still worth it. The satisfaction and nourishment outweighed the distress and loss. All, in one way or another, could afford to indulge it; none, in one way or another, could afford not to. The consumption of wild meat reinvigorated the practice, sustaining it to the season’s end. Wild meat consumption also became a tool of recognition – a membership card, much like the playful lies of Mexican fishers. Wild meat consumption became a form of symbolic capital.

In *Outline of a Theory of Practice*, Bourdieu defines the role of symbolic capital in the creation, accumulation, and distribution of other forms of capital. Rather than dissolving ‘divisions and hierarchies between things, persons and practice’ into a vague mesh of social ties (Bourdieu, 1977:89), symbolic capital organises social ties around social units bound by a “practical kinship” (ibid.: 40). These ties, Bourdieu argues, are created outside of everyday relationships and interactions and within spheres of specific economic action where shared
sets of experiences and knowledges are accumulated, affording individual members legitimate access to collective vulnerability, collective property, and collective authority (ibid.:40-54). Practical kinship “depends on the capacity of the official group members to overcome the tensions engendered by the conflict of interests within the undivided production and consumption group” (ibid.:40). The consumption of wild meat consolidates the group of hunters as a unit of production and consumption strengthening the social ties of practical kinship.

Mid-season, one young hunter, now lead drummer, returned for a hunt. He brought with him a young man from the village who had asked to accompany the hunter in hopes of improving his fitness and testing his mettle before applying to the armed forces now that he had turned 18. The young hunter and the boy arrived bright and early at the steps of the rum bar. No call, no flashing headlight, no notice, no courtesy. We at once averted our gaze, refusing to acknowledge either arrival, and glared at the hunter/drummer/chaperone in short, stolen glances of disbelief. The nerve, we thought. I thought, eyeing his new boots. We clanged and banged our way through the morning’s tasks. Chopping wood and emptying fire-pans with the attitude and bridled frustration of an angry lover, moments before a quarrel. No parrots were caught. We sat sulking, eating snacks from right out of our backpack, dipping our hand into its mouth and emerging with fistfuls of unidentified food of unknown proportions. We had not gone to the old man’s farm anyway. There was no meal, eye contact or conversation.

A vireo landed on the tar. Small birds were sometimes-welcomed bycatch. One younger hunter loved them. He would roast them in his firepan and share the insignificant morsels with anyone who asked. The older hunters had begun to appreciate such small catches that season. It was sautéed with the callaloo or roasted in the fire-pan. Remember, the older hunters would reminisce, how that young hunter would call these small birds “Piddikie”? He
would sing that ridiculous song about “sweet Piddikie” as he nibbled the meat off the tiny bone, holding it like a needle to be threaded even though he was going to eat that too. One older hunter had even used some leftover tar to make a miniature trap by the sapling, specifically to catch Piddikie. Though they caught no parrots that day either, we all laughed wearily when it worked. ‘Suh yuh nah cook it?’ asked the energetic boy, excited to have seen the trap in action. The oldest hunter ignored the boy. He tore the bird off his trap, kissed his teeth and, with a scornful flick, threw it in the brush. The young hunter looked off over the ridge. He daren’t sing any song about sweet Piddikie.

Collective vulnerability, legitimacy, intimacy, and authority all play pivotal roles in how spaces are defined and bridged. It creates new paths, between angry young hunters and grumpy old seed-sharers. It erases old paths, between older hunters and former apprentices. Symbolic capital is crucial to the understanding of the redistribution of capital across transforming social landscapes. It has been crucial in understanding the cascade of changes that occurred between the 2018 and 2019 hunting seasons. Economic capital was redistributed through emerging and revisited forms of livelihoods, from marijuana cultivation to drumming tours. Cultural capital has also been reallocated. Ecological knowledge was uncovered in the form of unfamiliar species encountered. Traditional knowledge was reshaped by adaptation, as hunters attempted to improve catch yields by using slingshots to shepherd parrots to their trap. Cultural knowledge and expertise were manufactured, introduced, and reproduced in the series of drumming performances. Social capital has been reapportioned, as patronage was withheld and sharing rituals broken. In each scenario, with each change, group structures are renegotiated and redefined. Symbolic capital is the mechanism through which an impermanent “kinship” is kept under constant review.

In the preface of her seminal work Friction: An Ethnography of Global Connection, Anna Tsing describes forest landscapes as social landscapes, constituted as overlapping layers of
social and natural histories. Tsing had returned to the montane forests of Indonesia where she had previously conducted fieldwork with the Dayaks of Kalimantan to find both landscapes transformed by large-scale logging companies. Why, Tsing asked, were ordinary Dayaks, who depended on the forest for livelihoods ‘joining distant corporations in creating uninhabitable landscapes?’ (2005: 2). What we know to be “global forces”, Tsing argues, are in fact ‘congeries of local/global interactions’ that produce friction: ‘the awkward, unequal, unstable, and creative qualities of interconnection across difference’ (2005: 3-4). It is this friction that inflects global motion. The brushing up of global against local. Transnational corporations can pierce the green armour of remote forests because Javanese transmigrants move to the region under government housing schemes, building roads and creating access. Indigenous Dayaks sell or grant access to ancestral lands because ‘you can get up to Rp. 150,000 for giving permission to fell a tree on your ancestral lands; you might as well give permission, because they will fell the tree whether you give it or not’ (2005: 25).

The past two chapters of this thesis have taken an altogether much more granular approach. Whether global or local, spectacular or everyday, all of these spaces are constantly in motion in their own right. ‘A study of global connections’, Tsing argues ‘shows the grip of encounter: friction. A wheel turns because of its encounter with the surface of the road; spinning in the air it goes nowhere’ (2005: 5). However local communities do not simply lie still like roads. The close ethnographic inspection of the last two chapters zooms into the inanimate asphalt to find that it is in fact a carpet of spiders. What is assumed from afar to be a flat, immobile surface upon which global encounters are had is, up close, pulsating sets of localised changes which themselves interact with larger, global ones. Social landscapes are filled with units and subunits across which forms of capital flow and transform – this is true of both global and local spaces. Global encounters and connections may cause friction.
between wheel and road, but independent of that motion is the tectonic shift of the social units that constitute each.

Symbolic capital is the soft power at the boundary of each social tectonic plate. It determines the motion at the seams. Fault line, rifts, volcano – practical kinship decides. Plates move apart, for example, when old hunters decide to respond to absence with promptness – the resulting loss of yield reinforcing the newly-defined subgroup and widening rifts. When plates move together pretty parrots hang outside cream houses in white cages. The movements of these minor plates, and the paths defined because of them, inform the movement of the major ones. Whether an indigenous community is engulfed and destroyed by large extra-local entities, is defined by their defeat, or both are transformed by each other is determined as much by the constant motion of the redistribution of capital within these spaces as it does by the friction between them. The roles given to the cast of actors within development and conservation are beginning to be re-examined. It is becoming increasingly apparent that a constructive and useful understanding of changes to social and natural landscapes require granular examinations of their constitutive social units. The following chapters move from the close inspection of this indigenous community to the units of conservation stakeholders that interact with and within the conservation space of Cockpit Country.
3. Stakes

The morning dew had evaporated and the mild chill had left the air, yet the group of around 15 were still gathered around the minibus that idled in village square, chatting patiently amongst themselves. Word had gone round the night before to all who expressed an interest in coming that the bus would leave at 7am sharp. Five racklas and a Gumbenh (see Chapter 2) were carefully stacked on the back seat of the bus. One of the group had returned with the Maroon flag; it had finally been located and now lay folded on the front passenger seat. The abeng – a centuries-old war horn used by sentinels in the First Maroon War to warn villagers of British insurgents, used today to announce the death of a Maroon – was, however, still missing. A fire destroyed one of the two original abengs three decades ago, leaving only one. The party was not prepared to leave without it.

Among the gathering were the young hunters. The hunting season had yet to start so I did not know it would be the last time that season I would see two of them. They huddled together in a group with other young attendees, talking politics with the deputy colonel’s nephew. He had parked his car to one side and now stood in front of the group gesticulating wildly with the hand that held the Prada sunglasses. The young hunters sat on the lip of the pavement and listened intently. Every now and then, one would readjust and lean further back – now that the sun was hot and the grass was dry. The others stood around – there but not; looking into the distance, cleaning their nails, squinting at the sun. The eyes of one flickered in the sockets of his sullen face. He was watching something as it danced in the breeze as free as perhaps he desired to be.

Two young women walked past with a loaf of bread. A boy began to kick a ball against the side of a nearby wall. The youngest hunter had left the group and joined the others by the side of the bus. He was agitated, mumbling something about attendance. ‘We should ah put dis pon di notice board’ replied an old drummer, renowned for playing the rackla. ‘No,
ah young ting run dis – ah di internet [WhatsApp] we ah use’ barked the young hunter growing more agitated. The old drummer turned his head slightly and looked down the road, deciding to let the young hunter be. The young hunter continued to chastise faceless villagers for anonymous laziness and a lack of dedication to a cause about which they were undoubtably unaware. The other Maroon villages might come, said the old drummer. That would bring the numbers up. The young hunter retorted something. It was inaudible to me but it suggested he’d rather the sparse few than the diluted many. ‘Suh where Nanny [leader of the Windward Maroons during the First Maroon War] come from den?’ chided the old drummer. The young hunter thought carefully before hazarding a guess ‘Charles Town – no, here. Yeah, ah we mek Nanny and she go tek ar troops and guh start up ova deh suh’.

Content with his partial revision of history, the young hunter walked away from the old drummer. I was bored and I had thin help to offer. I asked a villager why one of the many reproductions (still made today using largely the same technique) wasn’t used instead. Wouldn’t it be a more cautious and expedient choice? One of the two teenage girls nodded in agreement, ‘exactly, we just mek a whole bunch ah horn up ah [Culture] camp.’ The villager politely dismissed the notion, ‘no, we nuh use dem ones fi di proper tings, di one weh dem ah look fah come from Africa’. Soon after, someone had finally found the original abeng, deep green with modest gold embellishments. The bus set off for the anti-mining protest.

The old drummer had taken one of the racklas from the back seat and quietly drummed a tune to himself. His left side leaned on the hot metal of the exposed carriage as he looked listlessly out of the window. He used thin, crooked twigs to hit the drum head. They moved nimbly between the pockets of his leathered fingers, rhythmically grazing and striking the goat skin. The beat was a curious blend of militaristic and soulful: low yet crisp.

One of the passengers announced that they should all begin practicing. He was the much younger brother of one of the old hunters, and had returned to the village after leaving his job
as a police officer in the city. He hoped to become the next Colonel and had begun to organise support amongst the young men in the village. He also hoped to establish his own eco-tourism business, and had asked me to help him design a website. For now, though, he and one of the young hunters were involved in a farming project that would see the latter miss the entire season. He recited the words to an old Maroon song. By the third verse I realised that he no longer sang acapella; his slow, raspy wails were carried by the tailored beat of the old drummer.

The entire bus joined the performance. Two young hunters at the front of the bus led the song like little drummer boys. With a rackla sat in their lap, they faced the others and drummed a series of solitary strikes with a large club like metronomes. Others at the back struck the racklas with bare and uninstructed hands. They pounded with the heels of their hands, slapped with open palms, and flitted with their fingers, coaxing every last sound out of goat skin and curved wood. When the vigour of one song died, the series of thumps and pounds began to overtake the sweet warbles of the teenage girls sat together on the passenger seat further away from the main stage. It swallowed the skilful melody of the make-do drumsticks, spindles that twisted fibres of cacophony into harmony. It was then that the instigator started the next song in the score. After a few songs, the instigator demanded the abeng. He opened wide a window, perched his backside across the frame, and hung outside like a dog on a short car ride. He began to blow. There was no sound. The bus ran over a pothole. He slipped backwards out the window. Two of us lunged forward and grabbed his trouser legs. One passenger calmly took his arm and pulled him back in. Unphased, he adjusted his position and cleared his throat as if the previous failure and the near-accident were all part of the same technical glitch. Still nothing. He tried covering one of the two holes. Nothing but his own breathy effort. ‘Aye, weh di rum deh?’
Rum – specifically, white rum – has a particular place in Afro-Jamaican spirituality. It is used often in Obeah – a type of dark magic. During slavery, obeah was used to poison, disable, and kill plantation owners (Bilby and Handler, 2004; Fernandez-Olmos et al., 2011; Savage, 2012); It is used in Myalism – the opposing “white” magic comprised largely of traditional healing. Described as syncretism of African spirituality and the Baptist faith (whose missionaries were among the first to visit plantations), Myal involves medicinal plant use, libation and traditional dance (Besson, 2018; Chevannes and Besson, 1996). It is used in Kromanti – a (largely Windward) Maroon spirituality that lies somewhere between the spectrum of Obeah and Myalism (Bilby, 1981; 1983). In Kromanti, rum is used in preparations of charm plants, diagnosing social, spiritual, and medical ailments, and is sprayed from the mouth of spiritual practitioners to imbue an object with a particular virtue or disable an adversary (Bilby, 1981; 1983).

A black Canadian woman onboard offered to buy the rum at the next shop. She was a public speaker and local organiser on black rights and had visited the village a number of times – most recently to establish an archive of sorts with a now-deceased resident. The bus pulled up outside a small brightly-coloured store and the Canadian visitor and two of the young hunters alighted. One walked over to the large silver jeep, shiny and new with official tags on its tinted windscreen. It had parked in front of the bus. He spoke to the driver as if he knew him well. The other entered the shop with the visitor. They returned with bags full of rum, soft drinks, plastic cups, and snacks. After a rum-filled intermission of cocktails, peanuts, bun, juice, and banana chips, the song continued. The instigator fed rum down the mouth of the abeng, vigorously rubbing the runoff over his face, head, and neck. ‘Drink di rum outta it’ instructed one passenger. He waved the rum bottle in the air so that rum splattered everywhere. It landed on arms, thighs and across faces. None paid notice, except the visitor and I who tried not to seem put out. He poured another shot of rum in his mouth.
and sprayed it over the horn and then up into the air. He let out a large, ceremonial sigh that sounded like a raspy yawn. With puckered lips, he sucked in a long breath of air and raised the horn triumphantly to his face. A determined blow. A whimper that sounded like air skimming a wet surface. ‘Pass it’ beckoned another passenger taking the horn from him. He too filled his lungs and blew hard. Nothing. One of the hunters. A feeble flat note. ‘Rum!’ he hollered. Someone handed him a bottle as if he had asked for a “scalpel, stat”. The young hunter doused himself and the horn and blew again.

Over the course of the journey, the group practised a number of songs. The young hunter sat in the instigator’s previous position. He hung out of the window and was now producing a series of respectable sounds with every blow. The hollow, deep, undulating notes of the horn’s cry rumbled through the air as the bus tore through quiet rural neighbourhoods and the sound through their blurred, curious residents. ‘Come mek we res’ up so we stay fresh’ suggested one passenger. His suggestion ignored, the party wailed and drummed their way from one spiritual to the next. On an empty road, not far from the protest, the instigator instructed the hired driver to stop. ‘We haffi get serious, man’ he told the group. The vibe had to be right he said. It had to pulse from the walls. People will know just who they were. Most passengers alighted. Some went to relieve themselves, others went to smoke. The younger hunters took the drums outside and continued. One of the teenage girls unfurled the flag that had sat on her lap and held one end while the instigator held the other. Together they danced, sang, enjoyed and rehearsed and then, after some time, everyone boarded and left.

Soon walls of green gave way to little coloured boxes, peppered down the hillside, then a town square. The bus was heard before it was seen. All the windows had been opened and the faraway wails, moans, melody, and drums bounced through the air – in and out, then settling above the crowd. The bus drove slowly through the square. At the other end, where the road out was lined with parked cars as far back as the eye could see, the driver turned the
bus around and drove back to the centre, next to the monument. Intrigued protestors began to gather to look greedily at the bus that swelled with song. Every pulse of rhythm drew the growing crowd closer. Wide-open windows framed grids of faces and phones held high. There the bus sat, in the centre of the protest, convulsing with culture, memory, history, and pride. It suspended time, for I do not know if we sat there for a minute or an hour. The anticipation was palpable, tingling. One young hunter could take it no more and shouldered open the rickety folded doors. Out they rushed, a troop of resplendent warriors, with song as their weapon and drums as their shields. One held the Gumbleh for another to play, shimmying into a backbend and spraying rum into the air like a fountain like the spouting cherubs on a marble fountain. Another took the final bottle of rum and splashed it over the convening crowd. In the centre, the young hunter stood blowing the abeng. Old men in monotone cotton headwraps and long beards of natty-dread stood back with approving nods. ‘What an entrance!’ remarked one onlooker to another. Small flinches on the face of some gave away a certain discomfort, as if they felt suddenly displaced by what they saw.

The national news channel covering the protest rushed over to the passengers. The Colonel, who had arrived separately, began fielding questions. Another interviewer, affiliation undeclared, began to ask the Colonel about the nature of the relationship with the Prime Minister. The Colonel denied whatever allegations were being insinuated. In frustration, he then turned and shooed away the Canadian visitor, who had been filming the ordeal on her GoPro. The deputy Colonel’s nephew appeared and was now answering the media’s questions. He nudged his sunglasses further up his nose, reached in his back pocket and pulled out his iPhone and a business card. The forest was the iPhone, he told the newscaster, and the business card, the proposed protected area. He placed the smaller business card on the screen of the iPhone, ‘suh how dat ah guh work’ he said.
The officially-scheduled speeches and performances began soon after, on the stage that had so far gone unused. A number of local politicians spoke of their support of the anti-mining campaigns and the importance of the Cockpit Country as a national resource. A wealthy businessman spoke of how important it was to come together and fight environmental destruction. The deputy Colonel, an elderly frail man, spoke next. Cockpit Country belonged to the Maroons, he declared. No government had the right to mine their ancestral lands. The Maroons, if necessary, will fight. He would lead the community ‘back inna di forest fi guh nyam [eat] callaloo, tell di young bwoy dem “come mek we guh fling rock stone”!’ The mood hollowed and the crowd’s energy dissipated. The emcee shuffled her papers looking for the name of the next speaker. The only distinct sounds above the hum of apprehension were the feedback from the speakers and the occasional cry of street vendors. More local leaders spoke, including the Colonel who had since composed himself. A local singer sang a song about harmony and Jamaica’s natural beauty; ‘Out of maaaaaany. We. Are. Oooooooone’ she crooned. A Rastafari community from Montego Bay performed a Nyahbinghi, ‘a [Rastafari] ritual process consisting of extended drumming, chanting, reasoning, and testimony, all of which are meant to release spiritual energies that will vanquish Babylon’ (Yawney, 1994: 79). ‘A nice likkle riddim dem ah gwaan wid, whispered the village historian as he and I sat under the steps of the monument a few metres from the stage, ‘soun’ sweet man’.

By the time the group of Maroons took the stage to perform, the instigator’s voice had completely disappeared. The young hunter was exhausted and his lungs were giving out. He could produce nothing more than a series of sputters and gasps from the instrument on which he had shown such promise. Some were drunk, some were tired, and others refused to go on stage. The teenage girl, singing without her sister who stood on the side, held the mic close enough for all to hear as her voice began to waver and crack. Some held up the Maroon flag:
a green abeng upon a maroon background with the date 1738-39 embroidered underneath. The instigator sat in the centre of the stage beating the Gumbeh so fiercely he was drenched in perspiration. The Gumbeh is squat and has no bottom head. What it has in tone, it lacks in resonance. In the absence of any authoritative voice – his raspy commands or the horn’s flat, modulating cry, the instigator began to strike the Gumbeh even harder. Eyes closed, panting, sweating as if possessed. The drum head started to sag and one of the legs broke from underneath. He flipped the Gumbeh over, slid the edge of the goat skin towards him to tighten the slack and hammered the leg back in with the heel of his palm. He turned it back over and continued to play. The drumhead remained saggy. One old Maroon swayed to the music at the back of the stage with a bottle of rum in his hand. He poured it in his mouth but sprayed nothing out. The group sounded tired and the crowd looked tired of them.

Amongst the crowd, I recognised staff and members of two conservation NGOs and an independent research centre. They were members of the Cockpit Country Stakeholder Group: a 2006 initiative created and initially funded by TNC and included state departments, academics from the University of West Indies, local NGOs, and Leeward Maroon communities (see Introduction). These groups of actors are often articulated in conservation literature and analyses as key conservation stakeholders. Yet none of these three stakeholder groups gave a speech, or graced the stage by any other means. Instead, they moved within the crowd. A handshake here. A small, hushed gathering there. The Maroon village also made significant investments in their off-stage work – at the cost, even, to their on-stage performance. Identity, access, history, and knowledge were made distinct, practiced, and articulated in this off-stage work. In the bus and within the crowd. Off-stage work served to impose, articulate, and confirm group membership in very specific set of stakeholder relations. The WhatsApp invitation, the rehearsal, the entrance. The use of presence and absence, acknowledgement and erasure. These are all articulations of such membership.
Drawing from the previous chapter’s work on symbolic capital, this chapter explores this membership by first defining it. These particular groups of actors are not just conservation stakeholders, they are shareholders. As a result, they practice and articulate this exclusive membership in sets of ways not accessible to other local stakeholders. From there, the chapter expounds theory as to how articulation provides access to what Tania Li refers to as “fields of power”. This chapter then goes on to inspect particular ways in which articulation is formulated across different shareholders, which I distinguish from stakeholders. First, how indigeneity is articulated and professionalised in conservation activism spaces. Then, how the roles of NGOs and state departments are articulated and disarticulated within the Jamaican conservation space. I must make the point that the articulations examined are not restricted to their respective shareholder – they are bartered, traded and operationalised (as shares typically are) across all shareholders. This includes their default positions in lay expectations and romanticisations. It also includes common articulations that plague and unfortunately encumber many critiques of conservation: the savvy yet cash-strapped local NGO; the deeply problematic, too-big-to-be-good international NGO; the weak, ineffective, and/or corrupt state; the noble savage. Through the additional use of archive material from The National Archives, UK, this chapter takes a historical perspective in charting how knowledge, access, and identity has shifted social landscapes that both house and are themselves defined by articulation.

**Ethnopolitical entrepreneurs**

Adam Kuper’s article The Return of the Native was a scathing polemic on the essential role placed on indigenous culture in the rhetoric of indigenous peoples’ movements:

‘Local ways of life and group identities have been subjected to a variety of pressures and have seldom, if ever, remained stable over the long term. It is nevertheless often assumed that each local native group is the carrier of an ancient culture. In familiar
Indigenous culture, argues Kuper, is portrayed as surviving in the recesses of “rural enclaves”, under constant threat of western incursion. Advocates of indigenous peoples’ movements refer to the loss of indigenous tradition using both the language of genocide and romantic ideals of an essence that ‘can be nursed back to health if the resources are provided’ (2003: 390). Kuper ends his polemic with a stern warning to anthropologists, allies, and advocates: ‘Fostering essentialist ideologies of culture and identity, they may have dangerous political consequences’ (2003: 395).

Many comments, published as an addendum to the article, agreed in theory with the problematisation of essentialism in indigenous rights advocacy. ‘The position of anthropology in this debate is decidedly uncomfortable’ argued one reply (Kuper, 2003: 397). Some acknowledged the premise but opposed Kuper’s approach, arguing ‘what we need is serious anthropological research, rather than casual generalizations, and open-minded anthropologists who neither adopt indigenous causes as an article of faith nor reject ethnic struggles as racist manipulations by unscrupulous opportunists’ (Kuper, 2003: 398). The following year, the same journal published the co-authored discussion, On the Return of the Native. Racist stereotypes, implicated in the presentation of indigenous cultures, are not promoted by advocates, but by opponents, argued one author. Though Kuper’s article ‘helped … to show some of the mistakes made by well-meaning groups and individuals’ and ‘raises important questions regarding anthropological advocacy’, it also fails to address ‘the challenge of social justice and empowerment of disadvantaged ethnic minorities’ (Asch et al., 2006: 262). Some comments chastised Kuper for his inaccuracies – particularly his confusion of two different UN indigenous forums (the UN Working Group on Indigenous Populations
and the UN Permanent Forum on Indigenous Issues): ‘confusing these two fora is not just a question of mixing up two different places where indigenous peoples meet… It conveys an ignorance of the core events in the international process that sets the context for the specific cases dealt with in his article’ (ibid.: 264). Others level a moral charge, referring to his article as a “couched assault” that ignores, if not undermines, indigenous rights abuse.

Two of the co-authors, Justin Kenrick and Jerome Lewis, also published a synthesis of many of these critiques, and expanded on their own, in another journal. ‘Kuper’s polemic’, they begin, ‘is misleading in a number of ways, and would perhaps be better ignored’ (2004: 4). Kenrick and Lewis accuse Kuper of being ignorant of and absent from ‘20 years of debates, meetings and resolutions, achievements as well as disappointments, and … the participation of thousands of activists, advocates and academics’ (2004: 5). The antagonism between Kuper, whose replies are too numerous to give them rightful acknowledgement, and the many critics he acquired after the publication of The Return of the Native shares many similarities with the heated debate around the conservation status of the Hawksbill turtle in the next chapter (Chapter 4). Both sets of antagonisms use shame and castigation to affirm and deny credibility and make moral assessments of epistemic positions in order to establish membership of the particular social units involved in the creation and maintenance of particular spaces of articulation and what Latour (1999) refers to as “centres of calculation”, where science work, honest work, and boundary work take place (see Chapter 4 for continued discussion). The same is true of the Thomas Hobbes and Robert Boyle controversy that precipitated the development of empirical science – also explored in the following chapter.

Controversies such as these do not only make “science stammer” (Latour, 1987: 219), they slow down prevailing discourses and open practices bound by consensus and shielded by knowledge and honour up to scrutiny an interrogation. The heavy emphasis by Kuper’s harshest critics on his misidentification of two very similar fora, housed under the same
organisation (the UN), delineates a practical kinship. It separates those who have done the work, suffered the hardship, and shed the tears from those who can scarcely keep simple facts in order. Just as it separates those who have weathered the storm, seen tar harden and die, and watched parrots’ escapes from those lured away by fleeting fortunes. These critics do not echo calls for reassessment or request that Kuper take greater account of the dispossession, disarmament, and destruction of indigenous peoples. Instead, symbolic capital of advocacy work is used to illuminate the distant, dispassionate scholarship of Kuper, his ‘not very helpful article’ (Saugestad, 2004) and others like him from anthropological spaces involved in indigenous cultures. I will not, in this chapter, present where I stand on this. I have no desire to situate myself on either side of a broken fence. I fully understand and sympathise with both the attempt to empower indigenous voices and the accountability being levelled at those who, through their advocacy, reproduce the spectacle. Both perspectives seek to inch the car forward, away from poverty and marginalisation. One by turning the wheel, the other by trying to fix the engine. What is important to me is the forms that these debates take, the authority and morality that inevitably undergird them, and the symbolic capital it creates. How legitimacy then inadvertently and implicitly funnels other forms of capital to specific actors through rhetoric and discourse. As I have emphasised in the previous chapter, where there is symbolic capital, there is redistribution of other forms of capital across a social landscape. What, then, drives these ongoing tectonic shifts in the advocacy of indigenous knowledges, cultures, and people in conservation and development spaces? How does the spectacle work against the everyday and in what direction does the car actually move? I cannot answer that question if right now I, too, roll up my sleeves and either push or wrench.

Though many condemned Kuper’s article for an opprobrious portrayal of an advocacy within which they were deeply entrenched, a number of scholars have examined the professionalisation and articulation of indigenous communities. Tania Li (2000) compares
two areas in Central Sulawesi, Indonesia: Lake Lindu, a prosperous, literate, Christian farming community ‘where children aspire to government jobs’; and Lauje, a community with poor nutrition and health, few livelihood options, and where few speak the national language. Both communities have equal claims, despite the Indonesian government’s rejection of the distinction between settlers and indigenous, to defining themselves as indigenous. In contesting the proposed construction of a hydro-power plant by the lake (a national and international campaign), villagers of Lake Lindu articulate a collective indigenous identity in a way that their poorer counterparts have never achieved. Li credits these “fields of power” – spaces of conservation action, in which indigenous identity is articulated and utilised – with furnishing particular communities with sufficient attention and privilege that allow ‘local agendas [to be] identified and supported’. Fields of power not only amplifies indigenous activism, it creates “ethnopolitical entrepreneurs” – activists skilled in framing particular demands in ethnic terms to increase political support (Valkonen et al. 2017). Such entrepreneurship can be seen by the cultural hijacking largely orchestrated by the young hunters and the other political players, the deputy Colonel’s nephew and the instigator. The horn, the flag, the colourful dashikis (worn by the entrepreneurs, whilst the remaining passengers were largely dressed in street clothes) are examples of strategic use of ethnicity, employed specifically by particular individuals.

Commentators dispute Robert Putnam’s claims that increased social capital within civic society can improve democracy, arguing that active and deliberate roles in decision-making relies on yet another form of capital: political capital (Booth and Richard, 1998; Sørensen and Torfing, 2007). Sørensen and Torfing (2007) define political capital as ‘the individual powers to act politically that are generated through participation in interactive political processes linking civil society to the political system.’ There are three different modes through which individuals or sets of individuals can accumulate political capital:
endowment, or the level of access to decision-making processes; empowerment, or their capacity to make differences within such decision-making processes; and political identity, the perception of themselves as political actors (ibid.). Scholars argue that ethnopolitical entrepreneurship is deeply intertwined with forms of alienation and exclusion, determining who is and is not indigenous and, therefore, who does and does not belong in fields of power (Gomes, 2013; Thanwngmhung, 2016; Valkonen et al., 2017). I turn again to symbolic capital and the (re)assessment of membership required by the redistribution of capital. Indigenous communities may be essential to the creation of these fields of power, but it is a select few in these communities that are able to access it in any meaningful way. It is the ethnopolitical entrepreneurs who turn such cultural capital into political capital, through engagement in articulation work. It is through them that the distinct political and cultural structures that now rim their social world arise from the amorphous.

Amity Doolittle (2010) discusses the different strategies used by indigenous activists during the 2008 World Conservation Congress. Indigenous leaders, regardless of location or type of ancestral land (forest, desert, etc.) or the particular mode of conservation action threatening to encroach upon their ways of life, evoked two distinct forms of articulation during climate change negotiations at the congress. Initially indigenous leaders, from Arizona to the Philippines, would speak of their intimate relationship with nature, their ontological perspective of earth as a nurturing mother, and the breadth of their ecological knowledge. When discussions turned to specific conservation policies, such as REDD+ programmes, however, storytelling and cultural re-enactments gave way to explicit confrontations of the ‘histories of marginalisation and dispossession’ endured through colonialism, resource extraction, and green-grabbing. The ‘dynamic shifts in the rhetorical strategies of indigenous leaders’, Doolittle argues, ‘raises important questions about both the power and limitations of identity politics’.
Laurie et al. (2005) explore how “development-with-identity” has transformed indigenous Andean communities into sites of debate and definition. Indigenous communities and cultures are not just revitalised and ringfenced by activism. They are, Laurie and colleagues argue, reconfigured and professionalised by it, as the fields of power themselves become a resource in finding new development solutions. These novel, alternative, sometimes ecological, but always distinctly ethnic, solutions are particularly prevalent in Latin America and the Caribbean, where they emerge from attempts to undo the social impacts of structural adjustment policies between 1970s and 1990s that led to widespread transformation of the region’s economies (ibid.). In particular, Laurie et al. discuss the phenomena of indigenous “training programmes” that train, create, and professionalise indigenous experts, leaders, advocates, and elites. In Ecuador, the ECUARUNARI training school for indigenous women offers a three-year programme, which awards a diploma after successful completion of coursework and exams. Courses include local sustainable development, political organisation, and gender, culture and ecology. With distance learning options as well as short residential courses, the programme’s flexibility often makes it a more popular choice than university for many local women.

Jovan Lewis (2017) explores the discourses of indigeneity employed by the Rastafari Indigenous Village: the community who performed at the protest described at the start of this chapter. The community was first established in 2007, after some of the now members were approached by a large party of black American tourists seeking an “immersive experience” into the wellness and spirituality of Rastafari culture. Rastafari formed in Jamaica in the 1930s, largely as a response to the worsening economic conditions of the rural poor after the Great Depression ended agricultural migrant work (Turner, 1994:30). Unable to find suitable work in Jamaica’s agro-economy, many returning migrants were also disenfranchised by a system of progress that valued a civic sense of “respectability” and middle-class aspirations.
Such mobility crippled local economies as upward-moving households were stuffed full with imported goods and dreams. This led many men from rural poverty to sympathise with Marcus Garvey’s black liberation movement, fuelled by a rejection of ‘the bastardised version of British society which official and educated Jamaica [sought] to foist upon them’ (James, 1964, as cited in Turner 1994). The religiosity of the Rastafari movement came with the crowning of Haile Selassie, believed to be the prophet from the east to which Marcus Garvey referred (personal communication, Rastafari Indigenous Village). In the 1960s, the post-war, postcolonial Jamaican government began to persecute, arrest, and shave the heads of Rastafari in an attempt to bolster a workforce depleted by the Second World War and the Windrush migration. Many remaining Rastafari retreated to uninhabited rural uplands and lived self-sufficient, natural lives away from “Babylon”.

The Rastafari movement, given its recency, does not qualify as an indigenous community under prevailing definitions (see Saugestad, 2004; Kenrick and Lewis, 2006), however they share an identity and spirituality rooted in relationship with nature and a history of persecution (Lewis, 2017). The members of this community, therefore, articulate claims to indigeneity not as it is articulated by communities in the Pacific, North America or the Amazon, argues Lewis, but following ‘the particular model of the Maroon community in Jamaica’. This “model”, as described to Lewis by the Rastafari Indigenous Village, realises claims to indigeneity through concentration on traditional knowledge and specific histories of dispossession and disenfranchisement to assert a distinction from Jamaican society. The community has been funded, under the Jamaica Tourist Board’s “village-as-business” model, both by eco-tourism and a series of government development grants worth over US$200,000. Kate Meagher (2006), examining shoe and garment informal manufacturing clusters in Aba, Nigeria, argues that the effectiveness of organised social networks came not from independence from the state, but from access to resources and institutional authority gained
through the state. Political capital is not simply a tool through which ethnopolitical entrepreneurs articulate cultural and social capital into resources, it is also a mechanism ‘through which popular forces are incorporated into the “shadow structures” of predatory states. Political capital is a double-edged sword.

In rural South Africa, witch hunts of wealthy local unmarried women, increases in local revenue from growing belief in endemic mythical monsters (“monster money”), the sale of blue eyes and other body parts as simultaneous parts of ritual economy and organ trafficking are all sensational examples, Comaroff and Comaroff (1999) argue, of contemporary occult economies becoming ‘a new form of imperialism, the affluent West siphoning off the essence, even appropriating the offspring, of impoverished Others for ends both occult and ordinary’. As cash-based economies continue to transform and unrelentingly squeeze rural livelihoods, exploiting the occult – another form of cultural capital – is the ‘retooling of culturally familiar technologies as new means for new ends’ (ibid.). In the post-apartheid redistribution of capital, emerging black elites turn to “new magic for new situations”. ‘Processes of indigenization that work to redefine political authority, entitlement, and perspectives’ (Geismar, 2013: 3) – essentially, the procurement of political capital through indigenous identity – is not solely a process of articulation by indigenous communities. Rather, Geismar argues, indigenisation also utilises the “retooling” of indigenous culture through methods of provincialisation: ‘the ways in which cultural difference may be used to re-center our view of global politics’ (2013:3-4). Through the apparatus of provincialisation, indigenisation practices ‘draws indigenous people into dialogue with the state and challenges us to alter our perspective on both subject positions’ (ibid.).
Shareholders

‘We are neighbours. I just... how did it get to this?’ the dull hum of the ceiling fan lulled in the empty silence. The legal officer lowered her eyes as genuine disappointment set into the creases of her face. She shook her head and shuffled her papers together. She would let them tell me about it. I sat still and slowly plastered a polite, simple grin across my face and nodded. I tried to look sympathetic. I feared I looked demented. I had been playing poker with myself all afternoon. Scanning my facial movements ruthlessly, every twitch of the muscle, since I passed the security barrier. I walked up the long drive with a soft bounce in the knee and my thumbs tucked into the straps of my backpack like a schoolchild. I waited in the lobby looking wide-eyed at the wood that cladded both inside and out. I gazed in awe at posters of the different types of trees and other Jamaican flora. I drank their water and put the paper cup in the bin next to the cooler – with care, but also carefreeness. I would not have a single movement give away what side I was on – especially not while I was in the belly of the beast. I entered the meeting room to see a small army of staff. I armed myself with neutrality; a wide and grateful smile to hide my mild shock.

We had worked our way through the set of general, neutral questions I had prepared and were having an open discussion. They were more at ease and so was I. They invited me to tape the interview after watching me tap responses furiously into my laptop. I grew less convinced that the senior legal officer was there to orchestrate some kind of arrest. She had no plans to attack; she was there, I later realised, in case they had to once again mount a defence. They in fact seemed to be in the business of perennial defence. Many of the Forestry Department’s initiatives I came to discuss were not initiated by the forestry department themselves. They had heard of the plans for the Cockpit Country Protected Area in the announcement the Prime Minister gave to the nation. I asked when the protected area would be officially designated. We don’t even know if it’s finalised, they replied.
Earlier that week I met with the National Environment Protection Agency (NEPA), the agency responsible for the enactment of environmental law. It falls within the Ministry of Economic Growth and Job Creation, under the portfolio of the Prime Minister; and the Forestry Department are among the departments and “focuses” that fall under it (Jamaica Information Service, 2016). They shared plans to increase the proportion of land cover (of the entire island of Jamaica) designated as protected areas from 18% to 40%. The senior director of the Forestry Department, at the start of the interview had outlined their mandates: protected area and forest management. They had just finalised their strategic planning and had policy directives that led up to 2026. How, I asked, did it propose to achieve the 40% protected area target that NEPA had set? We all sat across from each other at one end of a large rectangular table, too big for the room. The staff looked around to one another, each, in turn, mirroring shaken heads and shrugged shoulders. ‘Well... we don’t know anything about that’ replied the senior director.

The NGO office was at the end of a small business complex nestled behind a vacant lot and steel billboard. The complex itself was a long row of white bungalows with gabled roofs and small gravelled drives. They stood behind a continuous white picket fence, each section festooned with respective company logos. The corporate cottages unsettled me further. I had already been unhoused by the walk. The main road that connected the “neighbours” was traffic-logged yet eerie. It lacked the footfall and bustle that was so characteristic of the island. I had also been shaken by the battered humanity of the Forestry Department. Before I left they searched their phones offering any links they had to people who had researched Maroon culture. ‘Beach cleanup’ offered the CEO as she walked into the reception area to find me staring at the boxes full of bin liners that covered the floor of the small reception area. As I scanned the office, I cautioned myself not to ask upfront about the neighbourly war. A degree hung on the wall – not behind her desk, but right opposite the seat
she had offered me at the head of the small conference table. Masters of Science in Conservation from Oxford University. Perhaps I had found my monster after all.

‘You just came from Forestry Department’ the CEO asked as she sat down. A terse nod as I summoned all the self-discipline I didn’t know I possessed. ‘They tell you what’s happening?’ I didn’t have to wait more than a minute before being told:

‘As soon as the [protected area] announcement was made, we sent a letter – within a month or two – to get copies of the maps. We wanted the shapefiles to examine it but we couldn’t get hold of it – they aren’t on the website. So under the access to information act – it’s the same thing as FOI – we asked the Prime Minister’s office for them. The staff got back saying that the maps were created by the Forestry Department. They sent us electronic copies of the maps but they didn’t send us the shapefiles. We want to know the changes that happen during the groundtruthing process. If there is a piece of land owned by the bauxite company and the boundary has been moved around it, that’s something we need to know’

The Forestry department had directed the CEO to the JPEG image of the proposed boundary, but refused to share the shapefile: A shapefile is a geospatial data format that stores the location and shape (as points, lines, and polygons) of geographic features as vector data. Using GIS software or some programming languages, shapefiles can be used to produce maps, map layers, or to undertake spatial analysis. In the preparation of this thesis, I was still unable to find any shapefiles on the Forestry Department’s website – not even of existing forest reserves. Keen, still, to appear neutral and avoid antagonism, I prepared my map (Figure 1) using alternative sources. The CEO continued, expanding on her reaction to the lack of information-sharing:

‘To be honest, when we asked for the shapefiles we wanted to make our lives easier. We wanted to produce our own maps but using the government’s shapefiles so that
when we present it nobody can say oh your map is not correct. But when they refused to give it to us, we were really concerned… maybe there’s some significant areas that they expected to be changed. They just keep saying “they’re in draft, they’re in draft”’ recounted the CEO.

Shapefiles are frequently shared. They are often published by academics, cartographers, and institutions at the end of mapping projects across numerous repositories. GIS software are equipped with a number of shapefile catalogues. The United States’ data.gov repository has an extensive catalogue of shapefiles ranging from national and local parks across the country to the locations of basketball courts in Seattle. The IUCN keeps a database of current protected areas: World Database of Protected Areas (WDPA). The database is used to compile the IUCN Green List, which in turn informs many development indices. It is useful to be able to outsource the creation of beautiful and informative maps and the spatial analysis of current or proposed land use. Why, then, were the Forestry Department, who treated me with the penniless and dignified generosity of an impoverished community, hoarding their shapefiles?

The CEO shared further concerns about the protected area even being passed into law at all. It was summer of 2018, eight months after the Prime Minister announced the protected area, and the groundtruthing process – physically walking the proposed boundary to ensure that its location encompasses key ecosystems along the forest edge – had yet to begin:

‘The protected area has to be gazetted before it becomes law and part of that is to groundtruth the boundary, work with local communities, and have public participation – that’s all part of the process of it being declared… You can’t create a management plan until [the protected area] is declared into law… The end of this financial year [March 2019] is the deadline for the groundtruthing. There is no way you can groundtruth that area in that short space of time – it’s very rugged. While
we’re waiting for this designation under law, we still don’t have protection. We’ve asked the government to declare that they won’t allow mining in the area in the meantime, but we haven’t got any feedback on that’

Both the Forestry Department and the NGO were still awaiting the outcome of the Access to Information court action when I visited them both the following year. The Forestry Department had just begun the groundtruthing process – over a year and a half after the protected area’s announcement – and had laid a single milestone of those that were to define the park’s physical border. Ill-governed, unenforced protected areas are often termed “Paper Parks”; who knew if this one would even make it onto paper. For now, it was a Hologram Park: illuminating the social and natural landscape with desires to produce nothing in reality more than a hollow image of progress painted by a coherent beam of light. To date, the groundtruthing process is still not complete and a second marker has yet to be laid. Why is the process so painstakingly slow? Is it, as the CEO suspected, a man-made purgatory – neither heaven nor hell, where the state at once collected mining revenues and were seen to be engaged in conservation practices?

Jamaica has had a short, but pronounced, history with conservation. Prior to 1987, very few environmental groups existed, with much of the limited work undertaken by academics at the University of West Indies (Lundy, 1999a; 1999b). The inundation of technical assistance and funding during the 1990s from international organisations such as Canadian Green Fund, WWF, USAID, UNDP, and The Nature Conservancy saw Jamaica’s conservation space mushroom; no fewer than 28 environmental groups formed between 1988 and 1995 (Lundy 1999a; 1999b; Haley and Clayton, 2003). One such early group was the Portland Environmental Protection Association (PEPA). Peopled by local elites (businessmen and professionals), one member described the group not as a conservation NGO, but “a cosy little club” (Lundy, 1999b). Conservation initiatives included spending the equivalent of over
£10,000 today on an environmental board game and organising a “green” seminar for local hotels (ibid.).

Another example of early conservation management in Jamaica was the creation of Montego Bay Marine Park. Designated in the mid 1990s, it is one of Jamaica’s first national parks (Carrier and Macleod, 2005). Though the park was established by central government, they neither funded nor managed it. Rather, it was managed by an environmental NGO (ENGO) and funded largely by USAID, who required the disbursements be spent on specific projects and not on the basic operations or maintenance (Carrier 2010; Carrier and Macleod, 2005; Haley and Clayton, 2003). Much of the funding was spent on producing business plans and capacity-building initiatives (Carrier, 2010). Many of the managers of the ENGOs who managed both the Montego Bay and Negril Marine Parks, James Carrier (2003) argues, are not career environmentalists, but expats laden with transferable skills and intimate and personal experiences of local nature. One manager migrated to Jamaica after illness and a messy divorce; her daily swims at a nearby beach brought solace. Her encounters with marine life and emerging threats led to informal research, which then led her new life as an environmentalist and dive-shop manager.

Commentators have criticised Jamaican ENGOs and the “activists-turned-managers” (Carrier and Macleod, 2005) who typically run them are often complicit in creating the very problems they are funded to solve (Garner, 2009; Haley and Clayton, 2003; Lundy, 1999b). The ‘dramatic increase in the number of environmental NGOs in Jamaica and the drawing-down of major external funding programmes’, Haley and Clayton (2003) argue, ‘has done virtually nothing to redress Jamaica’s most pressing environmental [problems]’. Instead, they argue, these ENGOs articulate problems and fabricate solutions to justify their own existence. Common charges levelled against these ENGOs include the misrepresentation of complex circumstances; lacking sufficient technical skills and competencies; retro-fitting
ongoing/conventional conservation projects with participatory or community-based approaches that are often inappropriate, ill-conceived, or under-executed; and seeking to both undermine the state whilst positioning themselves as its practical arm (ibid.). In particular, such ENGOs are fuelled through articulation of a failed, dysfunctional, incorrigible Jamaican state; a narrative that builds upon the state’s deteriorated relationship with the West after the socialism reform of the 1970s (Haley and Clayton, 2003). They are also fuelled by the articulation of peasants and fishers as encroachers involved in “peasant deforestation” (Kuymulu, 2011) and wilful reef destruction (Haley and Clayton, 2003).

The drip-fed financing of Jamaican environmentalism has led to its distinct unshapeliness. Bulges of attention and disbursements attached by narrow, starved corridors of time where the project and staff exist but action does not, annexed by emerging priorities borne not from need but narrative. The management of Montego Bay Marine Park, Haley and Clayton (2003) assert, is an example of such irregularity. When the ENGO receives funding, rangers actively patrol the coastline and prevent fishers from fishing the shallows. Without funding, broken equipment goes unrepaired, rangers could not be paid and therefore did not work, and fishermen returned to the shallows. Even when funding is obtained, conservation initiatives can be rendered spasmodic, inconsistent, and, ultimately, ineffective. Andrew Garner (2009) discusses the failed attempts of a small fishing cooperative in Negril to develop new deep-water fishing practices that would reduce reef destruction. When a Canadian consultant, tasked with helping the cooperative attract international funding, began developing their business plan, he asked for their accounts and records. After weeks of searching for them, it emerged that a government agency had requisitioned, and failed to return, the accounts for auditing several months prior. The agency was slow to respond to the many emails the cooperative sent and several months after the consultant’s initial request, no accounts were produced. The consultant, who had been successful in securing funding, could
not recommend that the cooperative be responsible for the proposed budget, negotiating instead its disbursement through an ENGO. When the cooperative approached the ENGO for the funding, they were surprised to learn that the ENGO was not simply the administrator – it now managed both the budget and the project.

Conservation interventions within protected areas are typically framed within one of two categories. The first is fortress conservation, where protection is defined by the exclusion of local users, paramilitary-style enforcement, and regulated activities restricted, usually, to tourism or scientific research (Homewood, 2004). The second involves community-based approaches, which regulate ecosystem use by local stakeholders, defined as ‘a village, or group of villages, an individual or group of individuals with a shared interest in the resource (Roe et al, 2000, cited in Homewood, 2004). Such approaches, Homewood (2004) argues, are often based ‘on the “use it or lose it” premise that sustainable management of natural resources is predicated on their benefit to local communities. Much advocacy has been devoted to the displacement caused by the former category; physical eviction associated with fortress conservation is particularly visible and better-compensated when it involves indigenous communities (Brockington and Wilkie, 2015; Fairhead et al, 2012; West and Brockington, 2006). What often remains overlooked, some argue, is the “economic eviction” (Brockington and Wilkie, 2015) of more participative forms of conservation. Agrarian-based livelihoods are restricted and discouraged in favour of “greener”, “indigenous”, and “traditional” activities, typically intertwined with or performed through wildlife and eco-tourism (see Agrawal, 2005; Astuti and McGregor, 2017; Brockington and Wilkie, 2015; Fairhead et al, 2012; Homewood, 2004).

Dan Brockington (2004) challenges the prevalent conservation rhetoric that protected areas require community support to be effective. Using James Scott’s characterisation of peasant resistance as employing “weapons of the weak”, Brockington argues that the
countermeasures available to and used by the rural poor neither pose threats to nor resistance against protected areas. ‘Local groups’ Brockington surmises, ‘can be ignored by protected areas with impunity’. George Holmes (2013) concurs that the anonymous, under-resourced, unplanned, acts of dissent by local communities have negligible impact on conservation. When the Dominican Republican state designated and fenced-off large expanses of protected areas in the 1980s, Holmes argues, many subsistence farmers had little choice but to leave and abandon all that they had (Holmes, 2013). James Scott indeed explores ‘the ordinary weapons of relatively powerless groups: foot dragging, dissimulation, false compliance, pilfering, feigned ignorance, slander, arson, sabotage, and so forth’ (1985: 29). These tactics, Scott asserts, have marginal effects on ‘the various forms of exploitation that peasants confront’ (ibid.: 30). Yet, Scott argues, these modes of resistance are far from trivial. Acts of defection, desertion, and evasion by peasants conscripted as labourers and soldiers have destabilised economies, shaped wars, and transformed nations (ibid.: 32-35).

These weapons are of even greater consequence. Everyday forms of resistance, Scott insists, are more than a “collection of individual acts or behaviors”; rather these acts ‘circle back… to influence consciousness and hence subsequent intentions and acts’ (ibid.: p37). Small acts of resistance may not break the strong back of conservation. But little by little, over time, they generate quiet discontent, histories, stories, narratives. They create consciousness. They create modes of representation and imaginations, determined by the poor. They create foundations upon which more discourse can be laid and truthed. The murmurs, eye rolls, fuss, and petty defiance make their way from private spaces into public spheres. From rural enclaves intro urban centres, pushing the needle of collective thought, action, and indignation as they go. They precipitate a “consciencization” – where political resistance becomes ‘grounded in, but not bounded by, local conditions’ (Gilmore, 2007: 196). Local groups may be ignored by protected areas, but they may not be ignored by everyone
else. The Roman Empire was not brought down by slaves, nor the clearances in Scotland by the crofters, nor England’s factory system by the worker’s revolt, exemplifies Brockington (2004) in development of his argument. These institutions may not have been brought down by peasants, but they could not have been brought down without them.

Take the abolition of slavery in Jamaica. Obeah was used frequently as a form of resistance by Africans enslaved on plantations. Obeahmen concocted poisons from ground glass and seeds to kill not only slaveowners, but wipe out entire plantations of enslaved – thousands at a time (Fernandez-Olmos et al., 2011: 132; Savage, 2012: 150-154). Production ground to a halt and any surviving enslaved Africans could not be resold – other plantation owners could not afford the risk of introducing an obeahman into their workforce (ibid.). Plantation owners began to allow missionaries on their plantations as a form of social control (Turner, 1997: 289-292). When slave revolts began to increase in frequency at the start of the 19th century, the plantation owners began to blame the Baptist missionaries, whose doctrines centred on individuals as sons rather than servants of God, inspiring a sense of equality and humanisation among the enslaved (Brown, 2010; Turner, 1997; Mintz, 1974b). Numerous laws were enacted between 1801 and 1831 to suppress both the movements of Jamaican Baptist ministries and the influence of the Baptist Missionary Society of London (Russell, 1973). After their ejection from plantations, the Baptist church became heavily involved in the abolition movement. The Christmas eve revolt of 1831 that precipitated abolition was started by an enslaved Baptist pastor after he and his congregation were refused Christmas day off (Mintz, 1974b). Once slavery was abolished in Jamaica, it was the Baptist church, and their sponsored “free villages”, that quickly stepped into the political and economic vacuum (Mintz, 1974b: 151-152). I do not romanticise the position of the poor, or undermine the crippling weight of oppression that they face. There are no magic bullets in their weak weapons; their suffering is long and enduring. However, though these petty acts and
crumbled arsenal may do nothing in the hands of the weak, they may become dangerous shrapnel in the hands of the not-so-weak. The rural poor and their impact on conservation (direct and co-opted) are not to be underestimated.

Fairhead, Leach and Scoones (2012) define “green grabbing” as ‘the appropriation of land and resources for environmental ends’. Green grabbing is executed through combined mechanisms of alienating others from resources and accumulating capital for oneself, both of which rely on ‘notions of “green” (and what, and who, is green or not)’ (ibid.). These green conceptualisations, Fairhead and colleagues argue, are articulated by and to a variety of actors that include scientists, technologists, entrepreneurs, green activists, NGOs, state departments, and local communities interacting across local and global scales. Many scholars have been quick to underscore the role of civil society, local communities, and the rural poor in green grabs and other such market environmentalism. In Cubucaré, Guinea Bissau, communities began to distribute to young male kin parcels of land usually left for future generations to claim, to subvert the access village chiefs granted to ENGOs (Temudo, 2012). In Central Kalimantan, Indonesia, local communities relentlessly map millions of hectares of forest with the help of NGOs and international funding from WWF ad REDD+ readiness grants (Astuti and McGregor, 2017; Peluso, 1995). Both sets of land claims stipple social landscapes with “intimate exclusions” that deepen ethnic, familial, class, and gender divides.

Scholars who consider acts of peasant resistance as non-trivial present a different picture of their impact on protected areas, with evictions being routinely followed by re-occupations or new encroachments, and forest guards being outnumbered by forest users and rendered ineffective by remote, mountainous terrain (Li, 2007). It is now clear that the “weapons of the weak” can be extremely effective, both in and out of the hands who co-opt them and amplify their reach. Yet there is at least a partial truth in Brockington’s and in Holmes’ analyses that cannot be denied. There are local communities for whom such
weapons are no more effective than a toy gun. The poisoned enslaved. The Negril fishing cooperative without direct access to development funds, pushed out of shallow reefs and their source of livelihood. Non-indigenous rural communities, whose decades-old practices are considered untraditional, unworthy, and are therefore unacknowledged. There are those who may be in the crowd, even on the stage, who have no access to the work off-stage and behind scenes.

There is a clear contrast between the rural poor and the rural weak; this contrast is there to some degree for all types of stakeholder. Some are ignored altogether, and some take their seat at the table only to find that they are the meal. There needs to be greater clarity around the notion of a stakeholder. Community resource management, Tania Li (2007) argues, is riddled with discourse that denies ownership, disenfranchising actors as effectively as fortress conservation through references to resource users, stakeholders, an “amorphous public” and an “anonymous private”. When we talk about the economic viability of a company, say a supermarket, we are clear to distinguish stakeholders – the cashiers, workers, suppliers, and local community who have an interest in the performance and preservation of the resource, for jobs, convenience, value to the neighbourhood – from shareholders. Shareholders do not just hold stakes, hopes, and interest; they own shares. Shares that can be bought, sold, transferred, invested, inherited; they are labile. There are mergers, acquisitions and takeovers, as forms of capital are quickly converted into tender to acquire majority shares. Part of how we begin to answer the questions just posed is by beginning to draw our own clear distinctions between a conservation stakeholder and a conservation shareholder.

**Articulation**

One of the distinctions between stakeholders and shareholders that is addressed by current conservation literature is the particular emphasis placed on indigenous communities, who are often more likely to be ‘viewed as deserving consideration and compensation’
(Brockington and Wilkie, 2015). What role do fields of power play in creating, disbursing, and redistributing shares among shareholders and once-stakeholders? The acquisition and use of political capital by indigenous communities, Tania Li (2000) argues, is indeed through the ‘cultural and political work of articulation’. The work may be staged and calculated, but it is never simply invented. It does not just behove articulation to take historical account; the work of articulation is entangled in history. Through ‘historically sedimented practices, landscapes, and repertoires of meaning’ (Li, 2000), the work of articulation is both a bridge between the past and the present and itself a temporal event that can be bridged by other acts of articulation.

In an account of a traveller, who spent a month in the Maroon village in the 1940s, the traveller predicted that abeng-blowing would soon disappear from Maroon culture:

‘Ole Galleo who died last year was the last really expert horn blower. A long and arduous training is necessary to send messages as they were sent in the old days... The present horn man is quite inefficient. He is in training, but unfortunately has no teacher. A few evenings ago I heard the strange blasts, which are wildly discordant and decidedly eerie and will be until his use of the horn is more perfected. I regret old Galleo’s death—for it is likely that the abeng will never be used again for the “talking messages” and that soon it will be a part of Maroon history, or simply continue to be used as a signal for deaths and meetings at the council house.’

(Dunham 1946; cited in Baldwin-Jones: 2011)

In her doctoral thesis, Baldwin-Jones (2011) confirms that abeng-blowing is still performed by very few males in the announcement of deaths. Where the traveller was correct, Baldwin-Jones argues, is in the cursory nature of its use; stating Maroons no longer possess the cultural distinction to be considered separate from other rural Jamaicans. The articulation work of the young hunter – rehearsing on route, performing upon arrival – is not only a
bridge to Ole Galleo and the war cries of ancestors. It is also an event in itself, another record of its ongoing use. Articulation maintains material connections between spaces, objects, and histories that current practices may otherwise render obsolete. Articulation also leverages and collateralises these connections. Has a complex, horn-based language been lost with the passing of Ole Galleo? With whom did he communicate? How long ago did his interlocutors themselves pass? From who did he learn the abeng? What I witnessed last year follows the PhD student’s observations a decade earlier, which follows the traveller’s account decades before. Each instance, looking in dismay at the coarseness of becoming. The betrayal of self-tutelage, the shock of sparsity, and the absence of proficiency and abundance. Each instance, we look over the shoulder of contemporary insufficiency for a glimpse of the rich history that must have been left behind. A cloak of stability, integrity, and competence left lying somewhere along the path of history, cast aside in haste or shrugged off unintentionally. We assume it has been the journey’s collateral. Each instance studded through history, further up the road. Yet each instance no closer to the cloak – the image of cultural competence we are sure has been dismantled by modernity. If the interpretation of meaning is, as Geertz famously depicts it, like a series of turtles each resting on the back of another such that it has us looking ‘all the way down’ (1973: 29), then the spectacle lines us up and turns our heads for us to each look over the shoulder of the other, all the way back. For articulation paints a patina onto the spectacle and convinces us it was here all along. That it is natural not constructed. Inevitable not imaginable.

Extending Stuart Hall’s work on the articulation of cultural identities, which are based not on ‘some essentialised past, … [but] the continuous “play” of history, culture and power’ (Hall, 1990; cited in Li, 2000), Li (2000) argues that articulations are by nature complex, unstable, contestable, and, therefore, subject to rearticulation. In the book *Conservation is Our Government Now: The politics of ecology in Papua New Guinea*, Paige West explores
the instability of articulation through the ‘different scales of identification’ employed by villagers of Maimafu, Papua New Guinea (2006: 54). Depending on the conflict, West argues, spatially-defined distinctions are drawn between clans, lineages, or, when referring to the wildlife management area in which they live, whole villages (ibid.). These scales are not only repositioned across spaces, but also over time. West describes a popular historical recounting by villagers that is part origin story, part tale of western incursion, and draws out several key points. One is the absence from the story of the other two Gimi-speaking villages that form part of the wildlife management area. Articulating the Maimafu villagers as the region’s first inhabitants, West argues, makes ‘discursive land claims’ (ibid.: 58), that are treated as ‘primary and more salient’ (ibid.); the story provides political capital. Another is the depth of cultural knowledge demonstrated in the story, which carefully charts historical and social change. This cultural capital provides a counter-narrative to conservation’s prevailing assumption of pristine, untouched nature of wildernesses and the pure, essentialised natives who inhabit them. Articulations of a dynamic history, ‘full of movement and change’, furnish the villagers with historical authority that resists such anti-change rhetoric. Another critical point highlighted by the story is the exchange between the outsiders and the locals. The villagers did not sit there inert and passive waiting to be educated; cultural change was not imposed upon them, it was taken as an economic decision:

‘People entered into what they thought were exchange relations with [the white visitor]. They gave him food and he gave them salt and bush knives. He told them what they were no longer allowed to do, and people thought that this was another kind of exchange. If they gave up these practices, they would get things in exchange.’

(West, 2006: 59)

The points drawn out by West exemplify how forms of capital and its distribution are both remembered and, consequently, manifested through articulation. Who and what are
articulated and who and what are not is itself a form of membership (and symbolic capital). Collective remembering through processes of articulation are neither personal or intimate, they are political acts of resistance. Heavy artillery in the weapons stores of the not-so-weak. The practice of teasing out culture, memory, identity, both organically and strategically, Li (2000) concludes, is limited to and finds its potency in fields of power – “‘places of recognition’ which others provide’. Li (2007) elsewhere describes these practices as ‘practices of assemblage – the on-going labour of bringing disparate elements together and forging connections between them’. Practices of assemblage are comprised of six specific practices: forging alignments; rendering technical – the process of extraction from and abstraction of the social world; authorising knowledge; managing failures, smoothing out contradictions, and devising compromises; “anti-politics” or the using of expertise to constrict and close-down debate; and reassembly, where cultural elements and discourses and (re)shaped, reworked, and deployed (Li, 2007).

Scholars who describe processes of articulation are clear to show how they are influenced by – even defined through – ‘government departments and NGOs [who] characterize, and seek to transform, the rural populace of frontier [indigenous] spaces’ (Li, 2000). I believe these descriptions do not go far enough in demonstrating how collaborative processes of articulation and assemblage practices are. Articulation is not limited to the voices of indigenous communities and their ethnopolitical leaders. Nor has it been co-opted and removed from them. I do not speak here of acts of disarticulation by extra-local entities that, for instance, present lands as “‘carbon sinks’ and not lived-in places, with embedded histories and cultures” (Fairhead et al, 2012). For all the calls for collaboration between stakeholders that conservation has issued, it is the collaborative work of articulation that furnishes fields of power with its true source of potency.
Chantal Mouffe (1979) was an early user of the term articulation during her examination of Gramsci’s development of the concept of hegemony, its emergence through leadership, and how it shaped social units. Though Gramsci presents hegemony as emerging from intellectual and moral leadership, Mouffe reminds us that these leaders exist as ‘the decisive nucleus of economic activity (Gramsci, 1971; cited in Mouffe, 1979). This leadership, Mouffe quickly adds, ‘operates … via the articulation of interests … to those of its allies in order to form a collective will, a unified political subject’ (1979: 10). Hegemonic leaders are the “cultural intellectuals” and entrepreneurs who represent the “social elaboration” – articulation – of their social group (Gramsci, 1971: 5). The political representation they provide, Gramsci offers, may be that of a single social group, but they nevertheless must

‘exercise a balancing and arbitrating function between the interests of their group and those of other groups, and succeed in securing the development of the group which they represent with the consent and assistance of the allied groups’

(1971: 148)

The ethnopolitical entrepreneurs, the advocates, and the NGOs and state departments who are their interlocutors have, through global discourse and international funding demands, become a quorum of articulators. The field of power is not a space of antagonism, nor is it a powerful core of indigenous rights into which extra-local entities are dragged as the gravitational pull of its global visibility grows stronger. It is a space of arbitration. A field of cultural relations, ‘structured in dominance’, in which ‘there is a continuous process of articulating and re-articulating’ (Hall, 2018). It is a field not just of discourse, Stuart Hall (2018) argues, but is ‘sustained by cultural practices’, which themselves are ‘articulated with and by other cultural practices’. It is the abeng in the crowd. The grand entrance. It is no coincidence that it is the hunters, in whom I am most interested and through whom I have
understood Maroon culture and forest use, that were among the most political agents the day of the protest. Who gatekept the affair through specific communication channels. Who made plans, aligned themselves with hopeful Colonels, and sought chieftaincy for themselves.

Leaders, cultural intellectuals, ethnopolitical entrepreneurs, conjurers of hegemonic will, create social relations, systems, and distinction – and particularly, distinguish themselves – through technical capacity held in spheres of economic activity (Gramsci, 1971: 5; 137; 144). It is why this work, that began with the slow, intimate, portrayal of a humble group of hunters at work, has now descended, several chapters later, into the fast-paced world of hegemonic politics. This is how we got here. This change of pace is an important one. Conservation and development often speak of these highly technical, specialised, traditional practices through narratives of soft bodies. Dying, crippled, weak, and fading. Lying used and abandoned on the floor of rural society as young men turn their backs and seek modern work. But these highly technical, traditional practices have a very particular place. Now is as good a time as any to begin to answer the question I posed at the start of this thesis: what sustains such practices? They are sustained, remembered, revived, relearnt in one way or another because they must. They are not just cultural technologies, they are political technologies, economic technologies, hegemonic technologies, governing technologies. They are the invisible arms of rule, apparatuses of power, artillery of governance. So unassuming, so organic, so bridging, undeliberate, and powerful. An unseen weapon that makes them not-so-weak.

Leaders, through this process of assembling, smoothing, arbitrating, practicing, and doing are charged with the “responsibility” of creating continuities ‘with the past, or with tradition, or with the future’; of creating a “State spirit” (Gramsci, 1971: 146). This is what distinguishes the shareholders – their citizenship. Their shares are in the nationhood of indigeno-environmentalism. The hunters, drummers, advocates, scientists, and state
departments – it is their civic duty to create and block paths across time. They are a quorum of citizens, not refugees, invaders, or tourists. If conservation is our government then articulation (of the indigenous) is the polling station, where governments are re-elected, deposed, forced to reassess, or forced to subjugate. It is the practical kinship formed against critics such as Kuper. It is the “rhetorical shifts” of indigenous leaders at international symposia. It is the retooling of cultural technologies. The collective provincialisation. The new magic. It is the ENGO in Maimafu who are “brought in” when the nation state fails, expected to contribute towards school fees and bridewealth (West, 2006: 78). Not to be paid, but to share in the spoils of articulation (ibid.: 119).

Such quora, of course, look and behave differently depending on their location, context, and the official nation state that wraps itself around them. In some regions, such as the Amazon, neoliberal measures towards both resource extraction and social inclusion have shaped knowledge and experts (Laurie et al, 2005). Here, articulation has a longstanding history of professionalisation, and quora are saturated with community-led NGOs and indigenous activist groups. Some defend their territory from encroachment of migration, eco-tourism, and resource extraction (West and Brockington, 2006), while others gatekeep such transactions. In Bolivia for example, where a self-identified indigenous president was elected in 2005, state officials were required to speak at least one of three indigenous languages (Aymara, Quechua, or Guarani), new constitutions were adopted to protect land rights, and health policy was modelled on “conviviality” (Htun and Pablo Ossa, 2013). Yet, the 36 seat reservations in central government requested by lowland indigenous pueblos – each seat representing one of the pueblos recognised by law – were denied; they were granted 5% of the total seats (ibid.). Andean communities (Aymara and Quechua) retained much of the political capital and regional oligarchs formed alliances with agribusinesses to dismantle land reforms (ibid.).
In regions such as the African continent, however, strong colonial legacies and intertwined histories of nomadism and settlement make it difficult for local communities to articulate indigenousness (Fortun et al., 2010; Kenrick and Lewis, 2004). Communities in communal land areas in Zimbabwe, for example, have no legal status. Households in community-managed wildlife management areas, such as CAMPFIRE – a model praised and replicated across African conservation spaces – often have little control over resource management and nor do they reap any benefit (Murombedzi, 1999). Existing colonial structures also shape community-managed wildlife management areas in Tanzania, reinforcing ‘power relations written on land’ through policy rhetoric based on deficit models of poverty reduction and women’s participation (Homewood et al. 2020) rather than narratives of abundance and authority found in articulation.

Achille Mbembe insists that Africa has never been spoken about rationally; political imaginaries of African existence are and have always been steeped in suffering and zoomorphism (2001: 1-4). It is, therefore, not only the material vestiges of colonisation or the transhumance of pre-colonial population that preclude practices of articulation and assemblages. Such practices are obscured by pre-existing “colonial rationalities”: the institution of colonial sovereignty (a) through constitution of the postcolonial subject as a non-human animal that must be dominated through violence (Mbembe, 2001: 25) and (b) by creating a ‘lingering doubt of the very possibility’ that such populations – full of absurdity, vulnerability, impulse, impurity, corruption, and irrationality – are capable of self-governing (ibid.: 13). Where some colonial histories and current neoliberal regimes produce environmental demagoguery, shareholding, and ethnopolitical fields of power, other colonial histories produce inquorate landscapes devoid of a co-produced environmental “State spirit” in which political capital is not amassed through articulation, but enmeshed in networks of sovereignty. Ethnopolitical demagogues are rare in, perhaps absent from, African landscapes.
because, according to Mbembe, there has never been a “State spirit” to co-opt and imbibe. Fields of power in the Caribbean are altogether a very different and neophytic beast.

Commentators argue that the dominant role that ENGOs play in Jamaican conservation weakens the capacity of both local communities and the state to participate by making them appear relatively incompetent and amorphous (Garner, 2009; Haley and Clayton, 2003). What colonial legacies remain in the Caribbean, how do they encourage or cripple ethno-environmental demagoguery, and how does this change across shareholders? Stuart Hall (1995), Jamaican social theorist whose work on articulation was explored by Tania Li, argues that Caribbean culture and identity – both in their myriad forms and their collective representation – are explicitly and intimately linked to and ‘are not in any sense separate or removed from the problems of political mobilisation, of cultural development, of economic development’. Though cultural identity holds particular importance in public space, Hall continues, it ‘present[s] itself always as a problem to Caribbean people’, because of the ‘very real, contemporary, and historical effects of myths of identity’. ‘[C]ollective social identities [are] formed in, and stabilised by, the huge, long-ranging historical processes which have produced the modern world’ (Hall, 1997: 45). The “dislocation” of slavery, the “culturally-dependent” patronage of British colonial, post-emancipatory rule, and the counter-identities formed as deliberate yet organic responses to postcolonial economic conditions all constitute the mythologies, the spectacles, of Caribbean identity (Hall, 1995).

The economic demands of running a plantation led its owners to actively encourage, even demand, subsistence farming from their enslaved workers as a relief from the burden of provisioning (Mintz, 1974b: 154-159). The enslaved were given less-fertile and unused areas of the estate; this in turn led to the development of sophisticated and effective agricultural practices – a process Mintz refers to as proto-peasantry (ibid.: 151-152). The ability to retreat to the hinterlands of Jamaica and live off the land continues to punctuate rural Jamaican
identity – from the Rastafari movement to the defiant claims of the deputy Colonel prepared to arm the Maroon village with callaloo and rock-stones. Slaves were also actively encouraged to sell their surplus in the island market; by the mid 18th century, Jamaica’s enslaved population controlled a fifth of the island’s currency (Besson, 1999). The economic, cultural, and social networks of the enslaved traders is almost identical to the contemporary “higgler”: intermediary market traders, typically poor, black, single mothers (Tantam, 2019). The loud, colourful women who line busy market towns and tourist areas with warm laughs but watchful eyes are both a continuation of proto-peasantry practices (such as funnelling communication and assisting escapees) and a response to contemporary precarity (ibid.).

The consolidation of collective Caribbean identity, through typical processes of distinction and othering, Hall argues, is ‘simply not tenable any longer’ (1997: 48) because of the deeply embedded history Britain has with the Caribbean and, in particular, Jamaica. Britain has been a part of Jamaica (and anglophone Caribbean) for as long as contemporary Jamaicans and formal Maroon societies (though groups of free Africans and Tainos lived in the hinterlands during Spanish colonisation; see Introduction). Upper-class British sensibility and habitus has been pumped into the womb of the island and informed the ambitions of the (typically fair-skinned) respectable, colonial middle class (Hall, 2017: 25). In his posthumous memoir, Stuart Hall talks about the “diasporic displacement” of Jamaicans through his experience of attending Oxford University during the Windrush period, arriving to an ‘eerily familiar and disconcertingly strange’ England (2017: 149). I recognise this feeling, and I am sure it informs my scholarship. I was born in the UK and lived just outside London until I was six. My mother and I then spent four years living in Jamaica before returning just before I started secondary school. Row after row of tall, skinny, bricked houses stood in comfortable pride, lining impossibly-narrow roads. I sat in awe on the ride home. Awed by the strangeness, awed by the feeling of being inside a Roald Dahl book. There’s an “in” one
feels. The shock of reality petered by a safety – one that you know you have earned by being a fastidious postcolonial subject. A good black.

This “colonial haze” (Hall, 2017: 180) still pervades Jamaican society and the social relations held within it today. The black, unlearnt, uncultured, rural poor in Jamaica are held not in contempt, but in place. They are Jamaica’s bread basket. They provide the food the middle-class sometimes eat (when they are not gorging on cultured imports) and they provide the culture to which the tourists flock. Jamaica, crown jewel and money pot of the British Empire, has similarly featured in British society for centuries. Both the people and their labouring apparitions. Their broken backs and hard labour are woven into British culture. ‘I am the sugar at the bottom of the English cup of tea’ writes Stuart Hall ‘the sugar plantations that rotted generations of English children’s teeth’ (1997: 48). Poor, black, labour was an important path between the two islands. There would be no middle-class familiarity without rural suffering – then or now. So the rural poor are held in place. In agricultural gulags and cultural corvées, so the nation may eat and for the world to see.

The Maroons, however, are not the rural poor. They are a myth, a fleeting memory, historic artefact. Many Jamaicans (inhabiting and diasporic), after hearing they are the subject of my study, admit they had no idea Maroon societies still exist, “just living in a village in the forest?!” today. Maroons have been the focus of some historians and anthropologists – particularly in North America – as the most “purely African” of its displaced, dislocated, diaspora, seen as ‘ostensibly untainted by the legacies of slavery’ (Krüg, 2014). The intimacy and secrecy of Maroon culture, historian Jessica Krüg (2006) argues, has left a vacuum in its public articulation which has been quickly filled by narratives and voices of scholars rather than Maroons themselves. However, Maroon identity has been articulated within and between Maroon communities – deliberately, organically – since their formation. Kromanti identity – ‘contested forms of political imagination and practice by
Africans and their descendants in eighteenth-century Jamaica and beyond – Krüg (2014) argues, was developed and articulated as a response to the ‘multiple social and political ruptures’ of the Transatlantic slave trade. While it is not a term used in the village (its use is largely restricted to Windward Maroons; see Introduction), it represents the practices of assemblage used to cohere numerous and diverse tribes across Africa into single social and political units.

Jamaica’s first 28 environmental groups and their early endeavours were characterised by activist-turned-managers, installed during the ENGO “neoliberal boom” (Brockington et al, 2018: 53-55), articulated intimate imaginaries and threats of peasant deforestation. At that time, Jamaican conservation spaces were characterised by the same ‘patron-client relationships which pervade Jamaican society’ (Lundy, 1999b). These relationships, Patricia Lundy (1999a; 1999b) argues, come not just from colonial legacies, but very specific and recent histories of IMF intervention, debt burden and structural adjustment policies. As terrestrial conservation in Jamaica (which is even more recent than marine conservation) begins to take root and international donors require increasing local participation, potential state and extra-state shareholders have greater reason to invest in, nurture, and cultivate Jamaica’s own field of power. I am no exception. Nor is my work – this work – over the past four years, which insists on prefacing almost every mention of Maroon with “indigenous”. However, contemporary Jamaican conservation is now faced with a moving target. The wheel cannot just simply hit the road. Conservationists, scientists, state departments must now contend with the longstanding, rehearsed, delivered practices of assemblage. So too must the Maroons – particularly the Leeward Maroons, who may be amongst the most secretive and whose location (Cockpit Country) is now experiencing ‘the confrontation of big actors over a relatively small area’ (Kuymulu, 2011).
The state of Jamaica

Were the villagers open to outsiders, one Forestry Department employee asked. Were they receptive to me or were they secretive? I had just finished bumbling around a hollow description of my research – which included a brief mention of “some kind of bird hunting”. It was halfway through the interview and I was disarmed and imprecise. Too relaxed. Leant back away from the laptop, that was once my shield, listening, laughing, and set to sing like a canary. Façade melted, exposed to the bone, my attempts to now collect myself seemed as futile as grasping water. They were no leviathan, but they were still a legal entity. The weight of my responsibility towards the village, now placed its hand over my characteristically open and divulging mouth, returning me once more to a series of short, sharp responses. They were polite and welcoming as they were to all visitors, I replied, trying to eschew any potential I might possess to be the department’s mole.

‘Why I ask that question is because in recent times you see a lot of UN funding going towards indigenous people, and in Jamaica Maroons are said to be indigenous. So they have access to all this international funding. So I don’t know who from the community level is tapping into this’

‘- if at all’ interrupted another. I gave a polite, throaty chuckle behind a crooked, tight-lipped smile. The first continued on:

‘That social integration, in terms of management of this unique resources [sic], I don’t think we have created that bridge between us and the Maroon community. We have a platform for dialogue – the Local Forest Management Committees – but the structure is local governance. We don’t impose what their initiatives should be or their ideas or thinking. We facilitate the discussion and we really try to engender that dialogue and that cohesive outlook of management. Because we’re managing it on behalf of the Jamaican people and Maroons are a part of that…’
‘– to a certain extent’, offered another ‘cos they do distance themselves from the rest of us.’ I chuckled and hummed, hoping to seem more understanding than guarded. ‘– so the local forest management committees’, the first continued once more ‘... of the 18 of them, three are actually based in close proximity to the Cockpit Country – in and around.’

She continued to press on for some time about the committee, which was both their “active interface with communities” and a vague but “special affiliation”. I was so relieved that her long description left no opportunity to fill silence with other people’s business, that I failed to notice it was a sales pitch that they hoped I would re-advertise to the villagers.

Local Forest Management Committees (LFMCs) were established in 1999 under the Trees for Tomorrow project funded by the Canadian International Development Agency (Headley, 2003). The project itself was started in 1992 as a way to help fund the Forestry Department, discloses Marilyn Headley (2003), Forestry Department CEO. The LFMC was piloted in the Buff Bay/Pencar region, a watershed unit in northeast Jamaica. The pilot consisted of multiple visits to rural communities over months to build rapport, establish trust, and collect data. It was both time-consuming and expensive. Due to “budgetary constraints” Headley (2003) conceded, the pilot model could not be replicated in successive LFMCs. A few years after its creation, researchers from the International Institute for Environment and Development (IIED) – a UK-based independent research institute – partnered with the Forestry Department to evaluate the current LFMC model.

The LFMCs had made progress, found the IIED report, but had yet to “take root” (Geoghegan and Bennett, 2003). A “stakeholder analysis” showed that the Forestry Department’s heavy reliance on local organisations often omitted ‘poorer segments of the community who tend not to be involved in associations but who were a major target of the Forestry Department’s outreach work’ (ibid.). The report also determined the Forestry Department’s role in the LFMCs to be vague and confusing. Legislature suggested the
LFMCs were quasi-legal entities co-managed by both local stakeholders and the Forestry Department. Other Forestry Department literature, however, described their role as more one ‘of an advisor … than a full management partner’ (ibid.). A third key concern raised by the report was the ‘poor participation of national and local government agencies’, including NEPA – the agency with overall responsibility. The ambiguity of and disinterest in the LFMCs, the report recognised, had much to do with the structure of the Jamaican administration, where responsibility was devolved and authority centralised. Kuymulu (2011) urges that analyses of LFMCs be grounded in the context of the neoliberal reforms and the 1977 IMF structural adjustment that preceded it. The strict austerity imposed on Jamaica informed the ‘widespread shift from state-led conservation projects towards ones privileging decentralized participatory approaches in the 1990s’ (Kuymulu, 2011).

The tripling of oil prices in 1973 led to the 1982 debt crisis and a period of structural adjustments for many economies in the global south (Bernal, 1984; Bowe and Dean, 1997: 3). In Jamaica, the economic crisis was intensified by political upheaval. The bipartisan political system in Jamaica comprises of the left-wing People’s National Party (PNP) and the conservative right-wing Jamaica’s Labour Party (JLP). JLP retained power for a decade following Jamaica’s independence, losing the 1972 election because of persistent dire economic conditions, which failed to improve post-independence (or, even, post-emancipation). At the start of his premiership, PNP Prime minister Michael Manley announced a “Democratic Socialist” agenda underscored by a package of state-supported programs aimed at increasing employment, reducing poverty, and eradicating socio-economic equalities (Boyd, 1987: 128). Social welfare grew by 32% per annum between 1972 and 1977. Real-time wages increased by over 50%. Capital expenditure on government services in 1976 was almost one-third higher than any other year – before or since (ibid.). By 1973, 30 new pieces of environmental legislation were enacted around watershed protection, timber
harvesting, and habitat protection (Berke and Beatley, 1995); Jamaica was hailed by international organisations as being ‘at the forefront of international efforts in environmental management’ (FAO, 1973; cited in Berke and Beatley, 1995). The Natural Resources Conservation Department (NRCD; NEPA’s precursor), was formed in 1975 with an annual budget of over US$5 million.

By the end of the 1980s, their budget was less than US$50,000. During Manley’s second term in office, capital inflow had fallen, tourism had declined, foreign exchange reserves were depleted, and there was a net outflow of private capital (Bernal, 1984; Boyd, 1987; Girvan et al., 1980). But it was not the public debt that reshaped Jamaican conservation. PNP’s anti-imperialist campaign led to the deterioration of US-Jamaica relations (Girvan et al., 1980). To fund his Democratic Socialist project, Manley imposed an 800% increase on bauxite production levies, incensing the largely US bauxite companies (ibid.). The US administration were also deeply concerned by Manley’s close relationship with Fidel Castro and the effect an open alliance would have on Cuba’s influence on the Caribbean. The US administration were further troubled by Manley’s public support of Angola in the South African Border war (ibid.)

To better understand the scope of the US-Jamaica turbulence, I examined archival material from The National Archives, UK. The bauxite levy fund had been depleted and the US banks had withdrawn foreign currency from the island. Media campaigns around growing violence, allegedly “aimed at discouraging tourists and potential investors”⁴, further drained the economy of capital investment. Few Western administrations offered aid. One UK official reported in a memorandum that they were told by an American colleague that

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'the US administration as a whole has definitely decided to leave the present Jamaican administration to rot... Apparently the US Treasury, egged on by the Bauxite companies, are still much incensed by the disgraceful treatment of companies in Jamaica'\textsuperscript{3}

The UK, still in economic recovery from WWII and heavily reliant on their relationship with the US were sympathetic but could not be seen to be helping. Whilst the administrations in the global north had officially withdrawn involvement in Jamaican politics, ‘the CIA and the US multinationals [who] have been shown to be a law unto themselves’\textsuperscript{4} were rumoured to be involved in a destabilisation campaign. In one memorandum to a UK cabinet minister, an American official described allegations of destabilisation by

‘the CIA and American bauxite companies, who are alarmed at the rapidly developing links between the PNP and Cuba and by the Government’s intention to bring foreign investment further under state control. It is also suggested that the destabilisers are in league with the leader of the opposition Jamaica Labour Party (JLP), Mr Edward Seaga and rich Jamaican emigrés’\textsuperscript{5}

The IMF and the UK began to grow concerned about the international impact of Jamaica’s economic crash. Jamaica, owing to its size and location, was considered the linchpin that influenced, if not determined, economic and political action in other Caribbean islands (and perhaps the wider Latin America). The IMF asked the UK government to intervene and organise initial financial support so there was some capital under which

\textsuperscript{3} Foreign Commonwealth Office, Caribbean Department (1976) [Internal Memorandum]. \textit{Jamaica: internal economic situation}. The National Archives, Kew, UK, Folio number: FCO 63/1422, page 2

\textsuperscript{4} As above

\textsuperscript{5} Foreign Commonwealth Office, Caribbean Department (1976, July) [Minutes: “SECRET – Secretary of State’s Meetings with Dr Kissinger, 7 – 8 July: State of Emergency in Jamaica”]. \textit{Political Situation in Jamaica}, The National Archives, Kew, UK, Folio number: FCO 63/1418, pp33-36
structural adjustment could be negotiated. The UK government in an internal memorandum noted two strong arguments for the £20 million financial support, which they ultimately offered; were it not made available,

‘Jamaica would default on her debts. Commercial banks would draw in their horns for other developing countries. Other governments would be frightened into retrenchment... All this would go in exactly the opposite direction from the way we want things to go ... Second, in the Caribbean context, it would be extremely damaging if Jamaica were to collapse. There is every likelihood that the Cubans would eventually step into the vacuum. In the meantime, civil disorder in Jamaica would give rise to serious concern among the Governments of the English-speaking Caribbean who might fear a similar slide into chaos and violence – which is never far below the surface in the Caribbean ... other governments e.g. Barbados and Grenada would probably step up pressure on the UK to increase its assistance to them ... a Jamaican collapse would cause acute concern in [other islands], and stiffen their determination to remain dependent on the UK ... For both of these reasons we should support every effort to prevent collapse’ 6

The IMF were equally concerned about the ‘further disquieting factor [of] the emigration of doctors, managers, skilled workers and the middle classes generally’7. Not because this depleted the workforce and deepened the recession – the largely agricultural and cultural (touristic) workforce would remain intact. The “good blacks” were leaving. The bad blacks were rioting. There had been disquiet among the rural poor since the 1938 uprising of

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6 Foreign Commonwealth Office, Caribbean Department (1978, 17th March) [Series of confidential telegrams between Foreign Commonwealth Office, Kingston branch, and IMF Washington branch]. International Monetary Fund (IMF) and Jamaica. The National Archives, Kew, UK, Box number: FCO 59/1576; folios 39, 47, 52).

7 As above
Jamaica’s trade unions, led by the agricultural unions who opposed the near-slavery working conditions on sugar estates (Campbell, 2014). Many of the small farmers, who supplemented their income working in factories, sugar estates, or through agricultural migration in the US, became increasingly exposed to the growing anti-colonial, pan African movement that inspired Rastafari (ibid.). One of the island’s major sugar factories was located in the urban, middle class tourist area of Montego Bay. Its workforce was comprised of the same disenfranchised small farmers; the area became the new frontier of the class war. The growing Rastafari community in the area began to disincentivise foreign investors and private developers. By 1963, tensions rose so high that the then JLP prime minister ordered the police to “Bring in all Rastas, dead or alive”, resulting in the Coral Gardens massacre of over 150 Rastafari and poor black rural workers.

The unrest was now further exacerbated by slum violence among the urban poor. Garrisons – Jamaican urban slums – began as large-scale government housing allocated by incumbent administration to their impoverished political supporters (Figueroa and Sives, 2002). Garrison gunmen intimidated, threatened or killed local opposition supporters and were a key component in electoral manipulation (ibid.). They also exacerbated Jamaica’s “patron-client” political system both through the gunmen that were allegedly paid by administrations and oppositions alike and from large-scale support garnered through rent-free agreements (ibid.). Between the lawless, state-created garrisons in the nation’s administrative capital and the armed uprising of the rural poor in its cultural capital, the violence and looming communism made it difficult to keep Jamaica under hegemonic control. The colonial haze was under threat of being burned away under a communist, rural, poor, black sun.
The IMF were interested in Manley’s successor, whether it was in the incumbent administration or the opposition. Names given credible weight during their speculations\(^8\) (see ibid.) went on to hold Jamaican office until 2006. Jamaica may have no longer been technically under Britain’s colonial rule, but it remained under America’s capitalist thumb. The subsequent funding of government agencies by Jamaica’s central government is not simply the result of a lack of financial capacity. The economic crash of the 1970s crippled the economy in ways from which Jamaica has yet to recover. However, the deliberate underfunding of Jamaica’s social and government services serves as a commitment to capitalism and a declaration against communism through neoliberal reform. Jamaica must continue to hollow out its public services in its negotiated constitution of helplessness.

After the LFMC pitch, one of the staff members around the table who had been contentedly listening throughout the meeting, decided to redirect the conversation back to the Maroons. ‘Would we want to have a better working relations wid di Maroon going forward?’ he asked the speech-maker.

‘I anticipate that going forward we probably will, but we’re still as I said kind of awaiting that finalisation of the area that is under Maroon control by the Government of Jamaica and the Maroons, and that’s a little bit about the Forestry Department – or outside of our scope. But we recognise that they’re one of our key stakeholders in the Cockpit Country and so we are open to working with them’

The Forestry Department runs almost exclusively on funding from international donors because neither the capital nor the will exists in central government. State departments must play a diminished role in the emerging field of power, funnelling efforts, initiatives and capital through and from NGOs. There are only so many shares they may hold. The central

\(^8\) Edward Seaga, Manley himself, who resumed office in 1989; and P.J. Patterson
government must continue its commitment to foreign investment. So hologram parks are announced whilst mining concessions are granted.

I had no plans to include the archival material in this body of work. I had acquired it quite early on in my research while reading through early 19th century files from the Colonial Office on Maroon villages. Memoranda on villages’ refusal to play taxes. Decisions to abandon punitive measures for fear that villages would retreat to the forest and stage counterattacks. Accounts of the role Windward Maroons played in helping the British government to suppress a post-emancipatory rebellion. Concerns over the absence of Leeward Maroons from such efforts. They seemed important at the time. Weeks spent in the pre-booked booth of The National Archives poring over material. Engrossed in recounts, rebuttals, strategies, decisions. The texture. Remarkable flourishes inked on yellowed rag. Bound by string in aged brown leather. So authoritative and real. The language. They called them ferocious\(^9\). Well-armed bushmen\(^10\). One document insisted on their assimilation. One cautioned against it. The Maroons were weapons, the British had decided, against “the disaffected peasantry”\(^11\). I was entranced. I was relieved. These were the bricks, the building blocks, the units of language – words, expressions, and slurs – that I too could use to articulate an indigenous discourse. Any attention paid to the more recent material was out of sheer curiosity and the excitement of handling declassified files.

It took me quite some time to realise which material really mattered. ‘\textit{Today, there are age differences in the ways people understand the “loss” associated with cultural change and assimilation into the Papua New Guinean nation-state and the larger process of nation-}

\(^9\) Colonial Office and predecessors, Jamaica (1897, 16\(^{th}\) January) [Letter from Henry Arslake to Secretary of State]. \textit{Maroons of Accompong: reports action taken to allay excitement among the Maroons. States that their attitude is peaceful and law-abiding}. The National Archives, Kew, UK, Box number: CO 137/579/23, Folio:249

\(^10\) Colonial Office and predecessors, Jamaica (1865, 30\(^{th}\) November) [Letter from Mr I. Lype to Rt Hon. MP Mr Edward Cardwell, King’s House – printed for parliament]. \textit{Extract from local newspaper giving an account of the visit of about 200-300 Maroons to Kingston and Spanish Town}. The National Archives, Kew, UK, Box number: CO 137/395/7, Folio: 358

\(^11\) As above
making’ (West, 2006: 63). I read it again and again. Something about it did not read true in
the Jamaican context. Jamaica is not, and may never be, in the process of making a nation.
The Government of Jamaica has stayed true to its destruction, brick by brick. They remain,
however, in the process of making a destination. A place to which honeymooners, divorcees,
birdwatchers, snorkellers, tycoons, property magnates, western-educated graduates, and, in
recent years, conservation scientists can come.

There are age differences, too, in the way that Maroon indigenous leaders, traditional
practitioners, those armed with cultural capital, engage or disengage with the emerging field
of power. The old hunters continue to walk slowly in proud silence up steep passes. They
forage, hunt, and prepare in the dignified quiet of communal-but-private spaces. The
shrinking spaces they have safeguarded, reclaimed, and unearthed over generations. The
young hunters, like many young indigenous men ‘believe that “traditional” indigenous
knowledge is valuable for defining their cultural identity vis-à-vis the state and outsiders’
(Baviskar, 2003: 117). They face a familiar-yet-strange Jamaica, where they must navigate an
emergent field of power, filled with broken states, handicapped departments, holograms,
confident ENGOs, and increasingly interested funders. They no longer walk in proud silence
through paths in the forest. They drive in loud insolence to commercial-but-public spaces.
They become bridges. Learning to articulate one space and replicate another.

Understanding fields of power and the articulation they co-produce – which adds
stability, history, and authenticity to the spectacle – is of critical importance. Scholars have
previously considered the spectacle of conservation. Anna Tsing speaks of the “economy of
appearances”: ‘the self-conscious making of a spectacle [as] a necessary aid to gathering
investment funds’ (2005: 57). Dan Brockington (2008) describes conservation’s role in “the
celebrification of politics”, where the celebrity helps to create a false consciousness based on
ideologies of heroic individualism, mobility, and choice – a spectacle – that provides the
social conditions for its own reproduction. James Igoe and colleagues (2010) combine Gramsci’s notion of the historic bloc with Debord’s discussion of the spectacle to consider the way that conservation ideologues produce and disseminate hegemony through the sets of images that mediate relationships with and concerning the natural world. This chapter makes two significant departures. First, I do not present conservation as being plagued and overrun by the spectacle. I seek not the sets of images that drive, distort, and corrupt conservation. Moving across scales and between stakeholders has made it clear to me that conservation itself is the spectacle. In any and all forms. The very utterance of its name is the conjuring of a world of images. Everyday acts of sustainable and environmental actions are never done in the name of conservation. That is the spectacle we wrap around it. That itself is the corruption. Of will and of words. It is the self-narration of demagogues and orators as they slide into seats of power.

The second important departure is in the association I make between the spectacle of conservation and the distribution of capital. In describing the spectacular, Anna Tsing asserts ‘[d]ramatic performance is the prerequisite of their economic performance’, that it is the claims, the conjures, and the dramaturgy that create the imaginaries which then fuel global projects. This conclusion, I believe, is yet another consequence of seeing just a wheel and a road and not the continuous movement of capital that lie on their surfaces. If these global economies were built simply on hollow claims then, like a house of cards on a table cloth, it could all fall down once one tugs on the edges. The danger of the spectacle of conservation is that it is so intimately engaged with everyday life, that it can move from across the room to right beside us to inside of us. Spectacles manifest where capital accumulates (Chapter 1: 51). Spectacles need spaces. Spectacles exploit deposits of capital that are nested in communities, along social units, within cultures, and across landscapes. Dramatic performances wrap themselves around pre-existing modes of economic action, and the spaces in which they pool,
produce their own economic actions. Much in the same way that I, over the past four years and in the production of this body of work, have spectacularised Maroon indigeneity by enveloping the economic actions of eight traditional hunters.

Both this inversion and the concept of conservation as self-narration have very important analytical consequences. It requires us to widen our consideration of orators, dramatists, and reproducers of the spectacle past the extractive companies, celebrities, and state departments to anyone whose economic activities are sanctioned, approved, eulogized, or even partially accepted by conservation. Local communities are often homogeneously portrayed as passive victims of cooption and exploitation, chewed up and spat out by the spectacle. Many are. But it is in capital’s nature to move; it takes a significant amount of effort to fence it in. Conservation shareholders can be made and unmade. They are positioned on shaky ground, not because they are perched atop a lie, but because the capital beneath them never stops moving. The village elder, the community leader, the NGO, the celebrity, they speak not just to uphold and reproduce the spectacle, but because reproducing the spectacle is the only way to stabilise capital. Such vulnerability ensures that there is no end point.

Cockpit Country Stakeholder Group (CCSG) – comprised of NGOs, local academics, Maroons; established and funded by The Nature Conservancy and a number of government departments – is the archetype of the quora of shareholders that speak conservation into existence. Actors within CCSG argue that the failure to define an ecologically and culturally relevant boundary is one of the most significant threats to the region and the government’s biggest misgiving. In 2013 local academics from the University of West Indies attempted to distinguish the boundary of Cockpit Country through geological surveys and public consultation with indigenous communities (Connell, 2020). The Maroon village refused to engage in boundary definition without acknowledgement that the region was ancestral
Maroon land (ibid.). The team defined a (much smaller) boundary through geological surveys only, which the Government of Jamaica then used to justify mining concessions, and which has been adapted to define the protected area that awaits gazettement and ground-truthing. When we begin to conceive of conservation as the means through which capital is not just produced through distinct interactions, but shepherded, corralled, and arrested over time and across space by approved actors (whose approval is, itself, contingent on their ability to maintain such repositories), we can turn our focus from the actors and their interactions to the systemic reproduction of inequalities and the prominent role conservation plays within it.
I missed it, every single time. Most of the young hunters sprinted ahead. It was often just one or two of the older hunters and I that trailed behind. The lead drummer sometimes stayed back with us. “Come Liddie, ‘tap crawl’” he would say. We would swap backpacks. I carried the water and the breadfruit, he carried the heavy camera equipment, which I brought to every hunt. All of it – every piece I had. I was like the experts in the documentaries. Out in the wild with my equipment. Real equipment. While they were busy with work, I busied myself with importance. There were lenses to be changed. The plastic casings made a dull clack when I attached one to the other. Like the fancy school shoes the older kids used to wear as they brushed past you in blissful unawareness. The heels, always taller than allowed, hit the parqueted corridors confidently with the dull clack of importance that had nowhere to go. The lead drummer would be back next week. A state department – culture, agriculture, or another as benign – had been approached by private investors to start an agribusiness in the village. The developers had come directly to the village the year before, but talks soured and the deal was off. Now it was dressed up in the laced fabric of development – sheer but not quite see-through. The villagers knew the private investors were still behind it, but somehow, repackaged, the opportunity was worth another look. As part of the project, the young hunter had gone to South America to meet another indigenous community involved in a similar project.

Now I had no camera and no purpose. The scale, hygro-thermometer, pen, and notebook rattled around the otherwise empty backpack. The soft rattle of an overstuffed plastic pencil case in a child’s backpack. Full of colouring pencils, fountain pens, Tipp-Ex, eagerness, and mistakes. And now I was being put to gentle test. The older hunters had me walk at the front. It would be another season before I would even notice the turn before Saucy Train. But the turn half way up Long Hill – that I should know by now, said the
hunters. All I saw was grey shards. Missed it again. Come so far to fail, the angry young hunter said as he pushed past me to get to the summit that had already come to us. I hadn’t noticed when, or even that, he had begun to walk with the slow pack until then. As I cried silent, unseen tears under the blue-black.

I was still deciding how to spend the empty time. No filming, no framing, no Sweet Piddikie. No parrots that day either, though a parakeet had landed on one of the traps. Soon after, three pigeons landed on another trap. The tar had managed to keep one in its lascivious hold, just long enough for one of the younger hunters to get to the base of the tree and catch it once it fell. Time to eat – at least, time to watch them eat and not myself be consumed. Time to know I wasn’t being watched, studied. Given the twice, thrice, over without so much as a lens cap as to clothe me. Motion slowly murmured through bodies. Time to cook the rice. Time to make the dumplings. Time to fry the plantain. There was an assortment of meat on the menu. Breakfast time, and even the air had put down its weight. If I was going to tell them, now was the time. My debut year, I panted and choked my way through four hunts. My presence was not expected, it was tolerated. Now that the young hunters had been lambasted into hospitality, I had a timetable. I was to come twice a week – no more, no fewer – one told me. I was going to miss class and I needed my absence excused. I had to go to meet with NEPA and the Forestry Department, I told them, as though it was a direct assignment from my university. I wouldn’t be able to come to the next hunt. Since once of us was crossing enemy lines, was there a message they wanted delivered?

‘NEPA come here once bout 7 years ago’ said one of the younger hunters. He cut a disc of plantain in half with his fork, ‘fi talk bout parrots and yam stick and all sort ah ting… we ask, why dem come bother di free people?’ That summer a different organisation came every week. A pan-African group from the US wanted to host a cultural event in the village. Something went awry and offended the Colonel and the event was cancelled. The Colonel
refused to return the money; instead the village held a party, which some of the pan-African group attended with their videographer in hopes of documenting a sliver of whatever it was they came to record. A project officer from the Ministry of Culture (MoC) came to propose a “village-as-business” model. Everyone was doing it, he urged. They would pay to train 20 people as tour guides, he offered. We already have tour guides – 20 in fact, one villager replied. Ok, but are they trained? Yes, but is the training up to date? Well, then – that’s something we can offer, the project officer concluded. Villages were hosting mango festivals, MoC added an extra JA$100,000 (US$1000) to the JA$1.4 million grant they had given the community, because it was such a good idea, he announced. What about fixing our roads, another villager asked. No, sorry, MoC wasn’t responsible for infrastructure – what about crafts? The village already had that big 6th January festival. What is for again? That’s right, some ancestor’s birthday. ‘One ah di biggest tings we see of value is dat festival – mi ah tell yuh!’ the project officer spat, slapping his hand on the table like he was about to win a hand of dominoes. Perhaps they could make a keychain, ring, cups, a plaque – wait, a tshirt with Cudjoe (the Maroon ancestor who brokered the Leeward Peace Treaty) on it. Add something he said on the bottom because ‘people love tings weh personalise and people love tings weh come from people caah dem tell ah story’.

There were a slew of meetings around the agribusiness. There was a meeting publicised as a UNDP grant meeting to conserve biodiversity and reduce deforestation. The consultants introduced themselves as representing UNDP. In the meeting it came out that the project involved the Forestry Department. “We don’t work with the Forestry Department” said a voice from the audience. The Forestry Department and the community “didn’t mesh” explained the Colonel. The consultants tried to insist that the Forestry Department’s role was perfunctory and attempted to get the meeting back on track. They sped through activities, asking each group to come up with words that defined their village and the forest. They chose
particular responses and offered others and wrote them on flipchart paper. They stuck the paper to the wall with the mural, took pictures and concluded the meeting with a promise to return. Most meetings took place around noon, while most farmers were still out and professionals were at work. Village elders, mothers, those between jobs, and the young hunters – who had returned, showered and eaten – were usually the only attendees. Meetings were not unusual – on their grounds and terms. Where I planned to go and what I planned to say, was another matter. ‘Suh yuh going tell dem bout di parrot, eh spy?’ another joked seriously. Never, I assured. I always kept my research vague. What did they think, I was going to turn up there and sing like a canary? Like I hadn’t been here, lived here, mothered here. I was the one going to face the behemoth, and I did not often dine with the devil. Perhaps it was I who needed reassurance, did that occur to them?

‘Yuh meet dat white woman yet?’ the first asked, probing further. ‘Not yet’, I replied, ‘I ran out of time last year and I haven’t heard back from her this year’. ‘Mi nuh trust dah woman deh yuh know’ the young hunter replied. I had heard those sentiments before. Last year, I smiled politely as the village historian brought me around to the “people yuh ah guh waan interview”. The deputy Colonel, the head tour guide, the timber merchant whose grandfather had been Colonel and who made no secret of his plan to bring chieftaincy back under the family name. There were particular villagers that tourists were sent to (largely the tour guides). There were particular villagers that came, whether or not they were sent for. There were particular villagers who engaged with state departments and spoke to the media (largely the Maroon council, that comprised of the Colonel, his brother, the deputy Colonel, and older elites). There were particular villagers who engaged, whether or not they were invited to (particularly the young hunters). Then there were particular villagers who spoke to the researchers and intellectuals. They provided the history, articulated the needs, and ascertained how useful an ally the researcher would be. So I sat, pen in hand, and politely
noted down events I had already read online or in the yellowed rags of the archives. When it was over, I donated, as asked, towards the museum refurbishment or book fund. The forest held many medicinal plants explained the deputy Colonel. It brought many scientists, like the white woman and her husband. We thought they came to learn, he recounted, imagine the nerve – they actually came to teach. What did they call it, oh that’s right, “capacity building”. ‘Tell me something’, the young hunter continued once breakfast was done ‘dem parrot here – weh dem call it – “Critically in Danger”? Cos den ah nuff more money we s’ppose to ah get fi dem!’

The “white woman” was an American ex-pat who came to Jamaica in 1992 as a PhD student to conduct research on the black-billed parrot. After some scoping and a successful pilot study, the scientist chose Windsor, a small, largely-deforested region at the north of Cockpit Country as her field site, establishing a small avian biology working group with students from University of West Indies. Together the working group conducted a series of bird surveys around Windsor to investigate the nesting sites of black-billed parrots. Combined with point counts conducted later that decade (see Davis, 2017), the survey ‘represents the only systematic study of resource and habitat requirements for any avian species in Cockpit Country’ (WRC, 2016). Owing to the region’s inaccessibility, the data collected during that period of study has been the sole data source of journal articles estimating species distribution of the yellow-billed and black-billed parrot, used by a number of researchers (see Davis, 2017; Koenig, 2008). The sparse data collected by the small team of biologists soon became the foundation of domestic and international conservation efforts, informing the both species’ IUCN Red List assessments and the national policies which are so often informed by such global appraisals (particularly in the global south).

After her PhD, the American scientist and her husband opened an independent research institute – Windsor Research Centre (WRC) – in a renovated plantation house in
near her field site. To fund research, WRC offers housing, facilities, tours, and recreational activities to visiting scientists who sought to undertake short-term research on an endemic species. Their website\textsuperscript{12} is an information juggernaut and is among the first results of a Google search of the region’s name. It features a comprehensive species list, geological/geographic facts, and contact details for room booking. Western scientists often contact WRC to collaborate. Typically, they will have worked on species in the same family or genus as a species endemic to Cockpit Country, and seek to apply their techniques and skills to a little-understood congener. Small, endemic, under- or unassessed species offer biologists access to international platforms through less-crowded and unmanned gates. No neophyte could contribute to the species assessments of elephants, lions, or any other large, charismatic fauna with large ranges and little to no speciation. The epistemic and physical spaces involved in the assessment of such animals are decades-old and closely guarded. Owned by professors, long-established NGOs, working groups and patrolled by armed guards, participation is often invitation only. One is usually apprenticed into these systems. One or two pegs down, however, the species still have long life histories, clear ecosystem function, and/or interest from the general public (e.g. bats, birds, frogs, bees). Here, one can cut teeth and make names far quicker.

In the tropics where many of conservation’s “second tier” species reside, forests are dense and governments hollow. Especially in the Caribbean, where colonialism and capitalism forge a special relationship on the backs of island nations and postcolonial subjects are patronised through old colonial ties but paid with new money. Undertaking species work that will feature in IUCN Red List assessments, and extracting such valued knowledge from these regions is like taking candy from a deliberately-underfunded, stateless baby. In contrast, the conservation landscape in Africa is dominated by a number of large, well-established

\textsuperscript{12} \url{www.cockpitcountry.com}
ENGOs (Brockington et al., 2018; Brockington and Schofield, 2010). Conservation, capitalism, and colonialism work together on the continent in such a way as to provide a trifecta of dominance that support such data monopolies, in which ‘many large NGOs have their own research departments publishing in … the more prestigious scientific journals’ (Brockington and Schofield, 2010). One afro-Guyanese ecologist once told me she was a fool. She could go back to the islands and get stuck in, but instead she was waiting at the door of African ecology, hand-to-mouth trying to get in. I couldn’t do it, I responded. I didn’t know how I would react as a black academic seeing such colonial structures up close. So present and raw. It was so very hard, she confessed, to stand and not fall in such spaces. The floor was made of black bodies – it moved and swayed, yet business was conducted upon it all the same as if no one could feel the shaky ground.

The collaborative work with western scientists also made WRC’s name. Its founder was listed as a contributor on IUCN Red List assessments of endemic amphibian and snails, as well as the yellow-billed and black-billed parrot. WRC works closely with ENGOs and state departments, offering consultation, scientific evidence, and policy recommendations. They worked with NEPA to ‘[operate] a constant-effort monthly banding programme from 2002 through 2008 to band and monitor resident and migratory birds’ (WRC, 2016). Now, WRC states,

‘we still band occasionally to keep up with monitoring of site fidelity and to determine the lifespans of our resident birds... With the near-100% representation of Jamaica's 29 endemic species, Cockpit Country is a good place to start and end your bird-watching, nature-loving holiday!’

As part of the now dormant Cockpit Country Stakeholder Group, WRC played a significant role in the anti-mining campaigns, proposing a generous boundary definition for the hologram park. ‘You should get in touch with Windsor’ one NEPA director suggested
towards the end of our meeting. No point re-inventing the wheel, cautioned the Forestry Department during another meeting. Did I know of the work of the American biologist at WRC, asked a faculty member of University of West Indies. WRC provide the scientific basis for our advocacy work, said the CEO of the ENGO. The research institute bridged many spaces. Indeed I had heard of WRC. Their website was the first that I had found when I began researching Cockpit Country ahead of my first field visit. We exchange virtual pleasantries via email but I have never visited. It’s not for lack of trying, we joke with each other. Bereavement, flash floods, poor mobile phone reception and intermittent internet in our respective enclaves – something always proved a barrier. Deep down I knew the biggest barrier was my own will.

The IUCN Red List of Threatened Species (hereafter Red List) is a global database of over 100,000 species and their current risk of extinction. The ledger of loss funnels attention and funding to particular species, efforts, and regions. Red List assessments often inform eligibility criteria of many large conservation funding bodies and private endowment funds, with many requiring that focal species are threatened (Vulnerable, Endangered, Critically Endangered) or Data Deficient. In Sorting Things Out: Classifications and its consequences, Bowker and Star seek to determine how classifications are made and articulated, asking ‘[w]ho makes them and who may change them? When and why do they become visible? How do they spread?’ (1999: 2). It is the invisibility of classifications, Bowker and Star argue, that is crucial to their ability to shape technical, scientific and social practices of actors operating in ‘formal ignorance of the social and moral order created by these invisible, potent entities’ (ibid.: p3-5).

Red List categories, however, do not function this way. They are a beacon, a call to action, an icon of ecological sciences, a symbol, one of Anthropocene’s mascots. Like articulation of indigenous identity, Red List categories create their own fields of power across
social and natural landscapes. Categorisation of extinction risk, particularly those designated as threatened, generates and redistributes forms of capital. There is nothing invisible, anonymous, or unseen about it – at least not seemingly. Documentaries, photography, aerial footage, and population estimates are placed on display in the public domain. Bourdieu (2004) criticises prominent STS (Science and Technology Studies) scholars such as Bruno Latour and David Bloor for an overemphasis on the invisible fields and structures that shape science. Such focus, Bourdieu argues, fails to acknowledge that each social unit in which science is produced (the laboratory, the research centre) operates within a wider social landscapes that both orient and are oriented by collective technical and scientific practices (2004: 32-39). Where capital is being redistributed, membership is being determined. Red List categories and the social units who produce them do not need to be rendered invisible to exert power and influence. Rather, potency is derived from the legitimisation of knowledge practices and techniques to organise determine social units. Red List categories are powerful because they are a form of scientific capital:

‘a particular kind of symbolic capital, a capital based on knowledge and recognition. It is a form of power which functions as a form of credit, presupposing the trust or belief of those who undergo it because they are disposed (by their training and by their very fact of their belonging to the field) to give credit, belief. The structure of the distribution of capital determines the structure of the field.’

(ibid.: 34; emphasis added)

This chapter explores how scientific capital is accumulated through the Red List assessments of the black-billed and yellow-billed parrots and its relationship to data grabbing, which I define as control of the production or use of data and data practices either around a particular species or within a specific region to execute and inform conservation science protocols (such as Red List assessments) and direct the very policies which govern or
influence data production processes. In early 2019, I organised an interview with a regional assessor at BirdLife International, who are responsible for the IUCN Red List assessments of all avian species, to understand the role that solicited contribution played in the Red Listing process. After the interview she asked about my research. I had just won a photography prize for Figure 2 and was still giddy from the win and the press. Excitedly, I shoved the picture under her nose and explained it all. The indigenous Maroons. The tar. The traps. “Centuries-old technique”. I was stunned silent when she invited me to contribute to the upcoming 2020 Red List reassessments. This doctoral research has seen me wander knee-deep in shoulder-high water. I had already become an expert articulator, procuring the grants that I needed to conduct this self-funded endeavour. I must have missed the turn again, for no I walked side-by-side with the very people this chapter sought to examine. The BirdLife International interview was my due diligence. The staff and the Forestry Department were nice, the CEO of the NGO was passionate and meant well. I thought the monster hunt had ended because I had seen the light, not because I had become the dark.

Through both my own experiences of the Red Listing process and a review of the process as it is described in literature and by BirdLife International staff, this chapter explores how data is manufactured, verified, standardised, and moved through spaces of conservation that themselves are transformed into fields of power. How is data articulated and presented upon contribution? What forms of co-production then take place to assign a particular category of extinction risk? As I write this, the black-billed parrot’s extinction threat is set to be upgraded from vulnerable to endangered (pending no objections); the first change to its category of risk since its first assessment. Does the number and type of contributions to the Red List process affect its outcome? Was I cutting my teeth and making a name? To better examine the relationship between the Red List process and data grabbing, this chapter widens its scope of analysis to all contributions since their solicitation began (between 2000 and
2004) to Red List assessments across all species in the wider family of Psittaciformes (parrots, macaws, parakeets, and cockatoos). This widened scope provides insight on the movement of capital, the creation of legitimacy, and the outcome of redistribution.

The IUCN Red List

The IUCN Red List of Threatened Species (hereafter Red List) was created in 1964 as a record of urgent cases of species decline, housed in loose-leaf ring-bound volumes (Collar, 1996; Hartley and Kuhn, 2003; Mace et al, 2008). The Red Data Books, as they were then known, became cumbersome and difficult to maintain after a few hundred classifications (Collar, 1996); another system was required to support the growth that was deemed crucial for its effectiveness (Hartley and Kuhn, 2003). As ‘conservation for development’ and biodiversity loss became central discursive themes among international agencies during the 1980s and 1990s, the Red List began to gain increasing momentum (Collar, 1996). Rising use of the Red List by decision- and policy-makers increased its visibility in the public sphere.

IUCN began to refine Red Listing process and protocols, particularly seeking to reformulate categories of threat (then, Extinct, Endangered, Vulnerable, Rare, and Indeterminate) so they were clearer and more comprehensible to lay audiences (Mace and Lande, 1991). What, for example, did rare mean? Was it under greater or lesser threat than endangered (ibid.)? The responsible committee also sought to create a more robust, transparent, objective system for species classification into these new categories (ibid.).

In 1994, a classification system proposed originally in an article by Mace and Lande (1991) was adopted and incorporated into a larger set of criteria (Mace et al, 2008). The first assessment cycle in 1996 highlighted practical difficulties in the implementation of the new classification scheme (IUCN Standards and Petitions Committee, 2019: 5), prompting its revision before the next cycle (in 2000). One change required was to better incorporate the divergent practices of different taxonomic specialists:
‘working groups on vertebrates tended to focus on population size and structure... working groups on plants emphasized geographic distribution area and life-history attributes and invertebrate biologists focused on population fluctuations and habitat fragmentation’

(Mace et al, 2008)

Before the current classification protocol, which has seen no change since 2001 (version 3.1; see Figure 10), species assessments were conducted on an ad hoc basis by working groups of taxonomic specialists. This was usually conducted during workshops where collective expertise was pooled and discussions held to determine the categories of a number of species under their remit (Rondinini et al, 2014). After protocol refinements, however, the IUCN Species Survival Commission began recruiting a wider network of volunteer experts. Experts were invited to either submit data as individual contributors, or through assessment workshops conducted by Specialist Groups, in which contributions were both collated and assessed. Some groups – Red List Authorities (RLAs) – were given the additional responsibility of “organising independent scientific review” of the assessments of
contributors and assessors (Butchart and Bird, 2010). The largest of these RLAs became large-scale operations that involved multiple taxa or entire classes of species and drew-down substantial funding; these were enlisted as Red List Partners.

Red List Partners are collaborating organisations who make substantial financial commitment in contributing to ‘leading or coordinating species-level assessment work… and/or acting as a Red List Authority’ (IUCN, 2018). They must be highly funded. The initial Red List Partners were BirdLife International, Conservation International, and NatureServe, enlisted in 2002. They were joined in 2010 by five additional partners. Now, species assessments are conducted solely by Red List Authorities and Partners. The IUCN is not involved in the creation of the IUCN Red List. IUCN publishes and monitors assessment data, creates training materials, provides advice, and resolves disputes and challenges (Butchart and Bird, 2010; IUCN, 2018). Why was the reformulation and refinement of IUCN’s protocols and standards followed swiftly by a divorce from its execution? Why now is all IUCN’s efforts dedicated to articulation and none to the scientific practice that it is known for? Did they free themselves up to do important work? Or are they avoiding impossible work?

The Red List is now recognised as the most authoritative listing of species’ extinction risk (Butchart et al, 2006; Collar, 1996; Miller et al, 2007). It wields substantial influence on legislatures and global funding schemes because of its ability to move data between science and policy spaces, informing both national conservation initiatives as well as broader policies on international trade (Keith et al, 2013; Rodrigues et al, 2006). The Red list also dovetails international conventions and indexes, such as the Aichi convention and the Human Development Index, further amplifying its power and scope (Rondinini et al, 2014). Even when countries opt to maintain their own national species lists, as much as 82% of the data is derived from the Red List (Miller et al, 2007). The Red List is conceived by many as at once
a “clear and comprehensive” objective tool, and a responsive mechanism ‘flexible enough to
deal with uncertainty’ (Butchart et al, 2016; IUCN Standards and Petitions Committee, 2019;
Miller et al, 2007). So many pieces of literature I reviewed used this precise rhetoric. I am
sure that I have also heard such words uttered in person at the British Ecological Society
conference. There is something sanctified about the way the IUCN Red List is described,
both by its supporters and its critics. To supporters, the Red List is an all-knowing, rigorous,
benevolent and forgiving god. Critics provide commentaries similar to the condemnation of
what organised religion does to people’s free will and individuals’ abilities to make moral
assessments. Through standardisation protocols that guide data collection and analyses, the
Red List is no longer perceived as an assortment of “hand-picked” assessments informed by
biased experts (Rondinini et al, 2014). It is now believed by many to be a systematic and
guided evaluation of living taxa (Butchart et al, 2006; ibid.). It is an expansive dataset, a
communication tool, a “global public good”, a monitoring technology (ibid.).

Not everyone, however, is a believer; the Red List still receives substantial criticism.
Commentators argue the Red List often fails to include important species assessments found
in the national lists of politically-isolated countries such as Russia, or Iran, where there is
often limited information flow (Popov et al, 2017). To remain responsive and seemingly
relevant, the Red List must be continually and frequently updated. Species assessments are
outdated after ten years (Rondinini et al, 2014); after which, if there is no contribution of new
information or data, they are classified as data deficient. As IUCN aims to expand its
database by increasing species assessments, more reassessments are also required. Currently
one in six species on the Red List are in the Data Deficient category (Bland et al., 2017). Data
deficient species receive less funding than threatened categories and without dedicated
reassessment infrastructure, commentators argue, such species will remain under such
categorisation, with others to join (ibid.). Data Deficiency is taxonomically and spatially
biased; little-understood, species-rich taxa that inhabit dense, remote regions are particularly at risk (Bland et al, 2015; Butchart and Bird, 2010; González-del-Pliego et al, 2019). 25% of amphibians and 40% of reptiles assessed by the Red List are currently categorised as Data Deficient. One can cut one’s teeth and make a recognised and published assessment, but the same sets of circumstances that make assessments easy – lack of governance, remoteness, absence of gatekeepers – make reassessments hard, given the infrastructure and support they require. Some argue that the Red List is therefore damaging towards what I call “runner-up” species and biased towards species that attract ongoing research interests: detectable, large, charismatic, and located in accessible habitats (Martin-Lopez et al., 2011).

In 2004, only 20% of updates to status changes were genuine: describing real improvement or deterioration in the status of a species (Butchart et al, 2007). These updates, some argue, are no reflection of the ability to monitor real-time changes but a series of corrections to a system not fit-for-purpose (see Butchart et al., 2007; Martin-Lopez et al., 2011). Stakeholders, even most shareholders (unconsulted indigenous communities, weak states, unscientific ENGOs) can be found bobbing at the end of the yo-yo of changes. The conveyor belt of assessments has also been criticised for its exponential cost. US $4 million per year is spent on species assessments by IUCN and Red List Partners. A further US$ 400,000 is required for reassessments and $860,000 for maintenance each year (Rondinini et al., 2014). Rondinini and colleagues (2014) estimate a further US$60 million will be required to support IUCN’s target of 160,000 species on the Red List. These estimated costs do not include the costs of collecting and making sense of the data – work that has been outsourced to volunteer experts. As the Red List gorges itself on species and free, but sometimes fleeting expertise, protected areas built around species assessments become increasingly useless conservation measures (Gjerde et al, 2018). Changes to categorisation aside, shifts in species ranges – often caused by increasing anthropogenic impacts – are becoming more
frequent. Outside of the environmental crisis, ecosystems are abuzz with change, oscillation, shifts, and transformations. Some argue that a system such as the Red List is not built to respond to dynamism or the natural and anthropogenic changes that are always occurring (Akcakaya et al., 2006; Keith et al., 2013; Rodriguez et al., 2011). Are the systemic issues described the result of sets of poor practices (from the experts, the assessors, the partners, or the entire organisation) or is the cancer in the bowel of the science itself?

Extinction risk is determined by one of two conditions: population decline (Criterion A, C, D, E) and range size Criterion B, with categories of extinction risk themselves determined by the fulfilling of respective thresholds (see Box 1; Mace et al., 2008). The population thresholds in Criteria A and E make use of the declining population paradigm, which assumes that larger populations are vulnerable to ‘extrinsic threats or processes… driving declines or significant fluctuations from which the populations cannot recover’ (Mace et al, 2008). Thresholds used in Criteria C and D are informed by the small population paradigm which concludes that a minimum of 50 genetically effective individuals are required to maintain a species. Assuming a rate of genetic effectiveness of 10% and further calculations around the preservation of genetic variation and the removal of deleterious mutations, the numbers of 500, 5000, and 10,000 emerge as population thresholds. This is the science, Mace and Landy (1991) argue, that ensures the Red List is robust, objective, and more than a political tool.

There are, however, political imaginaries entangled within each criterion. The units of measurement they employ is political:

‘Ideally, the time scale should be expressed in natural biological units of generation time of the species or population..., but there is also a natural time scale for human activities such as conservation efforts, so we have given time scales in years and in generations for the CRITICAL and ENDANGERED categories.’

(Mace and Lande, 1991)
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<th>Box 1: The IUCN Red List Criteria</th>
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<td><strong>A: Population size reduction, measured over the longer of 10 years or three generations based on any of A1 to A4</strong></td>
<td><strong>B: Geographic range in the form of B1 and/or B2</strong></td>
<td><strong>C: Small population size and decline, where the numbers of mature individuals are fewer than 250 (CR); 2500 (EN); 10,000 (VU) and:</strong></td>
<td><strong>D: Very small or restricted populations; D1: where the number of mature individuals are as C2a(i) or D2: (for VU only) a restricted AOO and plausible future threat, driving taxon to CR or EX in short time</strong></td>
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<td>A1: reduction reversible AND understood AND have ceased</td>
<td>B1: Extent of occurrence (EOO)</td>
<td>C1: decline of at least CR: 25% in 3 years or 1 generation</td>
<td>D1: where the number of mature individuals are as C2a(i) or D2: (for VU only) a restricted AOO and plausible future threat, driving taxon to CR or EX in short time</td>
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<tr>
<td>A2: reduction may not have ceased OR may not be understood OR may not be reversible</td>
<td>B2: Area of occupancy (AOO)</td>
<td>C2: decline in either: a) (i) number of mature individuals in one subpopulation be greater than:</td>
<td>D2: (for VU only) a restricted AOO and plausible future threat, driving taxon to CR or EX in short time</td>
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<td>A3: reduction suspected to be met in the future</td>
<td>Evidence (at least 2 of the 3):</td>
<td>i) number of mature individuals in one subpopulation be greater than:</td>
<td><strong>E: Quantitative analysis</strong> indicating the probability of extinction in the wild to be the longer of 50% in 10 years or 3 generations (CR); 20% in 20 years or 5 generations (EN); 10% in 100 years (VU)</td>
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<td>A4: time interval of reduction spans from the past to up to 100 years into the future</td>
<td>a) Severely fragmented or with numbers of locations fewer than or equal to 1(CR), 5(EN), 10(VU)</td>
<td>CR: 50</td>
<td><strong>E: Quantitative analysis</strong> indicating the probability of extinction in the wild to be the longer of 50% in 10 years or 3 generations (CR); 20% in 20 years or 5 generations (EN); 10% in 100 years (VU)</td>
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**Evidence:** (a) direct observation (census); (b) index of abundance; (c) decline in area of occupancy, extent of occurrence, and/or habitat quality; (d) actual and potential levels of exploitation; (e) effects of introduced taxa, hybridisation, pathogens, pollutants, competitors or parasites.

**C1: decline of at least CR: 25% in 3 years or 1 generation**

**C2: decline in either:**

- a) (i) number of mature individuals in one subpopulation be greater than: CR: 50
- (ii) percentage of mature individuals in a single subpopulation is greater than 90%
- (b) extreme fluctuations in number of mature individuals CR: 25% in 3 years or 1 generation

**D: Very small or restricted populations; D1: where the number of mature individuals are as C2a(i) or D2: (for VU only) a restricted AOO and plausible future threat, driving taxon to CR or EX in short time**

**E: Quantitative analysis** indicating the probability of extinction in the wild to be the longer of 50% in 10 years or 3 generations (CR); 20% in 20 years or 5 generations (EN); 10% in 100 years (VU)
The use of range sizes, for which ‘there is no strong theoretical framework to associate given range areas … with different levels of risk of extinction’ (Mace et al, 2008), is political. It is difficult to define, measure, and distinguish thresholds, causing ‘difficulties from methodological and biological standpoints’ (ibid.). ‘They’re just like this’ a lion conservationist recounts to me, pretending to outline a large rectangular range on an imaginary map ‘“let’s say it’s this” and I’m like “guys... this is going to be the range map!”’. I sat next to her at a workshop hosted by one of my (and her) funders and had begun to explain my trepidation around the task of contribution that had not long been handed to me. She empathised, at least they hashed it all out in a workshop together. There, she explained, they were complicit in their creations. Among the redundancies of Criterion B is migratory species, whose large ranges are not wholly related to population size.

The area of many small islands is less than range thresholds of threatened classifications, leaving most endemic species on islands like Jamaica threatened by default. Small islands result in small ranges. Small ranges can only carry small populations. Small populations are under greater threat from stochastic processes that destabilise population viability (Lacy, 2000). These processes include genetic inbreeding and loss of adaptability (Courchamp et al., 1999; Lacy, 2000), which some argue may occur within populations with as many as 5000 adults (Lacy, 2000). Dynamic processes can affect population viability on a demographic level by creating unstable breeding structures through skewed sex ratios, single-sex patches, and unstable age distributions (Courchamp et al., 2001; Lacy, 2000; Lindenmayer and Lacy, 2002; Taylor and Hastings, 2005). Finally, these processes can also affect components of individual fitness by reducing intraspecies cooperation such as lowering anti-predator strategies. Large populations of fish schools, bird flocks, and ungulate herds increase early detection and confuse predators (Courchamp et al., 1999; Lacy, 2000; Stephens et al., 1999). Similarly, small areas and habitat fragmentation can change interspecific
population dynamics, increasing competition and nest depredation/parasitism (Lindenmayer and Lacy, 2002). Möller and Legendre (2001) show that the small species populations in islands have less genetic fitness than their larger mainland congeners, largely due to less intense sexual selection by females in island populations, leading to higher rates of extinction. This is true, they argue, of the Puerto Rican parrot, which displays significant levels of reproductive depression.

The insularity, size, remoteness, and geographic dispersion of small island developing states (SIDS) bring additional disadvantages (Briguglio, 1995). They are more vulnerable to natural disasters; over half of the countries that have suffered the worst natural disasters are SIDS (ibid.; Pelling and Uitto, 2001). They have smaller domestic markets, limited natural resources, and fragile ecosystems (Briguglio, 1995). Their prosperity and global position are built on fragile economic and political foundations. Beach tourism and service sectors are ‘vulnerable to changes in consumer taste and natural disaster impacts’ (Pelling and Uitto, 2001). It is not just their endemic species that are inherently vulnerable to extinction. The islands themselves are inherently vulnerable to neoliberal determinism. SIDS are at the mercy of interpretation. Irus Braverman (2015a; 2015b) describes the process of Red List assessments, particularly as they pertain to parrots, as one fundamentally rooted in biopower. Within these assessments, Braverman argues, species become the ‘foundational ontological unit for knowing and calculating life or viability’ (2015b), through which life and death – in the form of viability and extinction respectively – are defined. The consumptive reassessment cycle that demands more and more species for categorisation, leaving behind trails of data-deficient species and abandoned field sites, Braverman argues, is the same process that Foucault deemed central to the control of populations: sovereignty over life and death. Species prematurely declared extinct often then become extinct as the in-situ conservation measures that protected any remaining species no longer continue (Braverman, 2015a) – a
phenomenon known as “Romeo’s error” (Mace et al., 2008). Conservation itself – not climate change, habitat loss, or agriculture, Braverman argues, determines what species live and die through cycles of focus and abandonment.

This application, however, can be pushed past its multispecies origin across all populations and forms of governance within conservation spaces. In his original use of the term biopower in The History of Sexuality, Foucault describes the female body as the “social body” (1990: 113-114) because it – the female body – is a technology through which populations can be surveilled and controlled. Through the female body, education and pedagogy can control the population’s offspring. Through the female body and maternal health, hospitals can control the births, deaths, and reproductive lives of the population. Through the female body, the nation’s most elemental unit of production and consumption – the household – is controlled (Foucault, 1990: 114-123). Given the number of conservation actions that can be scaffolded around threatened species, the animal body can become conservation-as-government’s “social body”. This has very specific consequences for tropical islands, full of small populations of endemic species that increasingly cycle through Red List assessments. Small populations on small islands with small people, small governments, and small minds. All inherently vulnerable. In desperate need of conservation action regardless of current ecological processes or sociopolitical circumstances. A biological fact from which small islands cannot escape.

The conservation management of the Imperial parrot (A. imperialis), an endemic resident of Dominica, offers a contemporary example. In 2000, it was listed as Endangered under Criterion D under the following justification:

‘Conservation action has begun to improve the status of this bird. Numbers have increased in recent years, but there are still fewer than 250 mature individuals, qualifying the species as Endangered. If the population continues to increase, it will
be eventually downlisted to Vulnerable unless there are concomitant decreases in available habitat.’

During this time, an American conservation biologist undertaking fieldwork in Dominica began to work closely with the Dominican government to start a captive breeding programme, create the Morne Diablotin National Park and generate over US$1 million in international funding (RSCF, 2020a). In 2004, the biologist became a contributor to the next Imperial parrot species assessment. Less than a decade later, the biologist moved to Florida and founded an independent research facility that specialised in the captive-breeding of rare species (RCSF, 2020b).

After Hurricane Maria caused large-scale ecological and economic destruction across much of Dominica in 2017, the Dominican government sent a cohort of rescued endemic parrots to a German-based ENGO (BirdsCaribbean, 2019). The ENGO was later found to be a wildlife trafficking ring run by an former nightclub manager (The Guardian, 2018). The fraudulent ENGO had amongst their captive animals, held in a small industrial warehouse, a number of other parrots sent to them by governments as part of supposed ex-situ conservation measures, including numerous parrots endemic to Australia and 90% of the remaining Spix’s Macaw population (declared extinct in the wild in 2019; see IUCN, 2019). The Guardian article exposing the ENGO asked ‘[a] secretive organisation based in a German village has amassed one of the world’s largest collections of rare parrots. How did [they] persuade governments to authorise the export of so many endangered species?’. Was the Dominican government particularly susceptible to exploitation at that time because it was without an expat scientist? Was their decision to trust the organisation driven by desperation for foreign input? Soon after this snafu, in 2019, the Imperial parrot was uplisted to Critically Endangered under the direction of a new expat contributor: a sales manager from Operation Wallacea, a conservation organisation that conducts research with volunteer students on paid
expeditions, who had recently relocated to Dominica. The Imperial parrot was not uplisted in light of new data collected, but rather a precautionary measure mitigating against the hurricane’s impact. There may be specific consequences of the systems of conservation within Australia and Brazil that led to the exportation of their threatened, endemic psittacine species. In the case of Dominica, however, both the outsourcing and the uplisting are consequences of there being few, if any, local conservationists and willing field researchers – caused, Reillo and Durand (2008) argue, by unnavigable terrain and lack of access to technologies. The island’s conservation plans, the parrots, the thinly-stretched state, the battered landscape – all increasingly and inherently vulnerable.

**The scientific method**

Outside of the context of species endemic to small islands with small populations, reassessments are no less strewn with political imaginaries and strategic intervention. Never has there been such a spectacular display of this as in the reassessments of the hawksbill turtle (*E. imbricata*). During the conservation boom of the 1990s, the hawksbill turtle, with its impressive size and global range, quickly became a flagship species (Campbell, 2012): a species ‘chosen strategically to raise public awareness or financial support for conservation action’ (Mace et al, 2009). Due to significant hunting pressures, the hawksbill turtle was uplisted from Endangered to Critically Endangered in 1996. The decision was appealed by Nicholas Mrosovsky: a member, and former chair, of the Specialist Group. Mrosovsky was described by colleagues as meticulous and rigorous – he once lodged a complaint with the scientific journal Nature about the lack of attention and space given to methodology (Lakin-Thomas, 2015). The data ‘supporting this highly controversial [Critically Endangered] status had not been made available for evaluation’ argued Mrosovsky (1997) in both his appeal and in a commentary for the journal Nature. He accused IUCN of peddling in secrecy and ambiguity, using “*in litt*” to encourage and obscure communication, strategizing and
speculation between select members of the Specialist Group, never made available despite his many requests (Mrosovsky, 1997; Mrosovsky and Godfrey, 2008). He also argued that the only “appropriate solution” was for the turtle to be listed as data deficient. The ‘category does not imply an absence or presence of threat’, Mrosovsky (1997) insisted, rather it creates a foundation from which transparent arguments could be made and available data presented and scrutinised in full. Perhaps it was the lack of experience Mrosovsky, a career psychobiologist whose academic interests were in animal sleeping patterns and amateur interests in turtle conservation, had in obtaining grants for conservation work that made him so naïve. For that foundation of which he speaks is often starved and penniless. What the category does create is funding deficits where there were once funding opportunities. If conservation is our government, these assessments are its mandates and the threatened categories its currency.

The IUCN Standards and Petition Committee ruled that all future assessments were required to ensure published and grey literature listed in the bibliography was publicly available; this later became part of the Red List guidelines (Mrosovsky and Godfrey, 2008). Despite the ruling, the status of the hawksbill turtle remained unchanged and the grey literature remained unpublished (Mrosovsky and Godfrey, 2008). Anne Meylan, a former student of the Professor who first introduced Mrosovsky to the hawksbill turtle and with whom Mrosovsky co-chaired the Specialist Group, published a response to Mrosovsky’s commentary in Nature. ‘The listing of the hawksbill as critically endangered was based on a rigorous evaluation by IUCN Marine Turtle Specialist Group members involved in preparing the status justification’, explained Meylan (1998), ‘I am a member of that group, and a hawksbill specialist.’ Was Mrosovsky not? Was he not a member of said scientific process? Implications of membership, legitimacy and authority are woven throughout Meylan’s rebuttal. Where there is money, knowledge, networks, and politics – i.e. economic, cultural,
social, and political capital respectively, definitions of membership (symbolic capital) is never far behind. Meylan accused those who opposed the status justification of advocating for the resumption of the international hawksbill trade and admonished Mrosovsky for his reckless commentary that cast doubt on the integrity of the Red Listing process (ibid.). In particular, she ridiculed the notion of listing the hawksbill as data deficient as this would greenlight hawksbill hunting and drive the species to extinction. Meylan and her partner are the founders and directors of an independent research centre in the Caribbean that monitors regional sea turtle populations (Bermuda Turtle Project, 2020). She is undoubtedly less naïve as to the economic ramifications of downlisting.

By the 2008 reassessment, there were more critics than just Mrosovsky. Many members of the Specialist Group argued that the assessment did not adhere to standards and guidelines which had since been installed. They argued that the data available did not establish a population decline significant enough to warrant maintaining the uplisting (Campbell, 2012; Mrosovsky and Godfrey, 2008). Members who supported the uplisted status countered with anecdotal evidence about where in the world they did or did not see the turtle. Others insisted the evidentiary requirements be relaxed in light of hunting pressures and ‘Cuba’s 1997 proposal to CITES to ranch hawksbill turtles in order to support trade in hawksbill shell with Japan’ (Campbell, 2012). Debates became explosive, members who supported the uplisting faced attacks on their scientific credibility, accused of sloppy science and politicisation. Those who opposed, and particularly Japanese colleagues, were accused of being funded by the Japanese Bekko Association (ibid.): a government-sponsored organisation originally created to research alternatives to tortoiseshell (bekko) in artisanal use but later found to be heavily embroiled in tortoiseshell lobbying (Grubb, 2019).

The antagonism, with its questions around legitimacy, moral standing, intellectual credibility, bears striking resemblance to the controversy between Thomas Hobbes and a
scientist named Robert Boyle, the outcome of which has shaped empirical science as it is
now known. In the monograph *Leviathan and the air-pump: Hobbes, Boyle, and the
experimental life*, Shapin and Schaffer (1989) detail how Boyle’s careful redesign of the air
pump through a documented programme of experimentation became the scientific method:
producing scientific fact through hypothesis testing and experimentation in reproducible
manner. The intricately-carved plates Boyle had commissioned for his figures that visually
depicted all parts and processes in detail; the long, languid descriptions of his techniques; live
performances of his science that became the “show piece” of the Royal Society, of which he
was a Fellow (1989: 30). All such practices created an empirical experience that defined the
production of facts in both ‘an epistemological and social category’ (1989: 25), to which data
belonged through practices of collection, analyses, and dissemination and to which his
contemporaries belonged through acts of witnessing and mirroring.

Thomas Hobbes – political philosopher, author of The Leviathan, and another Royal
Society Fellow – was the most vocal and prominent opponent of Boyle’s experimentations.
Among methodological criticisms around what did and did not constitute a vacuum, Hobbes
offered the deeper epistemological challenge that repeated acts and restricted witnessing
could never amount to the production of fact. Hard, shiny, objective, incontrovertible,
uncontested, universal fact. In other, more contemporary, words, neither what we know to be
science nor its peer-review can create ultimate truths. They both, however, create a class of
people who have access to a type of scientific capital. Hobbes was old, decrepit, ignorant, and
out-of-touch, sneered Boyle’s supporters. He ‘did not well understand the great development
of the English empirical science that took place just at that time … when members of the
Royal Society adopted the experimental method of research … Hobbes could no longer keep
abreast of them’ (anon, cited in Shapin and Schaffer, 1989: 11). The old man should be quiet,
others warned, because he ran ‘a real risk of being dealt with as a troublemaker or idiot’
The Royal Society threw the full weight of their support behind Boyle and eventually expelled a disgraced Hobbes. Capital had been redistributed, membership re-established, and Hobbes and his arguments fell on the wrong side of “in”.

The production of scientific fact (and truth, knowledge, perhaps even power), the Royal Society determined, was indeed fulfilled by witnessing. Witnessing, Hobbes’ countered before his ejection, that did not take place in the public domain but as ‘a private and, possibly a partial affair’ (Shapin and Schaffer, 1989: 113) in the communal-but-private spaces of the Royal Society. Private creation of public facts. Facts that govern. Facts that redistribute. Facts that take over spaces in order to reproduce. The scientific method, as we still know it to be, both ‘crystallises forms of social organisation’ within existing units and shapes the wider scientific landscape through ‘regulating social interaction within the scientific community’ (1989: 14, emphasis in original text). The scientific method behind the Red List shapes such interactions through the standards and classifications that define contributions and assessments. But further to this, the public-facing standards and classifications – the categories of extinction risk – shapes the entire conservation space by regulating interactions across scientific and non-scientific communities. Bowker and Star (1999) overlooked these types of classifications that simply cannot afford to be hidden for a second. They are powerful ammunition. If conservation is our government, it has become a rather authoritarian, well-armed one.

Controversies, Shapin and Schaffer argue, are useful analytical tools because ‘they often involve disagreements over realities of entities or properties of practices whose existence or value are subsequently taken to be unproblematic and settled’ (ibid.: 7). In seeing science “stammer”, asserts Bruno Latour, we may begin to see the innumerable ways in which one science hides and washes the face of another, we better ‘understand the
production of certainty’ (1999: 30-32). The role of such conflicts – Hobbes and Boyle, the hawksbill debate – is to provide historical and epistemic paths through the non-public experiences of knowledge-making (Latour, 1987: 200). But these conflicts do not often enter the public domain. It stammers to those who are already familiar with the sound of its voice. It stammers in communal-but-private. When it does enter the public space, it is rarely interpreted as science who stammers, it must be the people performing the science with the speech impediment. What could possibly be uncertain about science? About truth and fact? How can the voiceless stammer? A look at the current pandemic provides all the examples one needs to see how difficult it is for the general public to accept scientific facts for the set of likelihoods that they are. Many know deep down that is what they are, but acceptance is a different thing. Science isn’t understood by the public, it is believed. Somewhere between fact and fetish, both fabricated yet not (Latour, 1999: 270-272).

Shapin and Schaffer propose that Boyle’s process of experimentation created not one but three technologies: the material technology – the instrument or, in other cases, the data; the literary technology – the means of indirect witnessing; and a social technology – a set of convention and standards to which other contemporaries are held. All technologies are deployed, redeployed, and withheld across spaces of scientific, social, and political action in numerous ways to create not just knowledge, but belief. Biomedical researchers in western-funded research centres working at the intersection of health and poverty in African cities oscillate between practices of knowing and unknowing during data collection in clinical trials (Geissler, 2013). ‘[T]hose involved in advancing important scientific knowledge know certain aspects of reality they work on and in and yet do not know, do not want to know, should not know, or actively unknow them…’ (Geissler, 2013). These practices of knowing and unknowing do not just happen in the confines of one’s private analytical space, but out there during the process of data collection. Nutrition questionnaires failed to include
questions on food security, even though the effect of hunger-levels on data are well-known to science. Vital measurements such as patient temperature and the timely administering of drugs were glossed over and extrapolated. In the creation of genomic databases, Fortun and Fortun (2005) argue, unknowing is deployed by geneticists who wilfully map genes that are not just unknown, but in many cases redundant ("junk DNA") while presenting the database as an inventory of genetic sites of action. A public health battleplan against cancer. O’Hern and colleagues (2016) describe how conservationists of another kind must balance the preservation of both the structural and cultural integrity of museum artefacts. The amount of wear on a West African headdresses ‘is directly related to the degree and effectiveness of its cultural power’, whilst allowing too much wear to remain compromises preservation and encourages further degradation. Some things must be restored, leaving elements of the object’s material and cultural reality unknown.

The deployment and withdrawal of knowing and its technologies not only produce the science, but the scientist, in whom the public must have the ultimate faith if science is to be transformed into capital. Outside of a Chinese-led research centre, built on traditional areas of the Mongolian Steppe, are numerous, carefully-run experimental grassland plots showcasing different ecosystem-management techniques. Their sole purpose are to demonstrate to the traditional Mongolian herders, whose land the project had confiscated, that effective science was being conducted there (Williams, 2000). In the field of agroecology, Williams (2000) argues, NGOs, research institutes, and practitioners convince congregations of conservation stake- and shareholders of their virtue through technological practices such as aerial seeding, computer modelling, and wind tunnel tests. ENGOs can leverage the sophistication of technological practices to offset the moral disadvantage of opposing indigenous articulation. A Venezuelan ENGO, keen advocates against slash and burn agriculture and fire management, often uses remote sensing and quantitative methods to ‘[represent] data of fire
occurrences in ways that reproduce and bolster agency narratives of the destructiveness of indigenous burning’ (Sletto, 2008). Practices of high technology conceal practices of unknowing; ENGOs rely on such technologies and the unique forms of data they provide (data grabs) to fuel reforestation campaigns, without confirmation there had ever been a forest. Forest mythologies are the marrow of the bared bones of conservation actions. National assessments that inform global tables, such as FAO’s (Food and Agricultural Organisation of the United Nations) forest cover statistics, and international priorities are often underpinned by assumptions of historic forestscapes (Fairhead and Leach, 1995; Leach and Fairhead, 2000).

The reforestation of the “forest islands” in Kissidougou, Guinea led conservation policies that disenfranchised rural poor from economic action (Leach and Fairhead, 2000). Forest guards were employed to monitor regional fire activity and impose fines, despite many of the dry season fires occurring naturally (ibid.). Reforestation efforts also informed community-based approaches and NGO projects that sought to incentivise the adoption of alternative resource management strategies by providing participating communities with wells, infrastructure, and schools (ibid.) Accounts from village elders and aerial photographs from the 1950s showed that the savanna’s forest islands were not evidence of a historic forestscape, but were the result of grove trees planted by earlier settlers (Fairhead and Leach, 1999; Leach and Fairhead, 2000). Remember articulation of cultural, specifically indigenous, identity is the ‘continuous “play” of history, culture and power’ (see Li, 2000; Chapter 3). Remember that articulation is complex, unstable, open to rearticulation, and operates across different spatial and temporal scales of identification. Remember that conservation can disarticulate the cultural history of a landscape. Understanding the scientific method for the deeply social and political sets of relations that it is, we can no longer consider scientific practices as simply denying, undoing, or reinforcing cultural articulation. It is a form of
articulation in its own right. A continuous play of history, technology, and power. Technical practices replace cultural practices, claims to data replace claims to land, and high technology replaces indigenous community as the “deserving” object of attention and desire. Within fields of power, cultural identity is not the only thing articulated by shareholders – so too is scientific identity.

His eyes narrowed as he watched us. The catch was processed on capture now so I weighed the parrots as soon as the hunters trimmed and bagged them. ‘How much’ asked the oldest hunter as he put the bag on the scale as if he was buying pumpkin from a market higgler.

‘260’

‘Yeah man, me know seh ‘im did big’

‘...girl?’ I guessed tentatively, for in Jamaican Patois every man, woman, and child is “‘im”.

Its head looked bigger, eyes smaller, less of a white rim. So I went with girl.

The oldest hunter peered into the bag and nodded. ‘eehee, ah one ooman one dat.’

‘Aaaaaaaaahhhh’

Our guessing games had become something of an official sport now that the parrots were sorted out in the open. I thrived off the nods of approval. The hunters only just stopped short of putting money on the weights. 265 (grams) was as big as they got. Above 240 was respectable. Anything under 220, no matter the colourfulness or condition, brought with it a small weight of its own. None of this mattered of course, it didn’t change the going price. Yet in some way nothing mattered more. Here we were, a group of black folk out in the forest making science. Making ammunition. Making resistance. Making capital.

‘Yuh fi weigh dem before dem wing clip caah it ah guh come out smaller’ said the angry young hunter who could hold his tongue no more. The older hunters all turned to me in unison. I could feel their eyes darting across my face like recognition software, searching my
expression for some kind of justification. Surely she knows what she’s doing, I could feel
them think. I had to make it good. ‘Actually’ I began, after a long, supercilious breath ‘the tar
weighs more than the feathers. The feathers are negligible. It’s better to have it trimmed, it’s
a more accurate reflection of the weight.’ The oldest hunter nodded and looked away. I
smiled wryly wondering where on earth I pulled that nonsense from. The angry young hunter
looked down, satisfied but wounded. I offered an olive branch. ‘Here, you do the next one.’
The small notches are 10, I told him. It was smart to bring up the feathers, I praised.
Whichever way we do it, it has to be consistent across all catch and seasons, I explained. I
couldn’t remember how I did it last week, let alone last season. Truth is, I had no idea what I
was even doing with the measurements. The weight nor the sex. This far into the thesis and it
has made no appearance\textsuperscript{13} – it never will. I had initially planned to take wing measurements
too, but that seemed more trouble than it was worth and like it required more interest and
commitment than I could feign. All I knew was that every piece of equipment earned me
more respect. Last year when I pulled out the camera trap, a round of rapturous applause
from the audience of hunters would have come as no surprise. I didn’t leave it there, of
course. I didn’t want it stolen and I couldn’t imagine what there was to even capture. My
scientific identity masked personal inclinations and intellectual motivations. It wasn’t the
parrots I really sought to weigh up.

Conservation literature often portrays local communities as distrusting of scientists;
engagement with local communities calls for trust- as well as capacity-building (Berkes,
2007; Durand and Vázquez, 2011). How, asked one of the participants of the BES workshop
on indigenous knowledge that I had co-organised (see Introduction), were they to get these
people’s trust when sometimes local people don’t know what was good for them? Look at

\textsuperscript{13} Although I did run both variables through tests to ascertain the cause of the trap failures in Chapter 2. They
were, much like the activity itself seems to be, not significant.
ebola, the participant offered. It was difficult to get the outbreak under control because of the irrational fear local people had of the scientists and medical workers. So prevalent and insurmountable, the lack of trust in science. Positioning their response against science in this way is to suggest that their distrust is irrational, ignorant, petulant, and child-like – everything science is not. As if their response is commensurate to the smallness of their world against the grandness of hazmat suits, high technology, and modern efficiency. Many are not expressing distrust towards science, but towards people, systems, strategies, tactics. The distrust represents its own form of knowledge, gained from decades of experience of outside incursions. It is very rational. Polio vaccination in the Afghanistan/Pakistan region has been severely hampered by the CIA’s use of a vaccination campaign to locate and kill Osama Bin Laden by acquiring DNA samples to confirm the presence of his family in the region (The Lancet, 2014). Today, wild polio has been eradicated everywhere else in the world (Scherbel-Ball, 2020).

In a survey on local attitudes towards conservation, Mark Infield (1988) found many households were in support of or indifferent towards conservation. Their negative attitudes were towards the management practices of conservationists. Many “social dimensions” considered by conservation scientists are often rooted in an apprehension towards the type of science local communities see practiced. Human-wildlife conflicts are often human-human conflicts, as local communities respond to the misalignment of scientists’ outputs (ecological science) with espoused priorities (improving conservation management and social policy) (Estévez et al., 2015). Perceived local attitudes towards protected areas often fail to account for either local needs or local appraisals of the conservation process (Bragagnolo et al., 2016). Often it is not science that is distrusted, not even western science. It is scientific practice riddled with ignorance – misidentifications, uninformed baselines, lack of local and contextual understanding. The baseless science of the ENGOs who visit such communities
week after week to build capacity and advertise opportunities. The flawed and hasty science of the passing scientist with little choice but a quick cut of the teeth to infiltrate a saturated academic market who sees no harm in contributing information where there is a clear deficit. But the combination of high technology, local knowledge, and a slick mouth – this was something the hunters could get behind. So while I dabble in indigenous advocacy, they dabble in one of my science.

Data qualities
BirdLife International minimised its use of the data deficient category. A senior employee of BirdLife International, in a co-authored article, expressed concern over the liberal use – even misuse – of the data deficient category (Butchart and Bird, 2010). The employee credited BirdLife International’s 0.6% data deficiency rate to the ‘greater use … made of contextual information (e.g. condition of habitat, likely ecology/ habitat preferences and trends in known threatening processes) to assign alternative categories where this is plausible and precautionary’ (ibid.). The Red List Partner exerts great control over the assessment process, beginning with invitations to conservation practitioners and researchers considered “species experts” for remote contributions to species assessments. At the start of the reassessment year (typically occurring every four years), species Fact Files are then disseminated to the invited contributors with requests for comments and changes.

Early 2020 I received my invitation and my validation:

‘We believe that input from species experts as external reviewers enhances the quality of information that is used in decision-making and disseminated to the public and the ornithological and conservation community. We are therefore contacting you, as a recognised species expert, to ask whether you would be willing to contribute this knowledge by helping us to ensure that our species information is as up-to-date as possible.’
They called me an expert. A species expert. We had cultivated expertise. With scales uncalibrated and a camera that click-clacked like high heels. They gave me authority denied to me by personal circumstance. Like fuzzy slippers, one never knows how warm and fuzzy it truly is until the foot is slipped in. Species expert. Handled to me freely like those money-off vouchers one gets from the store when one has spent too much yet bought too little. No longer would I assume the moniker of single mother, black student, runt of the academic litter. Species expert. I was yet to panic over the reality that I knew nothing about either bird’s biology let alone had any clear use for the data we were mining. I had but wiped my feet at the doormat yet I was being ushered straight in without so much as a tap on the door. Species. Expert. There was a dress code, it seemed, under “how to contribute”. ‘We would be grateful’, the email continued ‘for any new information, corrections, or updates, in particular relating to population size and trends, threats, and conservation actions underway and needed.’ Data could not just come as they were. The Fact Files, a unformatted replica of the Red List assessment itself, required that contributions – new findings, relevant research, anecdotal accounts – speak directly to existing concerns and focuses.

Once contributions have been submitted, a draft assessment is compiled. Data is assessed and sorted according to its “data quality”. The highest being an observed censuses of highly-monitored populations in small, open, geographic areas, down to circumstantial evidence of suspected trends (see Box 2). The regional assessor explained the sorting process during our interview:

‘The general emphasis is to make use of the information we have. Sometimes we might have conflicting information and we have to work out which one is more robust. We also use remote sensing – we did that one time for an assessment, we used forest loss. If we can anticipate forest decline over a certain percentage in one part, then we can extrapolate it over another. There are guidelines for IUCN – there is a confidence level,
and in some criteria there has to be a greater confidence level than others, so for criterion A, you can “infer or suspect” whereas in criterion C – well C1 in particular – this has to be “observed, estimated, or predicted”

**Box 2: Data Quality categories**
(excerpts from IUCN Standards and Petitions Committee (2019: pp20-21).

**Observed**: information that is directly based on well-documented observations of all known individuals in the population (i.e., effectively a census of the known individuals).

**Estimated**: information that is based on calculations that may include statistical assumptions about sampling, or biological assumptions about the relationship between an observed variable … For example, transect counts of singing males of a bird species may be used with assumptions about the overall proportions of mature males these represent and about sex ratios to estimate number of mature individuals.

**Projected**: same as “estimated”, but the variable of interest is extrapolated in time towards the future, or in space. Projected variables require a discussion of the method of extrapolation.

**Inferred**: information that is in the same general type of units but not a direct measure of the variable of interest … Examples include population reduction (A2d) inferred from a change in catch statistics, continuing decline in number of mature individuals (C2) inferred from trade estimates, or continuing decline in area of occupancy (B1b(ii,iii), B2b(ii,iii)) inferred from rate of habitat loss. Inferred values rely on more assumptions than estimated values.

**Suspected**: information that is based on variables in different types of units, for example, % population reduction based on decline in habitat quality (A2c) or on incidence of a disease (A2e), or on circumstantial evidence.

I had suspected for some time that something was afoot with the black-billed parrot. My very first hunt on my first year in the field (2017) was an entirely different affair to anything I have witnessed since. 15 they caught that day. On two traps: the oldest hunter’s and the lead drummer’s. Black-billed, yellow-billed. They came one or two at a time like guests to a
barbeque. No sooner had one host returned to the party than another had to go get the door. What a bounty. Such abundance. It seemed, though, that I had come into town on the night of the last supper. The feast before the war. There has been nothing but famine and scraps since. Forty, fifty, used to be plucked out of the sky when he was a boy, the oldest hunter would tell us every now and then. Push those traps up like forks to a full plate. Couldn’t miss. Whatever was happening it was more expansive, deliberate and step-wise that anything just inherently vulnerable. The flocks had never been that big in years, yes. But something else was going on. Something new. The yellow-billed parrots were few and the catches were meagre, yes. But black-billed parrots had become gold dust. That first year they gathered black-billed parrots from their traps with some contempt, as though it would only just “do”. Now even they became more interested in the species’ whereabouts.

Cut teeth filled my mouth with the taste of blood and a fear that more would follow. I had no proof, nor a full grasp of the impact the upgrade would have on the community. I pushed ahead, convincing myself it that this was the better option. The state was like dead coral, hollow, lifeless, and bleached. It was unlikely that they would punish the community, given how much they needed them for international funding (see Chapter 3). Assuming data sovereignty furnished Maroons with increasing visibility, greater control, and improved potential access to funding. Birds, particularly habitat specialists, are key indicator species (Lindenmayer and Likens, 2011; Newbold et al., 2013; Owens and Bennett, 2000; Roberge and Angelstam, 2006), critically informing conservation policy in developing countries, where governance is often weak and resources low (Mistry et al., 2008). The ostensible gulf between conservation science and praxis (Laurance et al., 2012) is best bridged by increasing practitioners’ exposure to and participation in scientific research; creating links between policy-makers and universities; and upskilling community-based monitoring (Cooke and O’Connor, 2010; Walsh et al., 2014). Attempts to widen research participation (citizen
science, volunteer bioblitzes) often use equipment that rely on technological literacy/internet connectivity (Newman et al., 2012); create sampling biases (Postles and Bartlett, 2018); require resource-intensive training or data validation (ibid.; Foster et al., 2013); cannot examine physiology or ecosystem structure, critical for granular investigation of population trends (Chandler et al., 2017). Future research on the population trends of both Jamaican parrots requires groups of skilled and committed researchers to undertake robust, long-term studies. Once again, I convinced myself that the upgrade was morally required and scientifically accurate.

My motivations became a stranger to me. I could no longer tell if I was trying to stimulate funding to justify our observations or leveraging our observations so I could get more funding. I felt swept up and tossed around. On one hand, I lost trust in my motives, on the other was my responsibility to act. It was at that point I realised who the monster was all along. No, it wasn’t me. It wasn’t the hollow state or the ENGOs filled to the brim with expats or secretive old hunters who gatekeep natural resources or young hungry hunters and the cultural demagoguery that surrounds them. It was conservation itself. This is no field of power. It is a prison of power. People weren’t engaging in off-stage work because they could, but because they had to. They were chess pieces with one type of move at their disposal. Slaves to the spectacle. But surely, you may be saying to yourself, you could have just not. Just not what? Not recommend it be uplisted? And say I suspect nothing has significantly changed, when that’s not true. What when they go extinct on my watch? What exactly would that do not just to my credibility but the credibility of indigenous knowledge that we insist can sit hand in hand with conservation science?

Not participate? It is only a matter of time before another teeth-cutter comes along and finds them to be hunted to the brink of extinction. One summer’s evening, at my inaugural National Geographic Explorer regional meeting, I began talking with the founder of a
moderately-sized international ENGO. We talked about our work. He was seeking funding to employ more wildlife rangers, I was working with this fascinating group of Maroons who hunted parrots with this centuries-old homemade adhesive. What are the chances, he said. He would be going to Jamaica soon. A place called Cockpit Country, to catalogue some snails with a research institute called WRC. Industrial, capitalist, conservation (in all its guises) can do nothing but get bigger. Reach farther. It’s never enough. There’s always something unfound but inherently vulnerable. The rung of a high-traffic ladder is no place for a home. Climb or be climbed on. Black-billed parrots in a forest that dense – their fancy tools and fancier methodologies will find but a few. We know what story those numbers will tell. It’s ok, they’ll say. Lydia will set the record straight. Look how long we spent up there weighing, measuring. Tell them about our science, our data. Dragged into a fight with a fistful of stories dressed in tattered rags against shiny, pressed, buttoned-down data. I still can’t see another choice but to see it through. But perhaps that’s what holding shares does to you. Shares you didn’t know you needed yet cannot afford to lose. I made the only move I could, like conservation’s pawn.

There was still the matter of the type of data I would present to substantiate my suspicion. “Because I have to” would not suffice as a justification to my edit. Anecdotes had to be transformed into a “higher quality” of data. In our interview, I asked the BirdLife International senior assessor about their use of indigenous knowledge or local accounts in species assessments. ‘One of the reports for a macaw included evidence that some indigenous communities reported sightings, but the majority of our contacts are academics’ she replied. After some silence she began again ‘I guess it’s a bit difficult when local communities report seeing a particular species, because how do you verify that and determine how reliable the information is?’ Data quality did not just refer to the rigour of its quantitative analysis, it also referred to the implicit quality and credibility of the person collecting it. There seemed to be
no concern around reliability for academic contributors, despite how many of them often rely on the very same local knowledge (see Tomasini, 2018). Or so I initially thought.

Not long after the regional assessor had outlined much of the assessment process, one of the senior assessors walked into the meeting room and took a seat. He had taken many trips to the Caribbean, he told me, training local scientists. ‘One of the other things in terms of the link between indigenous knowledge and scientific knowledge’, he began, ‘– I mean … there are very few people who go into the forest [Cockpit Country] on a scientific level. I can name maybe three!’ He then to name the founder of the independent research institute, one of her assistants during her PhD research, and the Jamaican-born, US-educated CEO of BirdLife Caribbean; none of whom were scientific enough before his tutelage:

‘Look, [the founder of the research institute] needed a lot of help – I mean A LOT. I had to do a lot of work with her. But the locals… they may go in [become involved in ecological research] through their degree, but once they do, they sure as hell are not going back into it! There’s a sense that the degree buys them freedom and access to an office job’

The senior assessor described the work of the three local scientists, all of whom trained abroad and then followed an additional programme of informal tuition to become credible conservation scientists. He continued:

But very few people though, and that’s one of the issues in working in Jamaica though: its finding good field people who actually want to go back to the field. But [the founder of the research institute] – numerous students she’s tried to encourage. Got them on Masters programmes in the States, but they’ve done a runner. She tried really hard to get people from UWI engaged. Actually, Jamaica’s the one country in the Caribbean where the majority of the really active NGO/conservation/science people are actually ex-pats, whether that’s German, British, American... That’s
always been very hard, because the approach of BirdLife has been to work with the local people. But you go to the botanist but they’re German!"

‘It’s a different country, Jamaica’, he concluded wistfully, ‘unique to the Caribbean, I’d say.’

Local scientists occupy a difficult position in global science, one which requires further attention and research. Ukaegbu (1985) asserts that Nigerian scientists are often under-utilised because of a ‘lack of trust, recognition, and confidence by society’. ‘Literature on science and technology in developing countries in general, and Nigeria in particular’ Ukaegbu argues, ‘emphasises the structural constraints to scientific and technological development’. Little attention is paid to ‘the work world of the scientific and technological practitioner’, within which, Ukaegbu proposes, there is little to no encouragement for nation states ‘to create conditions for … technical professionals to learn by doing’. Celia Lowe (2004) chronicles the efforts of a team of Indonesian scientists around the conservation of the Togean macaque, which included determining the species as distinct from its congener and, therefore, endemic to Indonesia. The Indonesian scientists reported initial findings that suggested significant morphological differences to their funders, Conservation International (Lowe, 2004). Conservation International sent their own team of scientists to take control of the project – the local scientists were treated like participating villagers (ibid.). Local scientists have little scientific capital.

Bruno Latour introduces his well-known concept of “centres of calculation” – sites in which data is rendered mobile, stable and combinable (1987: 223) – by describing a 1787 voyage by a number of European scientists to the East Pacific to determine whether or not a particular land mass was separated from mainland Asia by a strait (1987: 215-219). Unable, due to weather conditions to get to the exact location, the scientists asked a group of locals on the beach of the land mass. The locals confirmed that there was a strait, by drawing a non-
indexical map in the sand, showing China, the island, the strait, and added notches for scale (each of which represented a day’s travel). It was this map – copied by a scientist into his notebook – that became their evidence. Their data. That the locals were able to render knowledge mobile, while keeping it stable and combinable, Latour argues, allowed it to replace direct observation and become data in its own right. ‘We need to get rid of all categories like those of power, knowledge, profit, or capital because they divide up a cloth that we want seamless in order to study it as we choose’, Latour continues ‘… the question is rather simple: how to act at a distance on unfamiliar events, places, and people?’ (1987: 223).

But there is another, and more likely, possibility. And for that we need to reinsert categories such as knowledge, power and capital because science is never produced without them. The scientists did not simply use the data because it was presented in an abstract form that they could copy. They used the data, which in part justified their very expensive voyage, because the locals presented a capacity for abstract thought. The locals could be believed. The locals had scientific capital. It was not the quality of the data that satisfied the scientists so much that they abandoned their voyage so close to the destination. It was the quality of those who produced it.

Elizabeth Garland (2008) describes how in 2000, a National Geographic Explorer undertook a 2000-mile trek through the central African jungle. It was at once a serious ecological assessment and a ‘lavish publicity stunt” (ibid.). At the end of the trek, the researcher met with the Gabonese president who signed all 13 of the national park sites that the researcher proposed into law that very day. Garland discusses the substantial influence and money amassed by such western scientists, now conservation demagogues, who she describes as “charismatic mega-biologists”, whose ‘(white) faces … most readily spring to mind when audiences worldwide think about the study and conservation of African animals’. Such stardom, Garland argues, sits on black backs: the many African scientists who do the
day-to-day work within the parks, many of whom have significant levels of managerial responsibility. While local scientists are trained enough to be entrusted with such science, they are paid less, and receive less access to professional development than their western counterparts, who ‘spend a great deal of time alone in the bush and yet somehow always seem to have plenty of money to buy expensive equipment and keep petrol in their car’ (Garland, 2008). When Garland asked about these inequities, local and western scientists were aware of them, but none were prepared to challenge things. ‘It was as if the project of protecting African wild animals somehow required (neo)colonial power relations to remain in place’, Garland speculates.

It does. Dan Brockington (2008) expands on Garland’s observations to consider the prevalence of celebrities in conservation, asking ‘[w]hy do [they] exist? What needs do they meet?’ Conservation feeds off of the “para-social relations” created from the sense of intimacy nations of voyeurs feel when seeing celebrities in the wild (ibid.). These relations distort and reconfigure a multitude of social relationships: between the rich and the poor; urban and rural; mainstream and marginalised; western societies and the global south; people and everyday objects (though imaginaries of sustainability, discussed further in Chapter 5); people and nature. For the spectacle is not merely ‘a collection of images; it is the social relation between people that is mediated by images’ (Debord, 2005: 7). These modified and mutated relationships, held secure by the articulation work of cultural demagogues, environmental ideologues and celebrities, serve as funnels that keep capital in and the poor out of particular spaces. But the spectacle does not just imprison the poor and the layman; it also ensnares its reproducers. Conservation is a hall of mirrors. A work camp. Whatever one’s route into conservation, whatever the motives that shepherd people through its narrow valleys, one is immediately shackled – upon entrance – by one form of capital or another. One does not hold shares, they are held by them. Even the demagogues. I have met some
“charismatic faces” in person. Some through National Geographic. Shoulder-deep in projects, looking for more financing, more equipment, more bodies. Whatever it took to get the data they needed both to justify support of the past and conjure backing for the future. We’ve run out of money and we can’t find it [some kind of marine species], I overheard one demagogue tell a senior representative from a funding body. I’m just so tired of this nonsense, another prominent African conservationist sighed as we talked at a funding mixer. Another was getting death threats but had to go back to the field, she had too much capital tied up there. If conservation is our government, citizenship is burdensome and taxation is high. And this is just the impact upon those with the privilege of being in the quorum of shareholders. Perhaps conservation is in fact one giant Ponzi scheme. Invited in with open arms, required to groom, seduce, and bring in others to pay your way out.

So why is Jamaica, as the senior assessor claims, unique? Why has it made available so few scientists, bodies, and suckers born every day? Jamaica’s hollowed-out, castrated state has certainly exacerbated the absence of both local and localized scientists. The island’s unique geographic, economic, and political history has played a role in that (see Chapter 3). So too has Jamaica’s cultural identity, which, under the gaze and patronage of Imperial Britain, has splintered into two diametrically opposed forms. On one end the autochthonous, unruly lives of the rural, black, poor; on the other, the educated lives of the aspiring middle class, groomed and tailored in British sensibility. Parents didn’t work in the fields, on their knees, on swollen feet to send their children to school for them to then work right alongside them, albeit clipboard in hand. My own mother, born and raised in rural Jamaica, is still trying to piece together why I left my job as a teacher to take her grandchildren to some forest up yonder. Mosquitoes ravaging their skin. Research ravaging my finances. Where had she gone wrong? Perhaps having and raising me in Britain made me like Icarus – another fool too close to the sun. It is clear to see why so many of the research institute’s proteges “did a
runner”. The best use of an overseas degree is not to submit to a precarious life in the same thorny overgrowth from which they had broken free. Recently a freelance wildlife illustrator, Cambridge graduate and woman of colour, told me that conservation was a game for the wealthy and the white. Becoming a localised scientist in small, under-resourced islands with little existing conservation infrastructure is too expensive a pursuit for many Jamaicans. Similarly, becoming a local scientist and rendering oneself indistinguishable from a past from which one has studied one’s way out is also a price too steep.

**Assessment**

I sat in hush with my stories and inclinations. How does one arm oneself, one’s suspicions, one’s choices, as well as a community with such paper thin words and possibly battle big data, big tech, and big consequences? Catch statistics counted for more than a suspicion (see Box 2). I started there. I referred not just to my findings, but to my (then) forthcoming peer-reviewed article (see Gibson, 2020). Black-billed parrots were not under significant hunting pressure, they were not typically desired by hunters, I argued. I cited an article by Wright and colleagues (2001), which analysed thousands of online advertisements of neotropical parrots for sale to ascertain the species that featured most heavily in international pet trade markets. Of the thousands, none were black-billed parrots, and three were yellow-billed parrots (Wright et al., 2001). The pet trade was domestic, not international, I argued. I skimmed the assessment again, looking for facts I could challenge. Under threats, both assessments listed consumption as food. The hunters never ate the parrots. The oldest hunter had tried it once in his youth, ‘Man, it tough! A one tough ol’ bird dat.’ I remembered speaking to a bird biologist from a prestigious German research institute once; we both presented research at a conservation funding mixer. Parrots were way too valuable to eat, she agreed after I confirmed that the hunters I followed sold their catch as pets rather than eat them. As far as she knew, almost all communities who hunt parrots do so
for the pet trade. I quoted her casual words to me, hoping they would strengthen mine, which lay soft and trembling.

It became difficult to refer to the rest of my anecdotal evidence without some kind of anchor. A publication, big numbers, hard facts, an utterance of agreement. Any paraphernalia of expertise. I had observed hybridisation in some of the catches – this was a suspicion that could justify uplisting under Criterion A. The assessment attributed nest depredations to the Jamaican boa. In my attempts to acquire scientific capital (either from others through witnessing or through embodied practice) I had erected a small number of camera traps. There was no scientific rigour involved: in no particular order; across no sampling grid; along no transect line. Just opportunistically placed by the water sources closest to the village. Each camera trap had picked up at least one mongoose, rat, or feral cat. I remembered that the oldest hunter had demanded that we kept anything perishable high, on top of a zinc cubby he had made after the avocado had been eaten by a rat or a mongoose. I speculated that small mammals were also involved in nest depredations. The rubbish trucks hardly came at all now and the villagers seemed to be developing their own waste disposal practices (mostly burning). No longer were bins piled high by the side of houses in hope and despair. Such small mammals were probably moving out into the forest, looking for food. Mongooses had raided one pineapple farm on the long route out into the forest. Parrot eggs were probably on the menu too.

I began to see the importance of my contextual contributions, which lay, as context does, in broken bits and soldered pieces. I still needed a bag for my bits and pieces, for I would look inept and perhaps unhinged had I poured it out of my hands like a bill satisfied with nothing but copper coins. I decided to build a website and populate it with bits of findings, pieces of updates, and camera trap images with the information strip at the bottom that always has the look of hard-won science. I had seen a website in the bibliography of a
red list assessment of another parrot. Their bits and pieces were pictures of hurricane damage and the likely number of nests destroyed. Wait. I was supposed to be making my name on incorporating the voices, knowledge, and desires of indigenous communities into conservation, yet I hadn’t consulted a single one of them. I quickly called the village historian. ‘Dem ah come late now. October, November time. Big ol’ flock. 50, 60 ah dem. Yuh fi see dem up inna di ackee tree.’ What? Was he sure? Then why haven’t we seen them in the forest? The news disembowelled me. Shame and panic now occupied the cavity. It was the day before the deadline and I had pressed and pleated my science the best I could and paid no attention to the seams that had come apart. Scrambling for some kind of clause, a biological explanation for how species in decline could re-emerge triumphantly months later, I reread the Red List guidelines again. Criterion B: “extreme fluctuation” (See Box 1). Yes. Perhaps the black-billed parrots had been outcompeted and starved from their typical breeding season and now here they were. A narrative that could befriens us all.

I would need some confirmation of this change from someone with experience of sightings both in the forest and the village. I would need a hunter. As uncomfortable as it is for me to admit, more than that I needed an alibi. Someone to shield all my foibles – scientific and otherwise. Someone whose authority on the matter was unquestioned. As fond as the old hunters and I were of each other, they wanted no part of this new magic and I knew it. I also could not bring myself to ask it of them, because I knew they would lie for me if they thought I was in desperate need. The young hunters had just abandoned the entire season and were rarely in the village. No point adding their bad science to mine, I reasoned. But deep down, I knew their credibility with many of the villagers right now was probably worse than mine. I was also desperate to remain distant from their political world. The angry young hunter was the only person I could talk to. We don’t catch black-beaks because we don’t have black-beak callers, explained the angry young hunter. Everything was crumbling. Wait, no, I
responded. What about that first year – look at how many black-billed parrots you all caught. Yeah, perhaps, was his absentminded concession. We can’t even see any black-billed parrots flying by, I added doubling down. The black-beaks don’t come around because they hear all of these yellow-beaks, the angry young hunter countered. Wait, what? I described to him an article that I had read about the black-billed and yellow-billed parrots living in sympatry (see Koenig, 2001). If this is politics, said the angry young hunter, then we can say they’re disappearing, but I’m just telling you so you can know the truth for yourself.

Interpretation was one thing. Cooking books was another. ‘No, let’s figure this out’ I replied. Were all the yellow-billed parrots just in the forest or did he see them all over Jamaica? All over Jamaica, he replied. And the black-billed parrots? They might fly about but they live in the forest. Remember those two black-billed parrots you caught, the ones with the funny colour on the head? I explained that I thought they were hybrids and sent a picture of the type of parrots I thought they may have hybridised with. ‘Ah true’ said the angry young hunter. I explained my theory about the small mammals and nest depredations. ‘Dem live high up inna woodpecker hole yuh nuh’ the angry young hunter offered. ‘I know’, I replied, ‘but rats can climb’. I explained my hurried justification of the possible shift in breeding season. ‘Look at these droughts… think about the amount of birds probably coming to the forest – maybe even from other countries. Black-bills would never come this late, right?’ They never used to, he replied, after some thought. Cooking books was more than my conscience could take. Cooking up reasons though, began to seem in line with the witnessing that science required. Perhaps, though, I was simply coaxing up agreement. I decided to run the theory past a couple other Maroons. They couldn’t be sure, but it sounded reasonable, they said.

This was now our bric-a-brac. It was difficult to capture such nuances in the website. More than that, this had become a game of suspicion. My catch statistics were no longer
evidence of population decline. Perhaps a napkin was the most appropriate medium, since my suspicions and my credibility were as fleeting as a phone number typically scribbled upon it.

Then I remembered the first draft of this chapter and the Imperial parrot. The sales manager and the government agency had published their bric-a-brac, on the potential impact of Hurricane Maria, in the conservation news section of a journal. I began reading through the Journal, owned by one of the biggest international NGOs. The conservation news section seemed to be a bric-a-brac shelter of sorts. Home to bits and pieces. Furnishing suspicions with DOIs. I asked some of the Maroons if they wanted to publish our bric-a-brac in the same section. They agreed. I asked one of them, who I knew had strong political aspirations, if he wanted to be the lead author. I didn’t like the way the prison of power felt nor the things it seemed to require of me. Lead authorship seemed more useful for their cultural demagoguery than my academic trajectory, I have long since ruled out becoming a conservationist or an activist for indigenous rights. I would help some of the co-authors get a conservation grant so they could carry on such work, I decided. Then at least there was one act of kindness between me cutting my teeth and also vanishing.

The news article highlighted some of the limitations of my publication and the use of its catch statistics:

‘Recent research explored the catch yields of traditional parrot hunting in Cockpit Country (L. Gibson, 2020, Journal of Ethnobiology, in press). Statistics for the 2018 and 2019 hunting seasons (July–September) suggest a significant decline in the black-billed parrot population, with the total take <5% of that of the yellow-billed parrot Amazona collaria, also endemic to Jamaica. There are, however, limitations to this study. Yellow-billed parrots were used more extensively as lures during hunts than were black-billed parrots, which could account for the differences in total takes.’

(Cawley et al., 2020)
My repentance had begun. At the same time, the article shielded me from some scrutiny. I was transparent about my research. I included, promoted even, the voice of others. It was to those voices, objectors could direct their criticisms. There was our science. But was my soul intact? Cooking up reasons, cooking up witnesses, cooking up science, cooking up culture, cooking up ignorance, cooking up morals. It’s quite some heat in the kitchen of power. One I may no longer be able to stand.

Psittaciformes are the fourth largest bird order, yet contain one of the highest numbers of threatened bird species, with 28% of its over 350 species classified as threatened (Olah et al., 2016; White Jr et al., 2012). Neotropical psittacines, which comprises over half of the order (Marsden and Royle, 2015), are particularly prone to high extinction risk; 31% of its listed species are categorised as threatened (Berkunsky et al., 2017; Gonzalez, 2003). The bird order also contains species most commonly reported in avian wildlife crimes (Olah et al., 2016). Colourful plumage, speech mimicry, and longevity enhances their desirability as pets and flagship species alike (Clark and de By, 2013; Pires and Clarke, 2012; Tella and Hiraldo, 2014; White Jr et al., 2012). Debates continue, however, over whether it is hunting or habitat loss that is the primary driver of the order’s pronounced extinction risk. Clark and de By (2013) suggest that their resilience makes them adaptable to environmental change, and that only two psittacine extinctions could be attributed to habitat loss: the Caroline parakeet and the Glaucous macaw. The picture is more nuanced, others argue. Habitat specialists (such as black-billed parrots) are more sensitive to habitat loss (Newbold et al., 2012; Owens and Bennett, 2000). There is regional variability in primary threats, with hunting posing the biggest threat to extinction risk in afrotropical parrots, and different forms of habitat loss exerting the most pressure on neotropical and indomalayan parrots (by way of agriculture and logging respectively) (Olah et al., 2016). Some argue that psittacines face a complex combination of extinction risks that cannot easily be disentangled (Berkunsky et al., 2017).
Scholarship on neotropical parrots suggests there has been an overemphasis on hunting in assessing extinction risk. Much of the trade networks in these regions are small and lack the capacity for international reach (Gonzalez, 2003; Tella and Hiraldo, 2014). Most, therefore, are sold domestically, in countries with little disposable income. Pires and Clarke (2012) found parrot hunting in Mexico was opportunistic; the abundant and the accessible were captured more often than the rare or the valuable. Rarity and high extinction risk may actually reduce a species’ hunting pressure – they may become more trouble than their worth. Economics alone does not compel hunters up steep grey shards. The disappointment, the frustration, the precarity. Most other livelihood opportunities are safer bets. Yet the inherent vulnerability of the pursuit is magnetic. Something entrancing in stumbling and suffering in the dense and sticky blue-black. Slipping, falling, laughing, crying. This is not rhino horn or pangolin scales. Often there is no large financial or social network. A bird in the hand is not automatically money in the bank.

‘Suh yuh nah come back?’ replied one of the old hunters after the oldest announced that he was cutting the season short (see Chapter 2). ‘No sah!’ There was still surplus stock, he said. The year before, he didn’t sell all his remaining catch at the festival. Three of them didn’t make it to this season. Died from some eye disease, looks like some of these new catches were weak and riddled with problems, he wondered. The younger hunters had connections and moved parrots quickly. They needed the money. The older hunters had patience and other resources: homes, farms, land. They waited for opportunities like the annual festival, where they could get the best price out of hypnotised tourists and returning customers. Any catch they hadn’t sold by the January festival, would be loaned out as early callers, fattened and gussied up for the following year – where husbandry costs could be offset by larger asking prices. It was an act of fiscal balancing. On the one hand enough surplus is required to invest in husbandry, rear bigger, more attractive parrots, engage in
patronage. On the other, one must avoid too much surplus: coops become overcrowded, parrots become sick and die. Young hunters who lack the space and infrastructure have the additional burden of surplus visibility. Stimulating requests from people to whom they are indebted, with whom they are connected. Driving down prices and encouraging theft. The social realities of traditional parrot hunting does not always suggest that bigger (and rarer) is better.

If we begin to move away from automatic assumptions of hunting being the primary driver of higher extinction risk among parrots, then why is the avian order at such risk? Other birds that inhabit these ranges are also impacted by habitat loss. If habitat loss plays a greater role in psittacine extinction risk, why do the impacts appear to affect them disproportionately? Models of morphological traits that make parrots more susceptible to extrinsic threats (small clutch sizes, slower life histories, relatively larger bodies) have attempted to answer such questions. Many yield predictions similar to current categories of extinction risk (see Jones et al., 2006; Machado and Loyola, 2013), suggesting that the life histories of parrots render them inherently more vulnerable to habitat loss. Such models, however, have low sensitivity and outputs are relatively unchanged when external changes are incorporated (ibid.). As habitats fragment, resources are extracted, and land use changes, actors emerge, protection imagined, the model can provide little assessment of their impact. Once again, appraisals of inherent vulnerability obscure opportunities to assess practical survivability, even possible durability.
These biological traits also make the parrots more susceptible to something else: new contributors with new methods, new technologies, new networks, and new results. To what extent do these social changes inspire changes to categorised (and perhaps not actual) extinction risk? Were there others, who had been compelled into action by witnessing, through advocacy? To begin to understand the role of social changes on categorised extinction risk, I analysed (spatial and tabulated) data requested from the IUCN Red List team, as well as the public-facing web assessments themselves (the only data source to list assessment contributors). The data was compiled in April 2020 – before the finalisation of the 2020 reassessment (see Appendix C for more details and tables of statistical results). Of the total species in the order Psittaciformes that has been assessed by the Red List (N=419), I restricted my analysis to the species currently listed as threatened (Vulnerable, Endangered, Critically Endangered) at the time of compilation (N=117). From the data, I established three location-based variables: biogeographical realm; endemism (ascertained from country occurrence); spatial data (shapefiles) of extant and past ranges. 66% of currently threatened species are nation-endemic (N=77) and over 50% (N=60) inhabit the neotropics (see Figure 11). Known ranges of these species spread across much of the tropics (see Figure 12).
Unknown, unconfirmed, and potential sites, however, appear to be concentrated not across within small and remote islands, but rather large swathes of landlocked forests (see Figure 13).

To understand how contribution to the assessments of currently threatened species may have shaped or influenced their categorisation, I analysed all previous Red List assessments since 2004\textsuperscript{14} (N = 627 assessments). There are significantly fewer contributors

\textsuperscript{14} 2004 was used as the lower limit as it is the first full assessment cycle since the 2001 changes to assessment classifications.
to the assessments of endemic species (mean = 2.8 contributors; N = 407 assessments) than to the assessments of non-endemic species (mean = 4.2 contributors; N = 220 assessments) (one-way ANOVA: F=30.11, p<0.001). There are also significant differences in the numbers of contributors to Red List assessments across different realms (one-way ANOVA: F= 11.21, p<0.001). The Afrotropics, inhabited by just 5% of the currently threatened species, have the highest numbers of contributors per assessment (mean = 6.0 contributors), while the Neotropics, which house over half of the species and most of the uncertainty, have the lowest (mean = 2.9 contributors). Within these assessments, endemism and biogeographical realms are strongly associated (Chi-Squared: p<0.001). When controlling for endemism, however, the differences in the numbers of contributors across biogeographic realms remained significant (one-way ANOVA, endemic: F=2.99, p=0.01; non-endemic: F=7.21, p<0.001).

Endemism and biogeographical realm have a clear association with the number of contributors to the assessments of currently threatened species, but what impact do these factors have on the outcome of the assessments themselves? To determine potential changes, I evaluated changes between consecutive assessments (e.g. species X, 2004 assessment vs 2008 assessment – providing there has been no assessment in between). Assessments rarely result in a change to the species’ category of extinction risk. Fewer than 10% of the total assessments were either uplists (5.4%) or downlists (2.9%) (N=52). Some were introductions to the Red List (3.6%). The overwhelming majority of assessments had seen no change from the previous assessment. Most species that are threatened now, were threatened then (see Figure 14, above). No particular biogeographical realm were more likely to have changes to species’ category of extinction risk (Chi-Squared: p=0.8015). Endemism also had no significant influence over category change (Fisher’s exact: p= 0.65). There were changes to the numbers of contributors from one assessment to the next. The number of contributors

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15 See Appendix C Tables 4 – 6 for degrees of freedom and N for all statistical results
remained the same in 63% of cases (N=319; total previous assessments = 510), increased in 37% of cases (N=189) and decreased in only two cases. Though changes to the category of extinction risk are rare, assessments in which there had been an increase in the number of contributors were significantly more likely to incur a change to their categorisation (Fisher’s exact: p<0.001). I was not the only newcomer to make changes.

Assessments conducted in non-assessment years (year ≠ 2004, 2008, 2012, 2016) were also more likely to result in changes to the category of extinction risk than
assessments conducted within the designated assessment cycle (Fisher’s exact: p<0.001). This is not unexpected. Surely there must be a good, pressing, urgent reason for conducting assessments outside of assessment cycles. BirdLife International has significant control over the assessment process of bird species on the Red List. Yet over a third of the assessments analysed occurred outside of the assessment cycle (N=229); 73% of changed reassessments are out of cycle (N=38), however these changes represent 17% of all out-of-cycle assessments. What, given the organisation, structure, and experience of BirdLife International’s well-oiled operation, is the cause of all these assessments outside of the quadrennial cycle? Endemic species are no more or less likely to be assessed outside of the assessment cycle than their non-endemic counterparts (Fisher’s exact: p=0.30). Assessments of species from certain biogeographic realms, however, are more likely to occur outside of the cycle (Chi-Squared: p=0.02). In both the Afrotropics and Australasia, there have been more assessments of currently threatened Psittaciformes species outside of the assessment cycle (N=15 and N=23 respectively) than within it (N=13 and N=21 respectively). One in five Afrotropical reassessments have resulted in change, compared to one in 10 in the Neotropics or Oceania. Not because of any underlying inflow of new contributors – not significantly different across different biogeographical realms (Chi-Squared: p=0.08). It may (at least partially) be the result of the autonomy and reach of established research centres in these large, open, colonial landscapes, able to make assessments on their own schedule. Outside of the cycle, as a matter of neither urgency nor exception.

Assessments conducted outside of the assessment cycle are, in fact, more likely to have increased numbers of contributors (Fisher’s exact: p<0.001). When controlling for the timing of assessments, the increase in numbers of contributors only increased the chances of category change if the assessment was conducted outside of the assessment cycle (Fisher’s exact: p<0.001). New contributors invited to the next round of assessments (as I was) were no
more likely to make changes than their pre-existing counterparts (Fisher’s exact: p=0.18).

Changes to categories, changes to actors, changes by large and established research centres all happen largely outside of the assessment cycle. The purpose of these quadrennial assessments, it seems, is not to update, but to maintain. A cycle designed to tick assessments over thereby rescuing species from the clutch of data deficiency. An entire system designed around safeguarding the financial buoyancy of avian conservation. Most changes, it seems, will not wait four years.

<table>
<thead>
<tr>
<th>Table 1.</th>
<th>nature reserve areas</th>
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<tr>
<td># Reserve</td>
<td>Department</td>
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<tr>
<td>1 The Pargoo</td>
<td>Nariño</td>
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<td>2 The Lookout</td>
<td>Quindío</td>
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<td>3 The Parque</td>
<td>Boyacá and Santander</td>
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<td>4 Miranda Swarthvski</td>
<td>Cauca</td>
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<td>5 Wablers Blue Sky</td>
<td>Santander</td>
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<td>6 Hummingbird of the Sun</td>
<td>Antioquia</td>
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<td>7 Chincherry</td>
<td>San Andrés and Providencia</td>
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<td>8 El Dorado</td>
<td>Cauca</td>
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<td>9 Yellow-crowned Parrot</td>
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<td>10 Tarrazu Coban</td>
<td>North of Santander</td>
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<td>11 Arriero Antioqueño</td>
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<td>12 Parú parú</td>
<td>Santander</td>
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<td>13 Blue-throated Parrot</td>
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<td>14 Colorado Falcon</td>
<td>Cauca</td>
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<td>15 Rana Terribilis</td>
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<td>16 Andean Parrot</td>
<td>Tolima</td>
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<td>17 Gila Fuecesi</td>
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<td>18 Las Tuiras</td>
<td>Cauca</td>
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<td>19 Cockroaches of Chia</td>
<td>Cauca</td>
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<td>20 Zarato de los Pinchín</td>
<td>Cauca</td>
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<td>21 Andes Parrot</td>
<td>Crushed</td>
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<td>22 Golden Frog</td>
<td>Tolima</td>
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<td>23 The Jaguar</td>
<td>Guainía</td>
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<td>24 Titicaca Vitticola</td>
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<td>25 Chacma de Parij</td>
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<td>26 Happy Eagle</td>
<td>Guainía</td>
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<tr>
<td>27 Loma Cerrada</td>
<td>Crushed</td>
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<td>28 The Iguana</td>
<td>Cauca</td>
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<td>Total</td>
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Figure 15: Excerpt of land tenure records from the 2019 Annual Report (page 8) of a Colombian NGO. The largest parcel, almost three times the size of any previous acquisition, was acquired in 2014 in a municipality infamous for the Mapiripán Massacre: the 1997 slaughter of over 30 civilians by a right-wing paramilitary group. The parcel is approximately 2% of the size of the entire municipality.

Take the year 2014, which appears to show a slump in the average numbers of contributors but a substantial addition to the Red List (see Figure 14). One contributor, an ornithologist at a Colombian NGO, determined that a single species of parakeet was in fact
The newly-split species was determined to be endemic to small regions of Amazonian Brazil with one endemic to a small national park in Panama. The NGO, funded by international donors such as Conservation International and World Land Trust, owns and operates 28 private nature reserves. According to a recent by a regional NGO, 41.7% of the Colombian NGO’s reserves – the most recent acquisition in the portfolio of now 63030.58 hectares of reserves – were acquired in 2014 (Fundación ProAves, 2019). The same year, two newly-split species were also introduced to the Red List through the contribution of a British researcher, working then as a postdoctoral researcher at Brazil’s Museo Paraense Emilio Goeldi. Yet another newly-split species, this time from the Phillipines, was also added to the Red List in 2014 through a single contribution. Eight species – 7% of the currently threatened species in one taxonomic order – all emerged in a single year.

I make no comment on the legitimacy of these or any other assessments – I still grapple with the legitimacy of my own. Contribution to Red List assessments is scientific capital. Categories of extinction threat are scientific capital. The ability to effect change on Red List assessments is scientific capital. And where there is one form of capital, there are surely others. Land grabs occur alongside data grabs. In longstanding conservation spaces in African landscapes, the power structures within and social units that surround scientific practices creates particular forms of capital in particular ways. Self-determining, multi-authored ways. In the Neotropics, rife with pockets and islands of inherent vulnerability, particular forms of capital are procured in emergent, less stable, exclusive, independent ways. Low volumes of contributors are both the result of unestablished landscapes and scientific practices as well as the need to ensconce both in exclusivity as scientific findings redistribute forms of capital in novel and less predictable ways.

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16 I have established this through internet searches of the named contributor and the region, as well as the justification offered in the assessments of the newly-split species.
17 As above
As I write this, it is a week to the day before BirdLife International will send the reassessment of the black-billed parrot to IUCN. After its review, the black-billed parrot will be uplisted to Endangered. There has been no objection from the only person in a position to do so. This research, borne from a culture-steeped union of pride and curiosity, may have missed its turn too. As I said in the introduction, I am not naïve enough to consider myself as one of the other mothers in the village, from whom I seek a refuge, with whom I cultivate solidarity, and to whom I am indebted. Yet I had not considered until now that I too was one of the slew of organised interests that bombards the village every summer. That this work could and perhaps would place value, burden, even prices on heads and the black bodies that toiled underneath them. Latour distinguishes the act of undertaking science from other acts of creation through the fermentation of lactic acid in Louis Pasteur’s pasteurisation experiments, where ‘a slow and uncertain practice with an obscure explanation [became] a quick and comprehensible set of new methods mastered by Pasteur’ (Latour, 1999: 121). The distinction is in science’s internal referent, its own plane of reference that renders its actions free and independent of the scientist (1999: 132). The independent action of science removes the perversion of will from the act of witnessing.

Like worked dough on a hard bench. It may come together under your hands, between your fingers, at the behest of your pushes and prods. But as long as there is life within that responds to your requests and purpose that bookends your actions, it is dough and not putty. The further I have ventured into conservation, the harder it has become to see science bubble and ferment, particularly when the distinctions, classifications, criteria, and categories used to interpret the action of science are so deeply social and political. Perhaps it – the science, the truth, the lie that bind us all in economic tethers – is hidden in the forest. Hidden by the forest. What is it we do here in these green spaces of action? Cooking up science, risk, histories, and cultures? These categories – of risk and of people – are not only scientific, or
even social, classifications. They are social and political articulations of inherent vulnerability and historic and contemporaneous intellectualisations of our accumulations of capital. From the open plains of historic African conservation to the “speciation booms” of the neotropics. Even if we don’t make changes, we must still make action if we are to remain shareholders. Either we drive the bus or we are run over by it. Make the currents that move and keep capital our way, lest the sediments of access, shareholding, participation, and engagement become the silt that blocks our path. Conservation compels us to act. Compels us towards the inveteracy of movement, monitoring, planning, action, all of which create sets of conditions that allow us to collect, if not create, data. Capture, if not conjure, change. Whether or not we hold convictions, agendas, or obligations. Forced into action, into labour. In conservation corvées.
5. Plastic

They were not coming back. That much was now clear. The season was drawing to a close and the snub blustered against our cheeks like cold, disaffecting breeze. Everything was so mechanical now. Leaving early. Walking slowly. Toiling silently. Catch and people were so few now that emptiness began to annex action. The hearth was left lifeless first thing as those that remained scattered off to their stations. Against a backdrop of orange, red, and pink syrups that spilled into and broke apart the blue-black, hunched silhouettes worked in treetops like hollow tinmen. Like empty souls that would rattle when shaken. Masks of despondency were wearing paper thin and they knew it. Underneath, faces creased with sadness and hurt. So they hid the sadness from themselves and each other and tucked it deep into the work. Hunched over, up high, toys atop the canopy. Little solitary islands in an archipelago of despair and quiet action. They would return to the camp once the pain was hidden in the trees, tucked into the tar, caged in with the callers. First thing in the morning as the sky spilled its syrup over the dead of night.

With so much unravelling and so few people, there was always something to busy oneself with. The hunters were now so busy that I no longer had to be. I had long since relieved myself of the camera and other paraphernalia of expertise and had taken to reading, drawing, or just staring into space. But for the others, there were now more opportunities than ever to drum up busy work. The pantry had to be checked to make sure nothing had been eaten by rats or mongooses. Other locations could be scouted, in case it was decided to move and let the current camp overgrow, because perhaps that was the reason the flocks didn’t come by… or stop… or stick. Reheating the tar, which now failed them more often than not, became an involved and elaborate affair. Bush alchemy. A little more castor oil here, some jackfruit discharge there. Inventory of the plastic bags took much time. At the start of the year (2019), a national ban on single-use plastic bags was announced. Jamaica has only one
type of single-use plastic bag, the “scandal bag”: black and opaque, named for the salacious contents one is able to conceal within it. The law is distinct from most other laws in Jamaica. Nobody seemed to be operating in the vast and complex grey area in which Jamaican lives are typically lived. I don’t know the discourse, media, or threats that surrounded its gazettement, but this law was as black and white as the scandal bag and those seemingly permitted to continue its exceptional use.

The hunters once sent me to the nearest town to try and procure some scandal bags. Most wholesalers still had some round the back, the hunters said. I might have more luck given I was foreigner. In fact, I might have asked for cocaine or trouble and received more welcome. Appalled hostility met my requests. Until one of the older hunters received a small quantity of black-market scandal bags from a friend in Kingston, any spare bags found or recovered were put to use. Laying around the home, on the street, weathered and buried around the camp from seasons gone. Holes and thin patches were mended with knots that distorted the bag in unpredictable directions like an imploding star, leaving little room for its contents. All bags were worked far past their utility. They still had to be careful with the illicit donation. It wouldn’t last long, especially as they were around half as thick as the typical scandal bag was. Counting and recounting the remaining stock provided more busy work. The thin, new scandal bags became another item circulated through the intricate, but now shrunken, patronage system. Yes, it was late in the season now. The young hunters would not come. Nor would the parrots – not like before. Not this late. There comes a point during furious, nervous tidying that one slumps exhausted in an armchair and realises that no amount of scrubbing will shift the stain of despair. In time, the busy work was replaced with resigned slumps.

The angry young hunter and the former migrant worker were now using the young hunters’ trees. Their attendance was barely surviving on the patronage welfare system, with
catches so few and infrequent that it did not cover the cost of participation (opportunity cost, husbandry, etc; see Chapter 1). The flocks still came from the north and two of the young hunters had the tallest trees down in the valley. Requisitioning the trees that were placed so optimally and brought such yield only made sense. It would be given back, if their owners ever came back. Two landed on the angry young hunter’s trap to barely a witness. The oldest hunter glanced over lethargically. ‘Pon yuh ‘tick’. Relief cushioned the angry young hunter from the hurt of the other hunters’ dismissal. No body rose, no spirits rose. No help, no joy, no bustle. Lethargy thickened the air and congealed action. ‘Weh di bag dem deh’ asked the angry young hunter. The oldest hunter reached behind, pulled one of the thin scandal bags from his backpack, and threw it at the feet of the angry young hunter without breaking his stare into space.

Bodies slunk across the camp like bored teens in a hot summer. Despondency put its arms around us, drew us near, and filled in the cracks of time. In despondency, we grew comfortable, with our plight and with each other. The oldest hunter peeled some sugar cane that we had taken en route. Not the thin, hard, wild cane that we sometimes lucked upon once we were deep in. Big, tall cane that we had taken from yet another farm on the way. There were so few of us now, brothers (and sister) in despondency. Things we filed past silently in the dark were now ours for the taking. Another hunter lay sleeping. One was propped up against a tree, cleaning his fingernails with a knife. The angry young hunter was down by the fire, boiling water for more tea. ‘Fuck!’ he blurted, running towards us. The hunter by the tree tried to get up in time but lethargy slowed him as if he was moving through treacle. The knife flipped out of his hand as he stumbled up to grab at it, but it had gone. Gnawed its way through the flimsy, thin, black-market bag and flew off into the clear technicolour morning.

The angry young hunter kicked over a smouldering fire-pan. ‘Fuck!’ ‘Ah wah di backside ah gwaan’ gasped the oldest hunter in disbelief. It was yet another thing none of us
had ever before witnessed (the escape, not the tantrum – that was fairly common). The angry young hunter immediately packed up and left mid-hunt. The next morning, he would walk past us with his new puppy. By my next hunt, he had returned and every time a parrot refused to perch, we would declare it the escaped husband who had come back to rescue his wife. “Come, she deh over yahsuh”, “see her here”, “Nuh worry, come sidung [sit down] mek we introduce you to one nex pretty girl”. We would all laugh, but we had taken the event seriously enough. After over 40 years of practice, it spawned yet another set of changes: processing catch on the go. Wings clipped, feathers oiled, sexed, weighed, bagged, distributed as they were caught. They could break free, but they would not escape (see Figure 16). They could escape, but tough luck – they had been shared. No dues owed. We returned to lethargy and eventually to laughter (despair had never left). But the hunts had been permanently transformed.

![Image](image_url)

*Figure 16: Yellow-billed parrot gnawing a hole into the thinner black-market "scandal bag" after Jamaica’s ban on single-use plastic bags in January 2019.*
‘Dem fuck we wid di scandal bag dis year’ an older hunter had prophesised from the start. “Poor man’s handbag” the oldest hunter called it. The plastic bag was a convenient and free carrier of both the poor man’s contents and his dignity. It housed his scandals and shuttled his offerings. It held the little that he had and masked all that he did not. And now it too had gone. What an endless ribbon of subversion. First economic opportunities had reorganised social conditions, material conditions, exposure to different environmental conditions, transforming relationships between people, spaces, paths, and hunts. Now political action had destabilised technological dependencies and reshaped decades-old practice. When he was a boy, his job was to poke the whittled sticks through the chicken feed bag until he had made a series of triangles all the way up the bag like a pagoda. They were tiers of perches that separated the catch – and they had to be separated or they would maim, if not kill, each other. Catch was plenty then; bagfuls of pagodas had to be prepared by the end of the hunt. What difficult work, the old hunter recalled, readying the bags every hunt. To tiptoe down steep inclines and across narrow ridges with such impedimenta. Rattling threats with every bump and jolt, like a house of cards. What technological advancement, what freedom, when one could simply sling catch into a plastic bag and be on one’s way. Scandals dangling carelessly from calloused fingers, tied and hung gaily from worn belt hooks.

Plastic is subversive. It transgresses cultural categories, flooding paths and invading social and natural spaces. It ‘opens up broader questions of value, identity, and art’ (McKay et al., 2015). Plastic frames postcolonial subjectivities. In the Philippines, McKay and Perez (2018) argue, plastic underscores socioeconomic divide:

‘For wealthy Filipinos, plastic is the detritus of colonialist globalization. It threatens the air with toxins when the poor burn their garbage, blocks the waterways and results in flooding, and fills the streets when discarded by sidewalk vendors… Plastic blocks national progress and marks a kitch popular aesthetic… For the poor, plastic
is convenient, lightweight, durable and/or easily replaced. It is a pragmatic material, reflecting short-term thinking about livelihood security. Its many colours cheer up their dark, poorly lit houses’

In Kenya, “plastic boys” – a term used to describe street hawkers in tourist areas and, more broadly, “useless paupers” who ‘fail to marry, accumulate resources, or set up respectable households’ – are agents of pollution (Meiu, 2020). The name originates from the 1970s, to describe groups of poor boys who sold plastic glowsticks given to them by American soldiers to villages without electricity with the promise that it would glow for three months. After some hours the light was gone and so were the plastic boys (ibid.). Plastic boys engage in social and physical contamination. They wear plastic clothes, give plastic smiles, and do plastic things, like homosexuality (ibid.). They are unproductive in every sense – they do not till soil, work land, make babies, or build communities. In fact, they even impede and lure others from productivity like plastic sirens. In Bangkok, “plastic-bag housewives” feed their family with parcels of takeout meals shuttled via plastic bags into their unkept dens of iniquity – and enable others to do the same (Yasmeen, 1996). The Thai peasant woman, a “micro-entrepreneur”, is crassly mobile, visible, audible (ibid.). Surfing between the public and the private on plastic waves created by Bangkok’s growing foodscape.

Plastic shapes postcolonial subjects not just through class, gender, and sexuality, but also its own form. The shape of plastic matters. Plastic bottles hold political implications about infrastructures around, access to, and commoditisation of water (Hawkins et al., 2015). It eludes to corporate greed and consumer selfishness. Plastic household items such as Tupperware and toothbrushes are ubiquitous, unremarkable, necessary, and politically neutral (Fisher, 2015: 119-120). Plastic cultural artefacts are outrageous, disappointing, and inauthentic, disrupting cultural continuities and dissolving temporal hierarchies (McKay et al., 2015). Where is the patina, the heritage, the dignified layers of age and wear? Incursion
and surrender are all that lie on the surface of plastic crafts. When they are produced by
indigenous craftsmen, it is all the more problematic. It unhouses articulations upon which we
have all come to rely. ‘I thought you said the practice was traditional… Aren’t they
indigenous?’ an anonymous reviewer wrote of the hunts when I made mention of the plastic
bag. What of the plastic bag? Bans on single-use plastic bags have become the single most-
prevalent plastic legislation globally. What about plastic bags specifically have made them a
target for such widespread reform? Plastics are the footprints of poverty and power. The
stenograph of suffering, disorder’s mirror on the wall. That season, the scandal bags wore
thin and hole-ridden – as did the hunts. This chapter begins with an examination of the role of
single-use plastic bags as a technology, and how it has become invested with such political
will. Through quantitative analysis, I then explore the distribution and prevalence of national
bans on single-use plastic bags, before reflecting on the other forms of social reverberations
this technological change has spawned.

**Technology of the poor**

‘What is “technology”?’ asks Al fred Gell (1988), exploring its place in the
archaeology of human existence. Technology, which began as tool use in the quest for food,
remains a socially derived method of accumulating resources. That a group of individuals use
tools is just as dependent on the transmission of technical knowledge – the distribution of
cultural capital – as it is on the existence of the tool itself. ‘In the widest sense, [technology]
is those forms of social relationships which make it socially necessary to produce, distribute
and consume goods and services using “technical” processes’ (Gell, 1988). But technology is
more than an enmeshment of processes, tools, and devices within a network of technical
knowledge; they ‘engender distinctive worlds of their own’, Langdon Winner argues (1986:
8). If two men, Winner proposes, travel down the street – one afoot, one in a car, the man in
the car cannot window shop, stop to pick flowers, or pause for a brief conversation (clearly Winner has yet to experience Jamaican driving) as the man on foot is able to (ibid.). Owing to the technology, man in car is subject to a different set of social constraints and spatial construction. An entirely different social world. One of obstacle avoidance. One of flow optimisation. One regulated by a different set of legal processes. Technology determines social order, pace, movement, purpose; consequently, it is a symbol of such. As technologies ‘become woven into the texture of everyday existence… [they] shed their tool-like qualities to become part of our very humanity’ (1986: 12). Technology, therefore, is a ‘total social phenomenon… that marries the material, the social, and the symbolic in a complex web of associations’ (Pfaffenberger, 1988).

Poverty brings these constitutive parts (the material, the social, and the symbolic) of the plastic bag into sharp focus. Baladi bread is a traditional flatbread subsidised by the Egyptian government. At one-tenth of the price of other breads, it supports 85% percent of the nation and provides a critical line of support to low-income families (Barnes and Taher, 2019). The purchase of baladi bread – which, unlike other breads, is not sold pre-packaged – encapsulates citizens’ navigation of the nation’s “casual care” systems, Barnes and Taher (2019) argue. Inspecting the loaves at the bakery, rejecting ones that are uneven and burnt. Laying them out on wooden crates, racks, car hoods for them to cool. Talking with others in that public space outside of the bakery as they wait – the small boy, the poor elderly woman, the underemployed, they are in no rush. Stacking the loaves carefully, once cooled, in the plastic bag carefully selected to hold their purchase. Large enough that the loaves are not squashed, small enough so it doesn’t add to the cumber. On its face, this is airing, stacking, and packing of heavily subsidised bread. But the purchase of unpackaged baladi allows poor citizens to articulate standards, display dignity, and widen and maintain social networks – all
of which is mediated by the plastic bag, which when used concludes the whole social and very public affair.

Zöe Sofia (2000) considers the inherent femininity of container technologies, describing it as the ‘structurally necessary but frequently unacknowledged precondition of becoming’ – much like our first container, the womb. The container sits in functional opposition to the masculinity, aggressiveness, and dynamism of tools (ibid.). It does not dismantle or construct. It does not need to be wielded or held to be used. The ‘humble jars or plastic bags’ work in hands and on shelves (ibid.). The container is society’s vessel. It waits obediently by its heels, forgotten on its shelves. It holds, it supplies, it transports, it mediates.

In contemporary Cuba, containers are in high demand. Here, products distributed by the socialist system – including sugar, beans, meat, oil – are also unpackaged (Boudreault-Fournier, 2019). Many collect plastic water bottles discarded by tourists for essential later use (ibid.). Many walk with plastic bags, still referred to as Cubalse: the name of the largest (now closed) state company that, although selling items in US dollars therefore being inaccessible to most, were the only providers of plastic bags since the start of the Cuban Revolution (ibid.).

An archaeology of migrant stations along undocumented border crossing routes into the US demonstrates the critical importance of plastic containers left behind (De León, 2013). Whether discarded or deliberately deposited to help future users, these container havens have become vital aid stations softening the perilous journey (ibid.). “Seemingly ordinary items” such as plastic bags and water bottles ‘have been shaped by [and shape] the institutionalized practices of the U.S. government, the human smuggling industry in Mexico, and by undocumented migrants’, becoming sites of subterfuge and survival. Plastic bags used to keep feet dry and reduce blisters during stream crossings. Four-gallon water bottles painted black or wrapped with black plastic bags to evade detection. Unlicensed hawkers in Kenya
use the same large plastic bags to both transport and display goods, making evading police easier (Mitullah, 1991). Plastic containers contain informal society, their hard-won fortunes, precarious plans, and long, thin hopes. They earn and collect their capital one plastic bag at a time. Informally, illicitly, invisibly in poor man’s handbags, through the unauthorised and ungoverned systems that make capitalism even possible (Lloyd, 1982; Mitullah, 1991). Once the “wheel” first hits that “road”, there is no more wheel nor road. Just the plastic poor shuttling between concrete wealth.

The role of plastic pollution in ecological destruction is becoming increasingly understood. Contributing to 10% of all man-made waste, plastics form as much as 80% of global marine litter (Xanthos and Walker, 2017; UNEP, 2018a). With up to 12.7Mt entering the ocean in 2010 (Jambeck et al, 2015), plastic pollution disrupts, and often destroys, many pelagic and benthic ecosystem processes. Whole, macroplastics are eaten by pelagic megafauna, who then die of starvation as the plastics clog their gastrointestinal tract. Fragmented, microplastics lay suspended in bodies of water (particularly around shorelines in the Tropics, where abrasion and increased sunlight advance photodegradation) where heavy metals, pesticides, and other (in)organic compounds adsorb to their surfaces, rendering microplastics both highly toxic and bioavailable to smaller organisms. Once ingested, the toxins become increasingly concentrated as they progress up trophic levels (Jambeck et al, 2015; Rose and Webber, 2019; UNEP, 2018a; Xanthos and Walker, 2017). Stranded plastics impact tourism through compromising aesthetics, causing vessel damage, creating obstructions near the shoreline – all reducing tourist revenue from recreational activities (Xanthos and Walker, 2017). More widely, plastic pollution creates as much as US$13 billion of damage to marine ecosystems each year (UNEP, 2018a). On land, 79% of all plastic waste accumulates in landfills, however a significant proportion of plastic waste is mismanaged, eventually clogging natural and artificial water drainage systems creating and exacerbating
public health crises (UNEP, 2018a; 2018b). At current consumption levels, in 2050, a collective 12 billion tonnes of plastic litter will fill both landfills and the environment (UNEP, 2018a).

Plastic litter and mismanagement are clear problems, that is inarguable. Over 92% of marine plastic litter is microplastics, largely in the form of microbeads (Liboiron, 2016) – synthetic plastic particles added to industrial and consumer products (e.g. printer toners, cleaning products) and used in industrial processes and medical applications (UNEP, 2018b). An estimated eight trillion microbeads enter the US waterways daily (ibid.). Of the single-use plastics found as litter in the environment, cigarette butts are the most common, followed by plastic drinking bottles and plastic bottle caps (UNEP, 2018a). Given this, why have single-use plastic bags become the target of so many national policies? Commentators argue that plastic bags are emblematic of consumerism (Martinho et al, 2017; Rivers et al, 2006).

Containers of gluttony. Unlike the plastic bottle or the Styrofoam cup, the plastic bag doesn’t dictate the amount consumed there and then – many plastic bags can be used all at once. They will carry home our impulses, our overconsumption, our habits, and the many purchases that purge our social anxieties and collective malaise. The only limit is the balance on the credit card and the strength required to lug it all home. There is no filling to the top and stopping. The plastic bag is formless, innumerable, and undisciplined, just like the mindless consumer, the proletariat, and the poor.

Technologies have politics. They are the ‘ways of building order into the world’ (Winner, 1986: 28). Every use of and discourse around a technology, Pfaffenberger (1992) argues, creates its “ritual framing”. These framings and counterframings constitute social relations through a technological polity. Articulating indigenous, articulating science, and now articulating technology. Each dose stronger than the last, for of all the forms of articulation, this is the most potent and perhaps the most pernicious. Unlike the other two,
membership simply requires that one inhabits its world of use – without even having to be the user themselves. A pedestrian can discursively frame cars. A laid-off factory worker can make quite the discursive statement about the technology that replaced him. Technology is ‘on the one hand extremely visible and omnipresent’, yet is, on the other, silent and invisible (Pfaffenberger, 1992). Ubiquitously. Ambiguously. Neutrally. Technology slowly fills the material world we mindlessly shuffle through, engaged in “technological somnambulism” (Winner, 1986: 5). It is our social world that renders them visible. And by this point, they are all around us. Our environment full of tools transformed instantly into a world of weapons. It is the intruder that turns the favoured vegetable knife into the weapon with which he is fended off. That immediate switch from invisible to visible traverses every fibre of existence – down uses, processes, techniques, our technical bodies, our social bodies. We have seen this before with the tar. Technology goes everywhere. It doesn’t need a seat at the table. It is the seat and the table. It doesn’t manifest itself through the blare of a horn or the beat of a drum or the quiet whispers of exclusivity or a set of protocols. It is already there. It has been there all along, laying there. So ubiquitous, ambiguous, neutral. It can also be rendered invisible, obsolete, useless.

Whilst the social world continuously reframes and re-renders technologies through discourse and technical processes alike, technological change is a much deeper embodiment of political aims and motivations (Pfaffenberger, 1992; Winner, 1986: 24). It is the determination of technological polity and the dominant framings that define and constitute it. It is the corruption and dismantling of its counterframing. The single-use plastic bag has undergone such change in the past two decades. Increasingly prevalent and visible plastic pollution has galvanised public opinion towards the need for action and led to a rise in regulatory and economic instruments in the forms of bans, levies, and voluntary public/private agreements (UNEP, 2018a). Bangladesh were early adopters of policies to curb
the use of single use plastics because of the extreme flooding caused as waterways became clogged with plastic litter (Clapp and Swanston, 2009; Vince and Hardesty, 2018). Residents of Ethiopia’s capital, Addis Ababa, were broadly accepting of the ban on single-use plastic bags because large numbers of ruminants, grazing on piles of plastic bags lining the streets, were found dead with stomachs full of plastic bags – their corpses, now too, lined the streets (Adane and Muleta, 2011; Negussie and Mustefa, 2017). Images of sea turtles ingesting plastic bags mistaken for jellyfish – they are particularly drawn to lighter-coloured, more translucent plastic bags (Santos et al., 2016; Schuyler et al., 2014), similar to those distributed by larger supermarkets in the global north. Plastic bags that litter the streets of Ireland in such numbers that they hang from tree branches like festoons – witches’ knickers, they are called (Kasidoni et al., 2015). Levies, bans, campaigns trickled from one country to the next as a number of national policies set out to limit if not completely ban single-use plastic bags. Single-use plastic bags were reframed from convenient tools of modern consumerism to symbols of environmental destruction (Kish, 2018) and lack of consumer citizenship (Westermann, 2013; 2019). They also became a covert symbol of class and wealth, as low-income, poorly or un-educated, large households remain more likely to use single-use plastic bags (Rivers et al., 2006; Zambrano-Monserrate and Ruano, 2020); are less able to afford alternatives (Ritch and MacLeod, 2009); and, more widely, are less likely to be involved in eco-consumerism (Gilg et al., 2005). Those migration stations along US border crossing routes were no longer aid stations or archaeological sites of hope, despair, or both, they were now plastic waste sites that allowed certain commentators to conceal xenophobia with environmental concerns (de Leon, 2012). Single-use plastic bags were and are no longer an acceptable technology of storage, transportation, or consumption. Their replacements are thicker multi-use plastic bags or cloth totes.
Never mind that single-use plastic bags were rarely “single use”. Many households used single use plastic bags to manage household waste; most legislations have led to dramatic increases in the sale of bin liners (Kasidoni et al., 2015; Kish, 2018; Martinho et al., 2017). Nor that consumer habits have not changed dramatically and that many have now transferred their single-use to thicker plastic bags (Omondi and Asari, 2019), which are too stiff to be used as bin liners and take even longer to photodegrade (Edwards and Fry, 2011). Nor that taking into account the entire life cycle of the bags, paper bags require significant amounts of water to produce (UNEP, 2018a), and that thick plastic bags and cotton totes would have to be reused 11 and 131 times respectively to result in a lower carbon footprint that the single-use plastic bag (Edwards and Fry, 2011). The numbers are of little consequence, the single-use plastic bag has been tried in the court of public opinion. It is the “low-hanging fruit” that comprises most environmental laws (Portner, 1998). Technology no more, the single-use plastic bag is material, social, and environmental waste.

Waste, too, has politics. Disposal, waste, pollution, and society all mutually constitute each other (Gille, 2007: 13; Harvey, 2017; Hecht, 2018). They carry the symbolic load of purity and impurity, what belongs versus what is “matter-out-of-place” (Douglas, 2003: 6-12). Waste is the prism through which moral values are upheld, social rules defended, and mutual dangers are communicated (ibid.: 3). ‘[W]aste and its management can produce new social relations, cultural forms, and political demands’ (Hecht, 2018). As a result, the act of wasting and engaging with waste ‘is an accusation that is … mobilised in a much wider set of claims about the causes and consequences of social change’ (Knox, 2018: 110). Waste and those who use and produce it become co-constituted as material and social impurities, dangers, and problems. Energy wasters, for example, are also time wasters, money wasters, wasters (ibid.). Microplastics provide a substrate for the adsorption of leached chemicals and toxins. But plastic debris also provide a substrate for biota-derived infochemicals that have
similar odour signatures as zooplankton. These chemical cues create olfactory-driven maladaptive foraging behaviours in many marine organisms (Savoca et al., 2016). Plastics, then, both carry and peddle in toxicity, so they too are also toxic (see Liboiron, 2016). The uneducated, undisciplined, and the poor ferry their overconsumption, handouts, and illicit goods in the toxic plastic, so they too are also toxic. Chains of toxins from slum to shore.

**National bans on single-use plastic bags**

The single-use plastic bag – as technology, waste, technology of waste and wasters alike – is deeply political and has been politicised to varying degrees by different nation states. Global differences in plastic bag politics is undoubtedly the result (at least partially) of nation states’ environmental scrutiny of their own plastic waste management. 16 of the top 20 producers of mismanaged plastic waste, Jambeck and colleagues (2015) argue, are ‘middle income countries where fast economic growth is probably occurring, but waste management infrastructure is lacking.’ There are also distinct differences in plastic recycling. Though fewer than 10% of plastics are recycled globally, Europe “recycles” as much as 30% (Geyer et al., 2017). But it is here again that plastic politics dips in and out of view. The influential paper by Jambeck and others (2015) does not, the authors report, address the import and export of plastic waste. China, the highest producer of mismanaged plastic waste, has also been its largest importer, importing 45% of global plastic waste since 1992 (Brooks et al., 2018). High income countries are the primary exporters of plastic waste, with the majority of recycled plastic ending up in the plastic export system. China’s new ban on imported plastic waste will displace an estimated 111 million metric tons of it.

If national responses are governed by an invisible system of global plastic politics as well as imaginaries of plastic’s material, environmental, and social toxicity, what are the different legislative forms that this takes? At the end of 2018, UNEP (United Nations
Environment Programme) released two reports on single-use plastics. The first, *Single-Use Plastics: A Roadmap for Sustainability*, is a series of case studies that evaluates the effectiveness of plastic policies in selected countries (UNEP, 2018a). The second, *Legal Limits on Single-Use Plastics and Microplastics: A Global Review of National Laws and Regulations*, is a comprehensive list of the current and proposed single-use plastic legislation, particularly around single-use plastic bags (UNEP, 2018b). I created a database of national policy responses (see Gibson 2020b) using (i) details of national legislation and restriction of single-use plastic bags of 190 countries from UNEP (2018b); (ii) the supplementary tables of raw data provided in Jambeck and others (2015) – an Excel spreadsheet including the economic status and plastic waste generation (unmanaged, mismananged, per person) of 192 countries; (iii) three indices from the Human Development Index 2019.
As of March 2019, 49% of the 190 countries examined had enacted some form of restriction of single-use plastic bags at a national level (see Figure 17). The proportion of high- and middle-income countries that have implemented restrictions (53% and 40% respectively) are significantly lower than that of low-income countries (72%), which overwhelmingly rely on bans as a policy tool (Chi-Squared: p=0.03\textsuperscript{18}). None have Extended Producer Responsibility legislation and only one – Burundi, which has since imposed a full ban – has levies or taxation. Middle-income countries, on the other hand, are more than three times more likely to have vague, unenforceable disposal regulations than high-income

\textsuperscript{18} Full statistical result, with N and degrees of freedom, presented in Appendix D Tables 8 - 10
countries (12%) or low-income countries (10%). Of the 48% of countries that have banned single-use plastic bags (N=93), 59% have implemented a full ban (on Manufacture, Import, and Retail Distribution; see Table 1). Poorer countries are significantly more likely to have full bans than their richer counterparts (Chi-Squared: p=0.002). 31% of the high-income countries with restrictions have full bans, compared to 60% of upper middle-, 76% of lower middle-, and 90% of low-income countries with restrictions in place.

The amount of plastic waste (managed, unmanaged, or littered) generated by a country did not significantly affect the type of legislation (or, if present, restriction) implemented by a country (see Appendix D for non-significant one-way ANOVA results). Nor did national levels of plastic waste production significantly relate to a country’s economic status. The rate of mismanaged plastic generated per person per day in a country was significantly associated with its economic status (one-way ANOVA: F=15.05; p<0.001). High- and low-income countries had lower levels of daily mismanaged plastic waste per person (mean = 10grams, 40grams respectively) compared to middle-income countries (mean=74grams). High-income countries have established waste management infrastructures that give citizens access to waste disposal services and remove waste and “wasters” from roadsides. Individuals in low-income countries simply cannot afford to mismanage such items. Plastic bags are the technological lifelines of many harvesting practices there.

In Benin (low-income; mismanaged plastic waste rate = 30g/person/day), small farms use plastic bags as a storage technology for grains. They dramatically limit post-harvest crop loss caused by large grain borers, which typically deplete up to 30% of grain stores (Kadjo et al, 2013). Similarly, in Mozambique (low-income; mismanaged plastic waste rate = 13g/person/day), rice farmers using traditional storage methods (raffia bags) had large numbers of grain moth, lesser grain borer, and weevil infestations to their already limited yield during storage (Guenha et al., 2014). Stored in plastic bags, in most cases there was no
presence of any insect and no need for pesticide use (ibid.) Weil and colleagues (2014) describe the use of plastic bags by indigenous forest people in the harvesting of wild peppercorns in Madagascar (low-income; mismanaged plastic waste rate = 13g/person/day). They are used during foraging. They provide hanging storage (away from animals). They form part of the intricate processes of spreading, drying, blanching, and sweating that comprise post-harvest preparation (ibid). They are used to transport the final product to market. All low-income countries. All, now, with full bans implemented. After controlling for economic status, neither legislation nor ban type were influenced by countries’ mismanaged plastic waste rate.

How can the estimated level of plastic waste produced by a country have no significant bearing on the type of legislation (or restriction, where present) implemented? Why does economic status matter so much? It has no significant association with levels of plastic waste produced by a nation. Economic status is, however, associated with the plastic practices of individuals, with the rate of plastic mismanagement per person highest in middle-income countries, which have growing economies, changing practices and infrastructures that have yet to catch up. Bans may be national, but they work in intimate ways to either break the back of or latently promote people’s plastic practices. These policies, in fact, may be the consequence of the type of trade-offs required by neoliberal policies in the global south: creating more cash-reliant workers to fuel modern economy whilst demonstrating commitments to western ideologies regarding environmental and social practices.

Neoliberalism, many argue, is distinctly an environmental project (Castree, 2008; McCarthy and Prudham, 2004). The converse—conservation as a neoliberal project—is widely accepted. However, the job of neoliberalism is to make ideological and physical space for the accumulation of capital (though these two things are often contraposed). In the hearts and the minds, the urban and the rural, the city and the wilderness. Environmentalism and the
set of imaginaries and articulations that fuel it, enacted through networks of neoliberal actors, is now a tool of global politics and a mechanism of social regulation (McCarthy and Prudham, 2004). As a result, global governance has been “fundamentally reordered” by international NGOs, international financial institutions, and intergovernmental organisations (Duffy, 2006a), who have had heavy hands in reshaping the economic and political landscapes of developing countries through structural adjustment policies, international metrics, and donor-funded projects. Such interventions, it has been argued, have aimed to hollow out nation states by restricting regulatory processes and emphasising ‘voluntary codes of conduct’ marked by the ‘fetishization of ideas of partnerships and engagement with “stakeholders”’ as key actors’ (Duffy and Moore, 2011). It is certainly true that Jamaica’s government agencies (e.g. the Forestry Department) have in many ways been functionally replaced by the quorum of conservation stakeholders (see Chapters 3 and 4). But it was neither neoliberal entities nor on-the-ground conservation actors that crippled these agencies’ regulatory capacities. They all sit side by side in the prison of power. These agencies were wilfully crippled from within, by central government, as a demonstration of compliance and subservience to the US and western capitalism. Herein lies the inherent contradiction of neoliberalism.

The notion of “good governance” has ‘permeated development discourse and especially research agendas and other activities funded by public and private banks and bilateral donors’ since the early 1980s (Weiss, 2000). At this point, Weiss (2000) argues, the World Bank and the IMF – “twin pillars of the postwar economic system” – replaced initial ‘reluctance to intrude in domestic politics’ with a new neoliberal orthodoxy. Reforms of economic policies became increasingly coupled with reforms of civil and state polity, which included the dismantling of illegitimate regimes and modes of governing sympathetic to the soviet bloc (ibid.). The entwinement of national bans on single-use plastic bags and economic
status – calculated and published by the World Bank – is a demonstration of precisely this. These reforms required simultaneous state presence and absence. Present to pledge continual allegiance to both capitalism and the environmental and political imaginaries that protect, reproduce, and ostensibly contain it. Absent to provide the vacuum that the market economy, reliant on “hyperexploitation of wage labour” (Castree, 2008), will fill. All of these contradictions are reconciled piecemeal along transnational networks that enmesh and ‘lie silently between global and local’ (Duffy, 2007). It is therefore specific to a nation’s colonial, economic, cultural, and political history.

How do these spectrums of reconciliation occur within the context of legislations on single-use plastic bags – containers of translocated capital and capitalism? I analysed possible associations between countries’ single-use plastic bag policies and indicators on the Human Development Index 2019 (HDI), controlling for economic status. I selected three in particular: Employment in agriculture, given the dependence of poor small farmers on plastic bags; and two indices from HDI’s Human and Capital Mobility table (Export and import; Foreign direct investments) which likely include the dependence of transnational networks on the humble plastic bag. If, as I suspect, environmental policies are the disguised execution of neoliberal agendas, then it must respond – unlike the spectacle, which is ruthless in the cohesiveness of its constitution and the ubiquity of its reproduction – to the everyday and informal flows of capital that largely comprises local economies. No indicator had a significant association across all economic statuses, but each indicator was significant in just one economic status.

Foreign investment is higher in low-income countries with full bans (average = 4.5%) than low-income countries with partial bans ( -1.5%; one-way ANOVA: F=4.37; p=0.05; see Appendix D). Environmental policies, often created and enforced in partnership with extra-state entities, provide the kinds of evidence of good governance upon which aid
conditionality is often based (Bayart, 2000; Duffy, 2006b; Hermes and Lensink, 2001). This comes as no surprise. Upper-middle income countries with tighter legislation had significantly higher levels of import and export, the index described by the HDI as ‘a basic indicator of openness to foreign trade and economic integration’ (one-way ANOVA: F=3.01; p=0.02). Countries with financial disincentives such as levies or extended producer responsibilities (e.g. Brazil and Montenegro) were more dependent on foreign trade (151% and 174% respectively), whilst countries without current regulations (e.g. Malaysia) or with vague or proposed regulations (e.g. Russia, Mexico) were the least dependent (64% - 82%).

The vast amount of undocumented movement in and out of countries such as Mexico, Malaysia, and Russia render the many informal, unrecognised, and illicit networks of supranational and international trade unlikely to be captured by the HDI. In this case, the countries with looser or no regulations provide the social, judicial, and political conditions to support informality and this statistical association is a reflection of such. Many upper-middle income countries, with rapidly growing, westernised economies, are most reliant on the informal sector to invisibly enable development. Such rich and populous upper-middle income countries with rapidly growing, cash-based economies are less at the mercy of governance expectations and more reliant on the informal sector that invisibly enables their development. They have less use for the spectacle of environmentalism than they do for the paths of everyday transactions that power their nations.

Agricultural employment is significantly more common in the high-income countries that instituted full plastic-bag bans than in the high-income countries with partial bans. (average = 49% and 21% respectively; one-way ANOVA: F=7.20, p=0.01). Richer high-income nations such as France, Italy, Saudi Arabia, and UAE, which are among the biggest donors of foreign aid (Petroia and Paciovschi, 2017), are more likely to have full bans that their poorer counterparts (such as Greece, Antigua, Panama, and Croatia; also categorised as
high-income). These countries set the aid conditionalities, a position supported by the spectacle of combined moral and economic superiority. They pick the low-hanging fruit of environmental policies to prove and model good governance. Such countries, with strong political rhetoric, often have multicultural cities and rural political elites who receive significant attention from state politicians (Stanley, 2018: 316). France props up its agricultural sector so disproportionately to other forms of government subsidies that its rural inequality is widening, with agricultural elites and policy-makers as joint shareholders in the declining sector (Behaghol, 2008). Large agricultural subsidies by the Italian government have led to the degradation of the Apulian rocklands in southern Italy, transformed into agricultural empires (Shelef et al., 2016). The UAE government continues to heavily subsidise its agricultural sector to support its expansion amidst growing concerns over food supply and rising prices of imported food in the ‘oil-rich but agriculture-poor’ region (Azzam and Rettab, 2012). Unlike fellow high-income countries Greece, Antigua, Panama, and Croatia, these rich, powerful high-income countries must submit to the spectacle of environmentalism to maintain their global position. And unlike their fellow high-income counterparts, they can afford to subsidise the sectors impacted by their environmentalism.

There are likely complex and entangled reasons behind the striking association between economic status and legislation type/ban severity. What I hope to have demonstrated in this limited set of analyses is a fact that conservation rarely acknowledges in its assessment of the plight of the rural and the poor. For almost all nation-states, the rural and the poor are both a problem and a resource; particularly in middle income countries where it is the invisible trade networks of the poor – not foreign aid, formal employment, or global political position – that support national economies and where plastic waste (that cannot be hidden by its exportation) is more prevalent. There are trade-offs made between spectacularising actions of the rural/poor for global and moral positioning and relying upon those very actions for
domestic and economic positioning. These trade-offs are geopolitically distinct. Many may consider the rural and the poor as transgressors of social and physical boundaries who pollute (pristine, in the case of the rural) landscapes and society with their presence. But with that disdain is also an acknowledgement that the poor also pollinate and fertilise. Engagements with Mary Douglas’ seminal work of Purity and Danger often forget – or fail to acknowledge – the full scope of her assessment. Refuse, she argues, is ‘a symbol of danger and of power’, asking ‘why should bodily margins be thought to be specially invested with power and danger?’ (2002: 149; emphasis added). When following Douglas’ analytical call to integrate bodily margins with societal ones (2002: 150), we must remember the power as well as the danger. Milk and faeces have fed civilisations for centuries, nourishing bodies and fertilising crops. Things at the margins are dangerous and dirty and disgusting to many. But they are also necessary and powerful and valuable to all.

The poor invisibly power modern, service-based, cash economies. They not only transform raw materials; they are raw materials. Informality and poverty are necessary conditions for capitalist economy. Many neoliberal and environmental laws that are enacted must straddle the contradiction – danger/power, problem/resource, ideology/necessity. We call them contradictions, but these things constitute each other; it is simply the difference of reality and its representation, the everyday and the spectacle. These laws then must both govern, admonish, and control the poor in broad daylight, whilst turning a necessary blind eye to what is done in the dark. Slaves must leave the plantation to trade goods, peasants must transport their goods to markets, the poor must cross margins. That is how globalisation can even be achieved. Without the network of paths trodden and worn down by poverty, there would be no wheel and no road.

**Plastic infrastructures**
‘There are unintended consequences, aren’t there’ said the Mechanical Engineer I consulted about the properties of the tar. ‘I mean, it’s like over here’, he continued,

‘you go to the supermarket, but you’ve forgotten your bag, so you buy another one at the shops. The next thing you know, you’ve got a mountain of them in your kitchen cupboards!! ... plastics are not the problem – it’s the way that it’s used that’s the problem. Plastic bags are perfectly recyclable, you can just melt them down and reuse them – polyethylene is very reusable. Instead we keep buying these thicker [reusable] bags which take even longer to break down, which was supposed to be the issue with the plastic bags in the first place!’

The unintended consequence of the UK’s levy on single-use plastic bags is that plastic is now stored and hidden in the same way the nation stores and hides its poor. In contrast, a bill introduced in Scotland, ‘based almost entirely on the successful Irish model’ was later retracted, failing for a number of social reasons including low public acceptance and a preference for paper bags (Kasidoni et al., 2015: 420). In South Africa, where a levy was trialled before a ban was implemented, the low cost of the levy and insufficient monitoring rendered the plastic prevention scheme ineffective and over time the initial reduction in plastic bag usage returned to normal levels of consumption (Dikgang et al., 2012; Kasidoni et al., 2015). After a study commissioned in 2004 – prompted by concerns around the health impact of littered plastic, Rwanda implemented a full ban (on manufacturing, import, and retail) in 2008. The ban, which sought no stakeholder consultation nor included any investment in recycling technologies or good, cheap alternatives, was initially unsuccessful as ‘people started smuggling plastic bags from neighbouring countries and a lucrative black market emerged’ (UNEP, 2018a). In Kenya, praised for its ambitious pursuit of a total ban on single use plastic bags, though the average number of reusable bags owned by individuals has
triple, the majority of them are poor-quality, still plastic, and often forgotten on shopping trips (Omondi and Asari, 2019).

Ostensibly, the prevalence of plastic bag bans in low-income and African countries is a result of attempts to signal their adoption of western perspectives through a demonstration of shared environmental concerns. Such countries, that rely heavily on aid or whose political regimes are treated with suspicion, are under greater burden to demonstrate good governance in as many forms as possible. Passing environmental laws is in many ways a political prophylaxis. It shows that the nation’s government is actually capable of more than syphons, embezzlement, and bribe collection – they can engage in real political activity. They must hold meetings where the agenda items do not simply comprise distributing hot money or covering up corruption. It also demonstrates an evolution of postcolonial subjects (particularly African) from irrational creatures, incapable of self-governing (see Chapter 3; Mbembe, 2001: 1-4), to becoming rational, civilised, moral, modern actors. Capable of environmental concern, pastoral care, non-violence, perhaps even abstract thought. But in line with the neoliberal contradiction, it also positions Africa as a humble, dependent, authentic ally instead of an unpredictable economic and social liability.

Global politics is steeped in and predicated upon outward demonstrations of dependency by former colonies, especially African ones (Duffy, 2007). To procure and maintain power, local and national African leaders must have recourse to “strategies of extraversion”: ‘mobilising resources derived from their (possibly unequal) relationship with the external environment … as agents in the mise en dépendance of their societies, sometimes opposing it and other times joining in it’ (Bayart, 2000: 218-219). These strategies are centred around the transformation of material cultures as ‘processes of constituting the “moral subject” in both the colony and post-colony’ (ibid.) Westerners can arrive at a more familiar, imagined, expected Africa. Not an Africa where capital and goods are hawked and
peddled at irksome, shameless, hectic pace in plastic vessels. Not an Africa that confronts one, upon landing, with plastic boys and their plastic ambitions. But an Africa where sustenance and necessities are gathered, hunted, crafted. Shared with grace and communality in wicker baskets and calabashes. These things do not disquiet us, they set paces and produce aesthetics that we can trust.

The signals produced by these bans, however, are easily unravelled by public appetite for or reliance on plastics. Many countries (e.g. Rwanda, Botswana) have made U-turns; revising their policy, making exemptions, persuading big business. Conjoined to Jamaica’s ban on single use plastic bags, The Trade (Plastic Packaging Materials Prohibition) Order, 2018, and enacted simultaneously is another law – The Natural Resources Conservation Authority (Plastic Packaging Materials Prohibition) Order, 2018 (NRCA). NRCA details the designation of an “approved person”, permitted to manufacture, import, and use single-use plastic bags, by an unnamed Minister under unspecified terms – ‘such terms and conditions as the Minister thinks fit’. Such pressure valves are necessary to appease the hoteliers, manufacturers, and innumerate neoliberal entities that Jamaica and other countries have endorsed both as a sign of good governance and under the likely terms of structural adjustment and other interventionist economic policies. Yet it is not that simple to extract plastic dependence from the fabric of many of these societies.

Brian Larkin (2013) defines infrastructures as ‘built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space.’ Appel and colleagues argue that infrastructures are sites of promises and betrayal; on the one hand, governance uses infrastructures to articulate and propose provision and safety, while on the other, communities negotiate ‘ongoing problems of service delivery, ruination, and abandonment’ manifested through infrastructures (2018: 3), suggesting,
'This tension—between aspiration and failure, provision and abjection, and technical progress and its underbelly makes infrastructure a productive location to examine the constitution, maintenance, and reproduction of political and economic life. What do infrastructures promise? What do infrastructures do? And what does attention to their lives—their construction, use, maintenance, and breakdown; their poetics, aesthetics, and form— reveal?'

Development projects in the global south that begin but do not finish, or install but do not maintain, infrastructural networks have made ‘ruination a constant companion of infrastructure’ (2018: 6). The temporality of neoliberal policies that insert and rescind impositions of privatization, financialization, and globalization upon social and natural landscapes have left patchworks of dystopia in and around communities of urban, peri-urban, and semi-rural poor. Though infrastructures (as technical projects) are apparatuses of governmentality, they are not just sites of political contestation, action and rationalities (Larkin, 2013); they are also sets of sociotechnical assemblages (Graham and Marvin, 2002: 16). Infrastructures ‘shape the rhythms and striations of social life. Class, gender, race, and kinship are all refracted through differentiated access to infrastructure, deciding … [w]ho, in a given family or community, carries water from the stream’ (Appel et al., 2018: 6).

In his definition, Larkin (2013) argues that infrastructures are distinct from technologies because they operate systematically and cannot ‘be theorized in terms of the object alone’. Rather, infrastructures ‘are objects that create the grounds on which other objects operate’ (ibid.) AbdouMaliq Simone proposes that these definitions and distinctions be extended to networks of activities within a city, particularly in African cities which are ‘characterized by incessantly flexible, mobile, and provisional intersections of residents …[who] engage complex combinations of objects, spaces, persons, and practices. These conjunctions become an infrastructure—a platform providing for and reproducing life’ (2004:}
407-408). People in such buzzing metropolises, underserved by their nation-states, meet Larkin’s criteria as social networks are supported and enabled by “processes of incessant convertibility” (ibid.). These hectic, ad-hoc, and emergent improvisations create distinct conditions for material and social objects. Such elastic definitions of infrastructure provide greater understanding of geographic differences in plastic bag bans and how they contradict and intersect reliance on plastics in pockets of the global south without water, electric, waste management, road, and other government services.

In these regions, the systemic use of recycled plastic containers is infrastructural. Water is carried home from the stream in plastic containers – their size, shape and condition also determine who collects the water and how. Where there is no piped water infrastructure, access to water is mediated by plastic buckets, jerry cans, and drums. Where there are no buildings to house social, government, and trade services, plastic containers are the medium through which goods, support, agendas, and capital are distributed within and between communities. Analysis of the plastic bag as a technology has brought the sociotechnical processes in which it is enmeshed into sharp focus. Plastic bags are entangled in livelihood strategies of poor farmers. Their uses create new social ties, networks, and practices. Their archaeologies already mark important geopolitical moments. When the scope of analysis is widened to plastics as consolatory infrastructures, framings, reframings, or counterframings are no longer possible. Plastic infrastructures are true reflections of the technopolitical terrain they cover. Like other infrastructural forms, they reveal the ways governance is instantiated, asserted, refuted, denied, and withdrawn. They underscore state absence. They are also uniquely placed to illuminate a relationship that many states – particularly in the global south – have with their citizens. It is intimate and subtle, and its political dimensions appear to go unnoticed or, at least, unacknowledged by development literature. Betrayal. As development projects filter in, one by one, to deliver aid to the poor, the rural, the indigenous, the exotic,
communities and nation-states co-articulate need. But each plastic container, each bucket that goes to the well, each plastic jerry can of gasoline that powers a compound generator are artefacts of betrayal. Such communities served as reservoirs of need for these “strategies of extraversion”. Each meeting, each set of empty promises, were never without audience.

It was over an hour into the meeting when the Colonel arrived. The project officer had not long since described a number of festivals that villages had organised with their grant. Mango festivals, ackee festivals, banana festivals. One village made a selection of honeys. ‘Yuh know seh sorrel could ah mek inna honey? Mi neva even know seh yuh could all get sorrel when ah nuh Christmas time!’ Someone had already asked about roads. The village already had an annual festival – better roads would enable more visitors to attend (see Chapter 4). The project officer apologised – it was outside of the Ministry of Culture’s remit. What was in his remit was helping them sell their amazing crafts, he pivoted. As he spoke, the Colonel strutted through the hall to the panel arranged at the front. He let the legs of the chair scrape against the concrete as he drew it out to sit. His entrance was to be conspicuous. Done with such heavy satisfaction that we knew it was his intention to have us know he wanted his entrance acknowledged. The Colonel no longer lived in the village, hadn’t for some time. Every time he came on business, he made himself as big as he could. Perhaps this secured his leadership. Kept it unchallenged – inside the village at least – if whispers of his presence filled the air like clock chimes. If his presence commanded, then perhaps, to them, so did he.

‘Sorry all’ the Colonel interjected. Some rolled their eyes; others kissed their teeth. One got up and left; the rain had begun to ease anyhow, and the hall always got so humid – made one fidget. He liked the Minister, he began, and the grant was welcomed for his people really needed it. ‘But how can 40% of Jamaica’s water come from Cockpit Country and we nuh have nuh water ah run tru we pipe!’ The delivery was the same every development
meeting. Apology for lateness, acknowledgement of opportunity, water punchline. As he spoke, the rains filled the networks of black plastic water-storage drums of the rich and the reused blue plastic shipping barrels of the poor. The audience may have bemoaned everything else, but they never took issue with the punchline. The river was an hour’s walk, the spring was now inadvertently polluted by another development project. Plastic drums were the water infrastructure – the containers determined access. Large industrial black drums could be rigged with a rudimentary, gravity-fed, system that allowed you to direct water through existing pipes. That and hope are why they continue to build houses with pipes and taps in the village. The smallest drum costs £250. I asked one day because I grew weary of fetching water from the drums outside and planned to gift it to my hosts. It would benefit me as much as them. After rent, food, childcare, and field costs, there hasn’t been a year in which I was able to afford it. Reused shipping barrels are the alternative for the poor. A day’s good rain will fill them, and four days of good use will empty them. Hence poorer residents are left particularly water insecure during the increasingly long dry seasons and must barter for water.

Environmental laws that exploit environmental imaginaries have profound social consequences, particularly in low- and middle-income countries where there is increased pressure to align governance with such ideologies. This has been heavily documented by conservation social scientists. Protected areas, wildlife protection acts, trade laws. All sweeping and without nuance, punishing the poor and creating carceral relationships between state and citizens. Stripping the poor of their technologies has similarly profound consequences. The summer after the ban’s enactment, I could feel a pronounced social shift from my first trip to the market. Before, everything was hard but easy. It would take all day, so a day was made of it. Each time you missed one of the four taxis, or it filled too quickly, you bought food. There was a section of the taxi park, between the wall, the fruit stand and
the clothes store, that was Maroon territory. You could leave your bags there; another Maroon would watch it. You perhaps went to the farm supplies store or the wood mill and look into how much it would cost to start a chicken coop or build a shed. You met with friends. Put money down on an appliance, that you hoped to have paid off by Christmas. Called back at the village and ran errands for others. If something needed to be sent back urgently, you gave it to the driver. Then you went back to the spot and made a day of it.

But not this year. The taxi drivers were less-friendly now. They charged for children now. Even the ones on your lap as you squeezed in the backseat with four other ample adults and your legs went numb. They charged for deliveries. Nothing was sent up with the driver for free anymore. People used to wrap goods in scandal bags as they placed it into their larger reusable grocery bags. They would tie the end of the scandal bags to the larger reusable bag to prevent theft. When that option was no longer available, items began to go missing and the taxi drivers were held liable. In the forest and in the taxi park, relationships and practices changed. If environmental laws continue to construct plastic as the “bad actor” (Liboiron, 2016), and whole plastic infrastructures are dismantled, there will also be dire political consequences. Gabrielle Hecht (2018) describes the Anthropocene as the “apotheosis of waste” that imparts particular and heinous forms of “slow violence”. Particularly in Africa, in what Hecht refers to as the “African Anthropocene”, where exploitation of labour in extractive industries places black bodies in direct toxic harm. The violence, however, is also in the environmental policies that claim to react to and fight against waste. This violence is much quicker. Toxic realities do not manifest until a lifetime later, when cancers spread, bodies, disintegrate, and a generation and their stories vanish painfully in the night. The eradication of waste and wasters, and consequently, technologies, infrastructures, material cultures, and social and technical practices are felt immediately. Snatched in broad daylight.
Conclusion

As I have said, conservation was new to me. I believe this is what has allowed me to look at it in the way that I have. Having never been inside it, I was able to walk around it, peering at its form from different angles. Trying to understand exactly what it is. Trying to find the discursive and descriptive language to emote what it is. Trying to identify glimpses, traces, and shadows of it in everyday practices. Trying to decipher the conditions under which it grows – like fields of sunflowers – once cultivated through representations and imaginaries. These practices – tangible and representational, habitual and performed, worked and articulated – are the engine that powers political action, that creates room for conservation. That provides spaces for conservation. That donates resources to conservation. That demands allegiance to conservation. So much so that we are at pains to convey, underscore, reiterate that it is not conservation that is our issue, but the way it is done. Who decided this and when was this proven to be the case? Why is the legitimacy of conservation so ineffable? How was this sold and bought without question? We have pedalled and peddled as hard as we can to create the motion to turn the wheel to power the generator yet the light overhead is dim and we can barely make out our surroundings. So we continue on. Pedalling, peddling, harder and faster. Hoping for more light and clarity but it never comes and I don’t think it ever will. These practices were meant for the dark.

In this thesis – and, more broadly, on this journey – I have not looked at conservation itself as a set of practices that need to be reassessed, refined, reimagined, or reformulated. I have not been guided by attempts to make conservation more inclusive, just, or community-based. Conservation was another familiar stranger. So odd and foreign, but something very recognisable would glint at me with every look. So I looked. At conservation. As a social, technical, and political phenomenon in its own right. I have come away with three lessons.
1. The everyday reality of how practices are sustained is obscured by the spectacle of conservation.

Conservation planning, development interventions, and environmental policies do not simply result in a moratorium of cultural and economic practices. Traditions and livelihoods are rarely effaced in a single blow. Chapter 2 illustrates the ways in which protocols are shifted, kinship redefined, and meaning, purpose, and wellbeing reconceptualised as an indirect result of development. Chapter 5 shows that material forms contested and targeted by environmentalism – specifically plastics – can in fact support and, indeed, produce such practices and the social, technical, political, networks they are enmeshed in. This is not to say that many practices and ways of life cannot undergo profound and even permanent transformation. Communities have been displaced, histories forgotten, people disappeared, and lives destroyed by forms of environmental intervention. The concept of death and decay, the permanent cessation of life, vitality and function, cannot be applied to the ways people engage with their material and social world. As long as material and social conditions allow, practices will be undertaken and revisited. There is no death. There is dormancy, declines in engagement, denial of access. And yes, this brings with it additional and new forms of marginalisation, immiseration, and impoverishment for particular groups – I will return to the emphases, as these important caveats form part of this argument. People move on (or are moved on) and paths overgrow but spaces continue to hold knowledge, memory, materials, and potential.

“Conservation-induced displacement” (Agrawal and Redford, 2009) – comprised of physical, economic, and/or social exclusion (Brockington and Igoe, 2010; Cernea, 2006) – is not a story of a single act. It brings loss, trauma, anger, injustice, inequity, ill health, anger, and much more (Brockington and Igoe, 2006; Mascia and Claus, 2009). It is important that
we portray these injustices, but when we do not place the same level of emphasis to the mechanisms through which people overcome such tragedies (see Cardozo, 2011; Holmes, 2013 for examples of such mechanisms) in order to advance our advocacy work, we also misrepresent reality, conjure spectacles, and disregard the everyday – this too, regardless of its intention, is an act of violence. This is not a direction to disregard injustice rather it is an appeal to, as Isabelle Stengers suggests, “slow down” reasoning and create an opportunity to arouse a slightly different awareness of the problems and situations mobilizing us’ by turning to the concrete, the everyday (2005: 991).

Across three years of fieldwork I watched the near-destruction of a centuries-old practice. I watched young hunters peel away, old hunters lose spirit, the unprecedented malfunction and stripping away of critical technologies, and the near-disappearance of one species of bird. I also watched as the practice, bloodied and on its knees, put hand to floor and crawl on. If I framed this thesis as eight small hunters managing to endure despite the backhanded efforts of a fractured, dysfunctional, colonially entrenched, somehow-still-Goliathan state (though for the sake of ease I sometimes wish I had), I am reproducing violence. If I insisted that the focus was placed on top-down systems of oppression and depict those beneath as weak, weaponless (see Chapter 3), homogenous, victims – this is violence. Were I to ignore the mechanisms through which parrot hunting continued to crawl, I would fail to acknowledge that these mechanisms materialise through forms of violence. That it crawled on the backs of others. I would fail to see the deliberate and systemic strategies of exclusion used by hunters to maintain their practice. How they scuttled away from the village and into the forest with increased fervour – not just to avoid being seen, but to deny knowledge to others including the young hunters who displeased them. How paths were deliberately blocked as hacked overgrowth was thrown over trails. Gardens ransacked and left depleted. This, often, is how things are able to continue on. And as we sit, with our
chosen few, and tell only their descriptions of violence, we give them the means, the power, and legitimacy to respond through violence of their own. This is violent.

In her proposal to “slow down”, Stengers defines the original role of the idiot: the one who does not speak the language, the one – in essence – who slows down the others by resisting ‘the consensual ways in which the situation is presented and in which emergencies mobilize thought or action’ (ibid.). I will be your idiot. Being a conservation neophyte, I have documented the sets of conditions before me with my own lexicon – forged through the everyday reality of a black female survivor whose material conditions have been encased in poverty and violence since childhood. It is important that social science show the atrocities that result from fortress conservation, but when we too begin to disengage from “the everyday” (as outlined in the introduction), we are just as responsible for reproducing the spectacle of conservation as those whose injustices we seek to overturn.

The desperate vastness of chronic poverty (not the acute, “knife-edge”, governed, debt-ridden poverty many face in the global north) brings with it a weary, relentless, persistent undulation. It carves out narrow grooves in landscapes of suffering that funnel people through the only available paths of opportunity, insulating them from the cruelty of choice (where the options would inevitably consist of bad and worse). How we depict the abstract nature of poverty, however, has become swollen with spectacle – which, as discussed in the introduction, invades our reality through abstractions. We can render it invisible or argue it solved in order to justify and protect top-down regimes of power land acquisition. We can select particular forms and amplify them in order to speak truth to power and, in doing so, make invisible the assortment of other forms left in the shadow it casts. In the book *Red Tape: Bureaucracy, Structural Violence and Poverty in India*, Akhil Gupta describes how poverty is operationalised by the Indian state in projects to “improve the condition of the population”; the “construction of the poor”, Gupta argues, allows violence to be enacted and
power exercised through an ‘ever-renewing and ever-deepening process’ with ‘its own modes of resistance’ (2012: 239). My concern is that the advocacy work that takes place in conservation arenas – of which indigenous advocacy, and conservation social science critiques are part – are involved in constructions of poverty and injustice that not only fail to acknowledge the everyday in fear of its bastardising effects but that has itself become an aspect of the institution of conservation violence.

It is imperative and ethical that we remain vigilant to the abuses of human rights that conservation can perpetuate, however we are responsible for violence in our own right. The shapelessness of the spectacle allows it to shift, contort, and redesign itself to maintain specialisation of power and domination over modes of production and accumulation of capital. We have not beaten back the spectacle of conservation, we have simply given it an opportunity to add to its set of images a “participatory” branch. This is why there is something so hauntingly familiar about Chapters 3 and 4, as we observe the mechanisms that concomitantly protect and commodify nature on the one hand and indigenous identities on the other.

In his later works, Michel Foucault argued that this previous focus on biopower and the top-down installation of repression led to crucial omissions of structures, shapes, and forms of power. Pinpointing the defining moment in the “history of repression” as the transition from a system of punishment to one of surveillance, Foucault describes a fundamental transformation in the exercise of power. Its application was economised, streamlined, obscured, amplified as political regimes and institutions were reconfigured to exercise power ‘within the social body, rather than from above it’ (1980: 39). This “capillary” power – the small-scale, surveillance-based, internal exercise of power – operated within distinct sects of the social body (criminals, workers, prostitutes). A transformational power that ‘reaches into the very grain of the individual’ (1980: 39), selecting and turning members
into agents of surveillance and infiltration to dismantle and disable particular actions from within (1980: 40).

Diverting attention towards apparatuses of power that are installed from above and away from channels of power that lay below, disrupted and intersected may be more than just an academic oversight. If conservation social science continues to have in its crosshairs only on the top-down, spectacular forms of violence that occur in conservation and not the capillaries of power and violence that cut across and intersect our everyday reality, we are complicit in both reproducing violence and hiding it – for we ourselves no longer recognise it. I do not see any justice in this. When I speak of how capillary violence burrows its way through everyday actions, I refer not just to the action of the Maroon parrot hunters. I also speak of the everyday actions of conservation scientists – which are as much political and social as they are technical (see Chapter 4) – and conservation stakeholders – which are as much exclusive (see quorum of shareholders; Chapter 3) as they are inclusive, as well as the everyday actions that constitute how these actions are articulated and conveyed to the broader public. These everyday actions are rarely considered in the orbit of the everyday (which in itself is rarely acknowledged) as they are built upon the everyday actions of others, but these “meta-actions” (which are often not top-down, but adjacent-to) are also pregnant with capillary forms of power and violence. They are the technologies through which we have all become agents of surveillance, illusions, resistance that form part of the spectacle of conservation. I will return to how these meta-actions manifest violence in the third finding. The following section, however, will look at the mechanics of capillary violence and how it is achieved through exclusion and exclusivity.

2. Conservation is not just reliant on exclusivity, it may be transforming the nature of exclusion
The growing recognition of the interdependence between biological and cultural diversity – and the significant decline in both – has reinvigorated interest in traditional and indigenous practices and the ecological knowledge they generate (Breckenridge 1991; Bridgewater and Rotherham 2019; Gadgil 1994; Gavin et al. 2015; Pretty et al. 2009; Sterling et al. 2017). Some practices gain more attention over others. Acute emphasis has been placed on hunting as one such practice. Traditional hunters navigate more of the forest, have more non-hunting-related contact with wildlife, hold very specific (and often very old) traditional species knowledge, and access more remote ecosystem services (Berkes et al. 2000; Friant et al. 2015; Gibson, 2020; Singh et al. 2010). I assumed, then, that deep exploration of indigenous parrot hunting practices would furnish me with (i) clear, if incomplete, understanding of indigenous knowledge systems, and (ii) a roadmap of how indigenous knowledge could be made commensurate with ecological science. I would return from the hunting grounds as Moses did from Mount Sinai, with commandments engraved on stone tablets, enlightened about how conservation should proceed. Epistemic walls would crumble, seas of hierarchies part.

What I observed was eight men who were afforded the opportunity to practise their craft. Trialling and erring. Tweaking. Recalling. Sharing observations – some learnt last week, some seen on nature documentaries. I saw men using what they knew and previously encountered and trying to make sense of what they did not. This is not to suggest that they had no expertise and were not incredibly knowledgeable. But there was no system of knowledge transmission. No whispers from their ancestors. Neither in the forest nor the village. No men sat around a fire, passing down knowledge as if it were an algorithm. No women sat on grass mats, keeping knowledge alive while collectively rearing children. Knowledge was never shared in any ritual fashion. People learnt by doing. If they didn’t do, they did not know. What I saw was the privilege and opportunity to participate. Access
granted to exclusive spaces of practice by systems of patronage and social ties. Access denied to most indigenous villagers.

There is something fundamentally distorted about the field of representation of indigenous knowledge and the threats it faces – particularly the emergence of cash economies in remote and traditional communities. It was my understanding when I entered conservation that the decline of cultural practices was the result of its refusal by younger generations. At the start of the PhD, I sought to understand what sustained traditional practices in hopes of being at the vanguard of its resuscitation. Perhaps this was my misunderstanding. In any instance, I now see that this is rarely the case. My documentation of the material culture of parrot hunting reveals the significant costs involved: raw materials required for husbandry; a parrot in-hand as a live lure; cages, feedbags and plastic bags for storage and transportation; sturdy boots; a machete. Males from wealthier or larger households, with greater accumulated resources, have little responsibility within household division of labour, affording them the time and means to engage in traditional practices; women and those from smaller/poorer households reliant on wage labour are less able to access cultural activities. Many do not reject cultural practices; they simply cannot access them.

In the final hunting season documented in this thesis, the younger hunters abandoned the hunt in favour of cultural performances financed by a black American seeking to capture and curate African and diasporic cultures to create some kind of syncretic, pan-African Frankenstein’s monster. I focused on this abandonment because it had real material consequences for the hunt (tar failure; see Chapter 2) and the hunters (saudade; see Chapter 5). I have no doubt, however, that the young hunters will return to hunting. The young hunters gained access to the cultural entrepreneur because he once attended a hunt. It is also how they met me, and the two travel bloggers (despite my attempts at sabotage). Their role as hunters is how they became close to each challenger to the village chief in the upcoming
election; each sought consultation for one performance or another. The young hunters left hunting because it is an asset—rather than a cash-economy and they need money fast. They will return to hunting because they are well aware of the political, cultural, and symbolic capital that parrot hunting brings them. This epilogue must be shared, because it shows the everyday reality of cultural practices. Indigenous knowledge is not a system of ecological expertise, upheld and maintained by the community at large. It is privilege, access, capital, exclusivity that grows more concentrated by the day. Ironically, the community participation advocated by conservation social science and now increasingly required by funding bodies, often further stratifies communities, as traditional practitioners become consultants to researchers, political actors, entrepreneurs, while outcomes restrict unsanctioned access by everyone else.

The consequences of this “inclusion” are felt at both ends of the poles. The reliance on indigenous knowledge not only concentrates access, privilege, and opportunity in the hands of wealthy, large households, it confiscates them from the outstretched arms of the poor. I witnessed and was involved in obscuring knowledge of and access to the practice from the wider village. Finding different routes to sneak back into the village so catch yields are hidden. Lying to close friends who are poor and whose arms are outstretched as they ask how many parrots were caught and could I help them to barter for one about what I knew or witnessed. Refusing to disclose the location of the hunts and the nights we planned to go—either outright or through strategies that include keeping headlights switched off (see Chapters 1 and 2). The parrots perched in white cages, hanging from the twisted limbs of bare, knotted trees that fill lonely courtyards symbolise the wider role of the asset-poor, capital-rich young hunters. They are social bridges— they create, reveal, and skilfully navigate otherwise untrodden paths (physical and figurative). When these members of the community are swept up by conservation, this presents an opportunity for exclusion to spread
like cancer through the social body of the village. As the young hunters became increasingly involved in conservation politics and cultural entrepreneurship – attending protests, going overseas with development agencies (see Chapter 3) – they grew increasingly distant from village life and the suffering of many within. ‘Me know she yuh ah help Maroon dem Liddie, but ah we yuh fi help first yuh nuh’ one young hunter once stated in response to both the museum exhibition I helped to install and my failure to honour a request for a new pair of boots (the first of such requests on the one year when it would have been needed the least).

Scholarship around marginalisation illustrate the particular violence and trauma associated with exclusion from marginalised groups. The institutions and frameworks of support that are closest to, or within, marginalised communities are themselves fragmented, fragile, and at the mercy of some external force; this precarity manifests in hypercritical and punitive relations that drive those at the margins of already-marginalised groups deeper into marginality.

Lois Wacquant (1996) describes the moral panic that accompanied the “new poverty”, where the accelerated degeneration of the metropolitan core was attributed to the emergence of a hardened societal underclass, entrapped in and insulated by densely populated, high-crime urban strongholds. The intersection of poverty, race, immigration, and urban decline created a regime of “advanced marginality”, where immigrant ghettos were wrapped in additional layers of stigma and exclusion. Unhoused people who are also drug users or are HIV positive or have a mental illness are less likely to access institutional or peer support (Comfort et al, 2015). Racial trauma shapes landscapes of violence, distorting, reconceptualising, and denying victimhood to some, resulting in acute mental illnesses (Gomez, 2019) and high levels of sexual violence (as victims are inhibited from coming forward not only by the shame of exposure, but the guilt of betrayal; Gomez and Gobin, 2020).
Lucas Bessire, in his exploration of the Puyedie (or “prohibited ones”) – disenfranchised, coca-paste smoking outcasts of the indigenous Ayoreo communities found across Bolivia and Paraguay – furthered the notion of “advanced marginality” to describe a systematic regime of disavowal within indigenous communities. Bessire defines “hypermarginality” ‘as a novel regime of social depersonalization and structural violence deriving from the conflation of politically authorized culture and indigenous biolegitimacy across distinct political domains.’ (2014: 278). Elizabeth Povinelli defines Australian multiculturalism as the burden of expectation placed upon indigenous communities ‘to perform an authentic difference in exchange for the good feelings of the nation and the reparative legislation of the state’, leaving behind the “repugnant” features of their culture for it to be received with outstretched arms (2002: 6). Bessire (2014) argues that this very burden is also responsible for the exclusion of certain members of indigenous communities.

Chapter 3 shows how conservation spaces sequester indigenous knowledge-holders, scientists, practitioners into fiefdoms of expertise, joining rank and files of official representations. The articulation of expertise creates the condition under which technical, cultural, and scientific practices are aligned to, rather than inform, environmental imaginaries. These knowledge-holders join, and legitimise, an exclusive quorum of actors – shareholders – who amass soft power by mobilising conservation’s political influence through displays of expertise held by few. They accumulate capital – cultural, political, scientific – which is then ringfenced and protected by the exclusory nature of symbolic capital, providing official representations that have been ‘contracted outside the zone of everyday relationships’(Bourdieu, 1977: 54). Exclusive spaces provide the necessary invisibility and assumed consensus to inculcate conservation with credibility and authority. From these spaces, officialness and definitiveness emerge. Within these spaces, ‘ritual strategies and strategic rituals, … the collectivising of private interests and the symbolic
appropriation of official interests’, occur (1977: 41). These spaces are fiefdoms of ecological knowledge.

Chapter 4 demonstrated how the Red Listing process – including its “public forum” – is an exclusive network of conservation actors whose membership depends on their ability to align themselves with the official representations and imaginaries. Whose membership must be renewed in the form of contributions and recommitments to the illusory community of practices that the Red List process purports to be. How many parallels can we draw between Chapters 3 and 4? Does indigenous knowledge (the specialised, forest-based, species-encountering knowledge, valued by conservationists) involve the same mechanisms of exclusion as the Red Listing process – which include continual and deliberate challenges to credibility, morality, and, therefore, membership? To secure de facto membership in the quorum of shareholders, must indigenous representatives deliberately exclude other members of the community, or is their exclusion merely the result of institutional and structural social arrangements (such as household/sexual division of labour)? When indigenous communities participate in conservation efforts, are there members who are hypermarginalised so their “repugnant” and off-brand actions do not undermine articulation work (that constitutes the field of power, as defined in Chapter 3)? Chapter 3 demonstrated how technology (Whatsapp) was used by the young hunters and their political leaders to deliberately exclude older, politically-active members of the Maroon community from the antimining protest. This, however, is not a regime of “social depersonalisation”, entrapment, or moral panic, directed towards a specific subgroup of the community, hypermarginalising them. The antimining protests represented a small, fruitless attempted power grab by a set of young, mobile, asset-poor, cash- and network-dependent group of men.

Across three field seasons in the village, I have observed an increase in the sets of engagements and actions done in the name of conservation. The growing public support for
the antimining campaign has brought increased numbers of visitors to the village and to the forest – a Jamaican recording artist filmed a music video in the area the last day of my final field season. To fund the hologram park, the Forestry Department have been awarded grants from the Global Environment Fund; a significant component of many of the projects is the “Indigenous Technical Knowledge” of Maroons\(^\text{19}\) (difficult to achieve as the Forestry Department are not welcome in a number of Maroon territories). There is also my contradictory role as a concerned sceptic – perhaps critic – of “participatory” conservation and the desperate medium through which conservation has been able to reach even the darkest cobwebbed crannies within the village (see Chapter 4 for my complicity). In this time I have also witnessed small but potentially significant transformations resulting from conservation’s increasing presence in the village. I grow concerned not that a single group will be hypermarginalised, but that “participatory” conservation may influence a much slower, less mobile form of exclusion.

Andre Beteille (1991) attempts to understand how the growing appetite for and increasing rhetoric around equality in India has failed to stop the reproduction of hierarchical structures and the entrenchment of inequality in Indian society. Why, he asks, as commitment to equality has strengthened and broadened, replacing the idealisation of hierarchies, ‘has it made so little difference to social practice’ (1991: 4). No country has eradicated inequality, but the open practice (rather than the inherited legacy) of inequality in religion, law, morality, customs Beteille emphasises, has allowed it to remain firmly rooted in India’s social and political domain. The social reproduction of inequality, Beteille argues, has emerged from grading and ranking of social positions, where specialised knowledge has moved from

\(^{19}\) see, for example, Project Component 3 (of 4) in one of the fund’s Project Identification Form: https://publicpartnershipdata.azuredge.net/gef/PMISGFDDocuments/Multi%20Focal%20Area/Jamaica%20-%20(9862)%20-%20Conserving%20biodiversity%20and%20reducing%20land%20degradation/6109_JAM_BD_LD_PIF_8Aug2017_for_resub_Rev_sig_14Sepclean.pdf
holding “functional importance” to high social prestige. Bureaucratisation being the process through which prestige-making has entrenched inequality. Bureaucracy – the adherence to impersonal rules, the establishment of ranks and line management, and the designation of the office as a “distinct sphere of activity” in which areas of competence are defined – is the “steel frame” of hierarchy (Beteille, 1991: 8). Bureaucratisation has pushed the transmission and transfer of cultural and social capital out of the public sphere and into the private spaces occupied by kith and kin, thereby ringfencing capital within distinct classes and castes, Beteille concludes. I begin to see, in conservation, the generation of a form of bureaucratisation – of traditional forest-based practices, revered for the relevant, contextual, specialised indigenous knowledge. As the young hunters slowly pull themselves away from wider society each time they are co-opted, selected, needed, they pull with them the paths and bridges they once made, reinforcing spaces of accumulated capital. Exclusion would cease to function on a case-by-case basis, but could become immobile and rooted in a class-based open practice of inequality – all in the name of conservation. This may slowly reveal itself over time; it would require further research, which I hope to undertake in the future.

3. Conservation forces upon its actors two forms of consciousness, to their own detriment.

Conservation social science has cast the suite of actors involved in conservation into particular roles. The corrupt, weak state that has laid bare its citizens for exploitation through neoliberal policies. State actors work in alliance wit extra-local entities to enact multiple forms of exclusions and displacement (Agrawal and Redford, 2009; Svarstad et al., 2018). Local communities in Indian tiger reserves, for example, suffer “in-situ displacement” as state policies and protected area enactments are supported by World Wildlife Fund, Global Environmental Fund, and the World Bank (Rai et al., 2019). The engorged, opportunistic
NGO who have suppressed marginalised voices in order to control narratives for profit. Neoliberal conservation – the ‘amalgamation of ideology and techniques … shift[ing] the focus from how nature is used in and through the expansion of capitalism, to how nature is conserved in and through the expansion of capitalism’ (Büscher et al., 2012) – provide the ideological impetus, redemptive clauses, and discursive technologies necessary for such takeover. This includes the economic tactics of big international NGOs such as the African Wildlife Foundation, Conservation International, and International Animal Rescue, whose “tightly controlled spectacle” (Igoe, 2013) is exercised through adoption industries and “T-shirt diplomacy” (Sachedina, 2010). It also legitimises the other side of the spectrum, including the heavily militarised tactics of “peace” parks and foundations whose inherently contradictory methods of “green violence” and long, protracted “kill chains” are reconciled through the deployment of discourses that relinquish poachers and their wider social networks into “spaces of exemption” (Büscher and Ramutsindela, 2015; Verweijen, 2020). The western-trained scientist whose (wilful) ignorance of the social, political, and cultural institutions peppered across the landscapes they seek to protect exemplify the colonial regimes that enshroud conservation. Many contemporary conservation institutions such as Flora and Fauna International (formerly the Society for the Preservation of the Fauna of the Empire) were once colonial, aristocrat-ran enterprises that sought to capture, ringfence and preserve “edens” – regions of unspoilt, complete, uncompromised wildernesses (Adams, 2004: 104-106; Neumann, 1996). Many such colonial relics remain the dominant funders and publishers of scientific research (see Brockington, 2008; Garland, 2008; both discussed in Chapter 3), as well as platforms for and hosts of discursive technologies depicting locals using impatient, hostile, problematic language (Guha, 1997). The local, traditional, and indigenous communities who have been ravaged, oppressed and victimised by a series of western incursions, leaving in tatters deeply-contextual knowledge systems and sets of
relations. From the soft but perfect English of a black Tanzanian man explaining to a roomful of white biologists that it is they who were the original conservationists until they were made the enemy of conservation (Dowie, 2011: xv-xvi) to the accusations levelled against indigenous Venezuelans whose fire practices, as a result, are less adopted by younger generations (Rodriguez et al., 2018). Scholars have begun to scrutinise some of these simplified, flat narratives. There are greater calls to analyse conservation NGOs with greater nuance (see Brockington et al, 2017) and turn a collaborative, rather than solely critical, eye towards the work of conservation scientists (see Chua et al, 2020). More is still needed.

The neoliberal policies and environmental imaginaries that co-produce each other – like two hands of capitalism that wash each other clean – leave behind them trails of shattered dreams and broken backs. The cost of maintaining symbolic, cultural, political, and scientific capital is steep, significantly influencing conservation policies, outcomes, narratives, and the sets of relationships in which they are enmeshed. In Jamaica, neoliberal policies dismantled existing state-run environmental projects, replacing them with empty institutions, understaffed agencies, and penniless plans. In small island developing countries – inherently vulnerable and disadvantaged as a result of their size, insularity and remoteness, economic status can be inflated and extinction risk overstated. Many such states are left with little choice but to engage in environmental policies that harm their citizens to align themselves to global policies (see Chapter 4) or priorities (see Chapter 5). Local people have been shackled into cultural performances, customary practices and the acquisition and maintenance of traditional knowledge; their fates now becoming inescapably embroidered into the fabric of their society. As misogyny locks men into toxic performances of masculinity, the wealthy are tortured by their own greed, and governmentality makes heavy demands on government as they engage in politicking and statecraft, so too has conservation (and critiques of conservation) placed burdens upon the oppressor as well as the oppressed.
Conservation has restricted the technical, political, and cultural actions of all actors (“good” and “bad”), who are incarcerated by the practices and identities that reproduce the spectacle of conservation and have granted them special privileges. Chapter 4 demonstrated how even the most technical of actions – the measurement of species decline in years rather than generations, fraught with issues arising from the wildly different lifespan of species – is the result of rendering knowledge outputs into forms that are both easy to understand and convey a more immediate sense of danger and crises. Tania Li’s fields of power – and Chapter 3 more broadly – is a demonstration of the political and cultural commitments that cultural demagogues, thought leaders, advocates, and environmentalists must make as they both reproduce and are restricted by the hegemonic discourses within conservation and sustainability. Presence at and insider knowledge of specific events and activities is required – in the case of the Maroons, particular development meetings and protests; in the case of those who dare to question the essentialism that lies behind indigenous advocacy (see the Kuper debate in Chapter 3), human rights fora; in the case of scientists, assessment working groups. These all constitute the “black boxing” of legitimacy, without which agency within conservation spaces is difficult to acquire and maintain. In the second lesson, I argued that these forms of exclusivity was both the product and perpetrator of capillary violence. I fear, however, that the fundamental transformation that takes place when people are recruited into becoming agents of surveillance and infiltration (as defined in the first lesson) manifests into a deeper, more internal form of violence, within not just the social body, but the physical body of each and every individual as they grapple with binary that is both the spectacular violence of conservation and the everyday manifestations of capillary violence (and the forms of consciousness each demand).
At the start of this thesis I described the dis-ease I felt in academic and conservation spaces but I have failed to explain why I felt this way. For most of this thesis I was not sure how to. I did not fully know what the source was but I recognised its overwhelming presence every place I felt it. I feel it so desperately and completely that I know it is more than a consortium of reactions to an amalgam of pressures. I have written much of this thesis in lockdown in my small two-bedroom flat with my two children. The disjointed scholarship I have undertaken in my dishevelled dwellings during the delivery of ad hoc curricula to my children became my home. It was our solace. In it we poured our worries and minor triumphs. In it we built memories and passed soon-forgotten time. Then began the series of race protests which cut through our silence and timelessness. The once undecipherable source became vividly clear. Horripilations, tingles and stirrings that haunted me over the four years of this degree were transformed into the recognised sets of practices to which I have borne witness my whole life.

In the ten days that succeeded George Floyd’s murder, I was contacted by no fewer than eight white people that I barely knew. In my bubble with my children and my work, shut off from the world, I engaged with neither the news of his death nor the international commentary about it. Deliberately. Not long after the protests gathered momentum, peers from my cohort reached out. Though it was hard to know what to say, one articulated, they simply knew they had “to say SOMETHING”. Colleagues with whom I had scarcely conversed away from a boiling kettle offered to watch my children while I “go to the demonstration”. Funders requested that I host a forum; they wanted to hear my experience and the organisation wanted to show its support. Heads of Departments sought “any advice I could spare” on the tone and content of their response. I deleted my WhatsApp – my social media apps had been deleted six months prior – and stopped checking my phone. I felt run
through and left vacant. I had never experienced such emptiness and desperation in my entire, unsheltered life.

Moments after sobbing uncontrollably in front of my children I sat staring at the amorphous source as it finally took shape before my eyes. There is true dignity in the quiet. It lives in the carpet that tickles bare, shift-worn feet. It is the slow-cooked meal made from haggled ingredients, paid for in coins and prepared patiently above a flickered flame. It is the starched blue collar. It is the daily walk of the West Indian pensioner to his local library where he sits on a desk adjacent to students and freelancers and makes notes as he reads his daily paper. Pointless to us but poignant to him. Dignity lies in the practice of endurance. Behind the door where our private selves recover from our public lives is where dignity dwells. However undignified I felt in the halls of the department, answering questions about how long my hair takes to dry and smiling at stories about how many spoons of sugar their black friend also took in their tea, I know my children, my work, and my dignity await me at home. I know they each meant well, but every check-in, well-wish, and shoulder of support cracked the window open that bit more, until there it went. My dignity, blown away like scattered ashes in the wind.

I saw him, one of the young hunters, a couple of days before I left the village. He walked down a side path from the village school like a wounded dog. Shoulders hunched and melting. It was the only time I have seen any of the young hunters alone. He looked up at me and smiled, ‘Hey Liddie’, and looked away quickly. He knew his eyes had betrayed him and that I could see the melancholy that sat behind them. I knew it, but I just couldn’t place it. I know it fully in the here and now. His dignity, too, had taken flight. People from marginalised (and, as discussed throughout this thesis, indigenous) communities have begun to occupy spaces in their own fields of power. There, they take seats and hold shares alongside yesterday’s oppressors, today’s allies, and tomorrow’s collaborators. Anthropology
is replete with examples of the struggles of indigenous communities who are asked to perform trauma, rites, and claims within courtrooms (Povinelli, 1996), find elusive, shifting middle grounds with conservationists, the state, and the extra-state (Conklin and Graham, 1995), and concomitantly mobilise and protect traditions and knowledge as they create and increase visibility against the forces of globalisation, incursion, and dispossession (Brockington et al, 2008; Greene, 2004). These expectations have been shown to be burdensome, often unattainable, and damaging. What is missing from many of these accounts is an acknowledgement that the damages will occur either way. Whether the task is too great or the performer is suitably prepared. Once the windows open, dignity will sail out the window. This places untold performative strain on the shoulders of indigenous and marginalised groups, whether causes are advanced, shifted, tweaked, or barely acknowledged. Reactions to the race relations protests have adversely affected my mental health. I am sure it has affected others in the same way. This is one thing that is extremely difficult to articulate. Aside from the stigma of mental health, we know we should stay quiet, because these seats have been reserved for us and these shares have been donated to us. So we sit there, crumbling inside, for we know nothing awaits us at home anymore.

The workshop at the British Ecological Society conference was well-received. We had invented a number of endemic threatened species in a fictional landlocked African country. They had to read through local accounts that we dreamed up and try to assess the ecological threats. There were red herrings – deforestation, hunting, flagship species – that we knew they would fall for. Then there were nuggets of ethnographic descriptions that, when pieced together, revealed an intricate network of threats that included a disease that badly affected a fruit tree that led to the decline of an endemic frugivorous bat. The aim was to demonstrate how complex social and natural landscapes were. That agriculture, hunting, and peasants were not always the culprits. That accounts and stories had layers of meaning
and volumes of data. But something felt wrong. If a black person had walked into the staff room and seen me and my colleague, as we took turns rehearsing the manufactured accounts in fake African accents, I would have died inside. When I pretended to be the pregnant wife of a former hunter, the “useless man” who no longer brought home any delicious bushmeat, my co-host asked if we were going too far.

No such performance made it to the workshop; we had always intended on providing printouts. Regardless, the workshop, the activities, the fictitious accounts, are precisely the set of imaginaries I have defined conservation to be. They are the terms of reference. The actors, the brief, the challenges, all familiar strangers. It was precisely why we chose the fictitious central African country, the antelope, the bat. The incidental, unconscious patchwork of data – as if villagers lacked the capacity to articulate in any other way. We may have widened the set of images our audience were now exposed to – and there are wider still, but we were reproducing the system of imaginaries and representations that pin the poor in place. That pin us all in place; dictating practices and imposing expectations. Every interlocutor in conservation – from the scientist to the civil servant – all speak as if they have conceded to malfunction. That compromises had to be made because you have to be in it to change it, chiselling away at oppression, inequality, marginalisation, social and environmental injustice one concrete chunk at a time. It can only be a good thing. But is it?

I wish to return to once more to the juxtaposition of the spectacle against the everyday, presented in the introduction, as two opposing forms of consciousness. The practical consciousness of the everyday is the pragmatic and tangible awareness of our material world, allowing us to scramble over its inconsequentialities, inconsistencies, paradoxes and repetitions. The smoothed, coherent, apportioned representation of reality creates another opposing consciousness that, aware of the confines of the categorisation that surrounds it, tries to inch its way along such narrow corridors without touching a wall. I have
used race a number of times in this thesis as a way to think through the impositions of conservation as a spectacle. As I grapple with notions of dignity, performance, betrayal, as I feel the piercing, open eyes of witnesses and onlookers, I have come to see the synergies between the spectacles of racism and conservation as more than simply the result of their conjoined and entangled colonial histories. Ensnared in both spectacles are the tortured bodies who must house both forms of consciousness at once:

‘the Negro is a sort of seventh son, born with a veil, and gifted with second-sight in this American world,—a world which yields him no true self-consciousness, but only lets him see himself through the revelation of the other world. It is a peculiar sensation, this double-consciousness, this sense of always looking at one’s self through the eyes of others, of measuring one’s soul by the tape of a world that looks on in amused contempt and pity. One ever feels his two-ness,—an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder’

(Du Bois, 2007: 8)

This two-ness, W.E. Du Bois argues, sits between such tortured souls and the world around them in the form of an unasked question: ‘how does it feel to be a problem?’ (2007: 7). As disenfranchised bodies are dragged in from the margins to the centre of the spectacle to be observed, prodded, directed, consumed, the more energy is required to navigate the complexities of our everyday but the more energy we must devote to navigating between spectacular ‘walls … relentlessly narrow, tall, and unscalable to sons of night who must plod darkly on in resignation, or beat unavailing palms against the stone, or steadily, half hopelessly, watch the streak of blue above’ (2007: 8).

What is the price of the participation we advocate for? Of “conscientization” (Chapter 3: 112)? What happens when we “uplift”, or rather uproot, communities out of their everyday
practices and into the representations of themselves that we have all been gawking at in disbelief? When we impose consciousness on them. When we tell them to hike up their skirts and show us their soft bodies, then place a mirror in front of them and make them look too. “Look at that deformity!!” we tell them. Is there not something perverse and damaging about this? I may have been able to make a thesis of eight men and a park that is yet to exist, but it wouldn’t make a minute’s worth of conversation with the majority of villagers. Pretty parrots in white cages may help pass the time away, but many are concerned about their next meal. Their health. How they’ll find the money for school shoes. What a peasant with his wheelbarrow must endure will always seem worse to us than it does to him, there in the moment as he suffers life’s abrasions mechanically, argues Henri Lefebvre (1991: 133):

‘his wheelbarrow is still creaky and cumbersome, this peasant's life is still harsh and that worker's life is still dull and joyless... yet our consciousness of these things becomes transformed and loses its triviality, its banality, since in each thing we see more than itself- something else which is there in everyday objects, not an abstract lining but something enfolded within which hitherto we have been unable to see. In fact if the harshness of peasant life and the squalor of the farmyard, or the sadness of life in a proletarian neighbourhood, appear intolerable, they seem even more so once we become aware of the magnificent, grandiose character of the works they have produced by their labour.’

This thesis has clear limitations – it is geographically and socially restricted. I have made a number of assertions based on eight men that, every summer, share a single practice. For all the years that I have visited the village, I have never been in the dry season or visited the annual festival. I have barely explored the village in which my work is based, and have visited few others. I hope however, this narrow, but very deep pool of experiences from which I draw has provided a starting point. A place from which we can begin to question
what conservation as an epiphenomenon is doing. Not conservation gone wrong. Fortressed, militarised, with big money and without small voices. But the very idea of conservation. Even, perhaps particularly, the exemplars. What is the concept of indigenous knowledge doing to the fabric of communities, when conservationists pluck “experts” from fields of impoverished souls like daisies? What happens when the community is stripped of its young ethnopolitical entrepreneurs? They may be privileged, but many are also social reagents – bridging spaces and integrating outcasts.

The final lesson I leave with concerns the role of conservation as spectacle – and the other consciousness it demands from its most oppressed actors – on the mental health and wellbeing of participants. Capitalist guilt – much like the white guilt and concern many black people had to endure and assuage as part of the black lives matter movement – drives much of this desire for consciousness. Any and all groups of people have every right to awareness of their circumstances and place in the world. Many, though, already are. Many render themselves unconscious in order to endure. In order to practice, to continue, to adjust, and to be. What will conservation do to this? What will happen to the souls of the “included”? 
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Appendices

Appendix A: Statistical Analyses (Chapter 2)

Chapter 2 makes use of two datasets. The first is catch statistics from the 2018 and 2019 hunting seasons. Each variable is listed in Table 1. The second is the weather station data that I received as a .csv file from the Jamaica Meteorological Services. I have described the data type that comprise this database within the chapter itself (Chapter 2: 64-65).

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>DESCRIPTION</th>
<th>USE IN STATISTICAL CALCULATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Datetime</td>
<td>The date and time of a catch and whether it was a single event (where one bird landed on the trap) or multiple events (with a flock or sub-flock being trapped)</td>
<td>The year of the hunting season (2018 against 2019) was used in Fisher’s Exact tests against successful v failed trap tallies; see Appendix A Table 1</td>
</tr>
<tr>
<td>Temperature</td>
<td>Temperature and Humidity values were collected in 2018 and 2019 (using different instruments). Both were recorded in the dataset, however 2019 recordings were used for analyses.</td>
<td>Used in one-way ANOVA tests; see Appendix A Table 2.</td>
</tr>
<tr>
<td>Humidity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>Weight (in grams) of successful catch.</td>
<td>Used in one-way ANOVA tests; see Appendix A Table 3. Weight was not tested as a variable affecting success as failed trap events results in no catch to weigh</td>
</tr>
<tr>
<td>Success</td>
<td>Yes or No recorded</td>
<td>Used in one-way ANOVA tests; see Appendix A Table 2.</td>
</tr>
</tbody>
</table>
Appendix A Table 1: Fishers Exact test of difference between season, species, and time of catch

<table>
<thead>
<tr>
<th>Hunting season (2018/19)</th>
<th>Species</th>
<th>Goldilock Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parrots (1)</td>
<td>All (2)</td>
</tr>
<tr>
<td></td>
<td>v Year (3)</td>
<td>v Success (4)</td>
</tr>
<tr>
<td></td>
<td>Parrots (5)</td>
<td>All (6)</td>
</tr>
<tr>
<td></td>
<td>p (&lt;0.001)</td>
<td>(&lt;0.001)</td>
</tr>
<tr>
<td></td>
<td>N 62</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>F &lt;0.0001***</td>
<td>0.25*</td>
</tr>
<tr>
<td></td>
<td>p (0.04)</td>
<td>(0.17)</td>
</tr>
<tr>
<td></td>
<td>N 93</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>N 93</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>F 0.44</td>
<td>5.83**</td>
</tr>
<tr>
<td></td>
<td>p (0.009)</td>
<td>(&lt;0.001)</td>
</tr>
<tr>
<td></td>
<td>N 62</td>
<td>93</td>
</tr>
<tr>
<td></td>
<td>F 25*</td>
<td>0.44</td>
</tr>
<tr>
<td></td>
<td>p (0.04)</td>
<td>(0.17)</td>
</tr>
<tr>
<td></td>
<td>N 93</td>
<td>93</td>
</tr>
</tbody>
</table>

Note: This table reports the Fisher’s Exact (FE) tests (2x2) that were undertaken in Chapter 2 on the catch statistics. (2) shows the FE of success v failed trap event tallies in 2018 v 2019 hunting seasons; restricted in (1) to parrot catch tallies solely. (3) – (4) shows the result of the FE of parrot v pigeon catch tallies in the 2018 v 2019 hunting seasons (3) and in successful v failed trap events (4). (5)-(6) shows the result of the FE of successful v failed trap event tallies both before v after 7am (“Goldilock hour), restricted in (5) to parrot catch tallies solely. (1) shows a significant difference in the tallies of successful (v failed) parrot catches between each hunting season. (4) shows a significant difference in trap success between parrot and pigeon catches. Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
Appendix A Table 2: The Effect of Environmental Factors on Trap Success

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Humidity</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Goldilock Hour</strong></td>
<td><strong>All 2019</strong></td>
</tr>
<tr>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Parrots</td>
<td>All</td>
</tr>
<tr>
<td>(1)</td>
<td>(2)</td>
</tr>
<tr>
<td>F</td>
<td>0.27</td>
</tr>
<tr>
<td>p</td>
<td>(0.61)</td>
</tr>
<tr>
<td>N</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: This table reports the one-way ANOVA results of the effect of environmental factors on the success or failure of trap events in 2019 only. A manual hygro-thermometer was used in 2018 which offered less reliable results and cannot allow for comparison across both years. In addition, trap failure occurred only in 2019 – restricting the scope of possible statistical comparisons. (1) – (6) show the results of one-way ANOVAs of the recorded temperatures (° C) in successful and failed trap events, controlling for species (parrot catch specifically; (1), (3), (5)) and for time (before (1)-(2) and after (3)-(4) 7am). (7) – (12) show the results of one-way ANOVAs of the recorded humidity (relative humidity) in successful and failed trap events, controlling for species (parrot catch specifically; (7), (9), (11)) and for time (before (7)-(8) and after (9)-(10) 7am). (3) and (5) show significant differences in temperatures between parrot catches outside of the Goldilock hour and, consequently, across all of the 2019 season. Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***.
Appendix A Table 3: The Effect of Weight on Variables that affect success (determined from Table 2)

<table>
<thead>
<tr>
<th>Temperature</th>
<th>Goldilock Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2018</td>
</tr>
<tr>
<td>Parrots All</td>
<td>(1)</td>
</tr>
<tr>
<td>F</td>
<td>0.20</td>
</tr>
<tr>
<td>p</td>
<td>(0.82)</td>
</tr>
<tr>
<td>N</td>
<td>42</td>
</tr>
</tbody>
</table>

Note: This table reports the one-way ANOVA results of the association of weight with factors that themselves have a significant association with the success of trap events (from table 2). Direct association between weight and successful vs failed trap events cannot be determined as escaped parrots cannot be weighed. These tests, though they can confirm no direct association, could help to illustrate the possibility of indirect association. In tests (1) – (4), weights of catches are sorted into temperature categories (20-25°C, 25-30°C, >30°C) based on the ambient temperature during capture. These are then tested against each other, controlling for hunting season ((1) and (2); (3) and (4)) as well as species (parrot catches only; (1) and (3)). In (5) – (7), the weights of catches trapped before 7am were tested against those trapped after 7am, controlling for year – (5) and (6). (1) – (7) show that weight has no significant effect on temperature or time of catch (both variables that affect trap success). Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
Appendix B: List of IUCN descriptors of range classification

For more associated notes and detailed guidance on using these codes, see the Mapping Standards and Data Quality for the IUCN Red List Categories and Criteria. Version 1.16.

**Definitions for Presence, Origin and Seasonal distribution codes**

<table>
<thead>
<tr>
<th>CODE</th>
<th>PRESENCE</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Extant</td>
<td>The species is known or thought very likely to occur currently in the area, which encompasses localities with current or recent (last 20-30 years) records where suitable habitat at appropriate altitudes remains. Extant ranges should be considered in the calculation of EOO. When mapping an “assisted colonisation” it is important to note that this range should be treated as Extant.</td>
</tr>
<tr>
<td>2</td>
<td>Probably Extant</td>
<td>This code value has been discontinued for reasons of ambiguity. It may exist in the spatial data but will gradually be phased out.</td>
</tr>
<tr>
<td>3</td>
<td>Possibly Extant</td>
<td>There is no record of the species in the area, but the species may possibly occur, based on the distribution of potentially suitable habitat at appropriate altitudes, although the area is beyond where the species is Extant (i.e., beyond the limits of known or likely records), and the degree of probability of the species occurring is lower (e.g., because the area is beyond a geographic barrier, or because the area represents a considerable extension beyond areas of known or probable occurrence). Identifying Possibly Extant areas is useful to flag up areas where the taxon should be searched for. Possibly Extant ranges should not be considered in the calculation of EOO.</td>
</tr>
<tr>
<td>4</td>
<td>Possibly Extinct</td>
<td>The species was formerly known or thought very likely to occur in the area (post 1500 AD), but it is most likely now extirpated from the area because habitat loss and/or other threats are thought likely to have extirpated the species, and there have been no confirmed recent records despite searches. Possibly Extinct ranges should not be considered in the calculation of EOO.</td>
</tr>
<tr>
<td>5</td>
<td>Extinct</td>
<td>The species was formerly known or thought very likely to occur in the area (post 1500 AD), but it has been confirmed that the species no longer occurs because exhaustive searches have failed to produce recent records, and the intensity and timing of threats could plausibly have extirpated the taxon. Extinct ranges should not be considered in the calculation of EOO.</td>
</tr>
<tr>
<td>6</td>
<td>Presence Uncertain</td>
<td>A record exists of the species’ presence in the area, but this record requires verification or is rendered questionable owing to uncertainty over the identity or authenticity of the record, or the accuracy of the location. Presence uncertain records should not be considered in the calculation of EOO.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CODE</th>
<th>ORIGIN</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Native</td>
<td>The species is/was native to the area.</td>
</tr>
<tr>
<td>2</td>
<td>Reintroduced</td>
<td>The species is/was reintroduced within its known historical range through either direct or indirect human activity.</td>
</tr>
<tr>
<td>3</td>
<td>Introduced</td>
<td>The species is/was introduced outside of its known historical distribution range through either direct or indirect human activity. Does not include species subject to assisted colonisation. Includes species intentionally moved outside of its native range to perform a specific ecological function.</td>
</tr>
<tr>
<td>4</td>
<td>Vagrant</td>
<td>The species is/was recorded once or sporadically, but it is known not to be native to the area.</td>
</tr>
<tr>
<td>5</td>
<td>Origin Uncertain</td>
<td>The species' provenance in an area is not known (it may be native, reintroduced or introduced)</td>
</tr>
<tr>
<td>6</td>
<td>Assisted Colonisation</td>
<td>Species subject to intentional movement and release outside its native ranges to reduce the extinction risk of the taxon.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CODE</th>
<th>SEASONALITY</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Resident</td>
<td>The species is/was known or thought very likely to be resident throughout the year.</td>
</tr>
<tr>
<td>2</td>
<td>Breeding Season</td>
<td>The species is/was known or thought very likely to occur regularly during the breeding season and to breed and be capable of breeding.</td>
</tr>
<tr>
<td>3</td>
<td>Non-breeding Season</td>
<td>The species is/was known or thought very likely to occur regularly during the non-breeding season. In the Eurasian and North American contexts, this encompasses ‘winter’.</td>
</tr>
<tr>
<td>4</td>
<td>Passage</td>
<td>The species is/was known or thought very likely to occur regularly during a relatively short period(s) of the year on migration between breeding and non-breeding ranges.</td>
</tr>
<tr>
<td>5</td>
<td>Seasonal Occurrence Uncertain</td>
<td>The species is/was present, but it is not known if it is present during part or all of the year.</td>
</tr>
</tbody>
</table>
Appendix C: Statistical Analyses (Chapter 4)

I acquired IUCN Red List data were acquired through three different channels. I submitted an API key request. An Application Programming Interface (API) is a standard data format that can be used to make data calls, requests, and queries in any programming language. Almost all platforms (e.g. Google, Spotify, Uber) offer APIs upon request to allow software developers to develop compatible apps and data scientists to access big data. The example below is the result of calling the Species History API of a currently threatened parrot species by its IUCN Internal Taxon Identification number using a function (species_api) I created in Python:

```
In [45]: species_api(22684502)
```

```
Out[45]: {'name': '22684502', 'result': [{'year': '2016', 'code': 'EN', 'category': 'Endangered'},
            {'year': '2013', 'code': 'EN', 'category': 'Endangered'},
            {'year': '2012', 'code': 'EN', 'category': 'Endangered'},
            {'year': '2008', 'code': 'EN', 'category': 'Endangered'},
            {'year': '2004', 'code': 'EN', 'category': 'Endangered'},
            {'year': '2000', 'code': 'EN', 'category': 'Endangered'},
            {'year': '1996', 'code': 'EN', 'category': 'Endangered'},
            {'year': '1994', 'code': 'EN', 'category': 'Endangered'},
            {'year': '1988', 'code': 'T', 'category': 'Threatened'}]}
```

The second data channel came from the pre-approved access I acquired from IUCN Red List Team to download several tabulated and spatial data of the current assessment data of selected species (both the descriptions and the shapefiles of range maps used in Figures 12 and 13). I selected all 117 threatened psittacine species and downloaded the compiled excel spreadsheet, from which I compiled a database containing:

- Internal Taxon Identification number (used to access API of species’ assessment histories)
- Scientific name
- Countries in which the species occurs (used to determine endemism)
- Biogeographical Realm
The final channel, involved using the IUCN Red List website itself to manually gather data on the number of contributors that participated in each of the 627 assessment events by counting the names listed. This process was repeated to ensure accuracy. I used a number of functions, written in Python, to stitch these three data channels together to create a Pandas DataFrame (a database type within Python, where I was able to populate columns with API calls through the use of functions) of the 627 events, which included contributor change, assessment change, and the rolling averages of contributor numbers to assess general trends.

---

### Appendix C Table 4: Fishers Exact/ Chi Squared tests observing the association between factors affecting changes to IUCN Red List assessments (used in Tables 5,6)

<table>
<thead>
<tr>
<th>Endemic v Realm</th>
<th>Endemic v Assess year</th>
<th>Realm v Assess year</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) 98.48*** ($\chi^2$)</td>
<td>(2) 0.82</td>
<td>(3) 13.80* ($\chi^2$)</td>
</tr>
</tbody>
</table>

Note: This table reports the Fisher’s Exact (FE) tests (2x2) or the Chi-Squared tests ($\chi^2$) for variables affecting changes in tables 5 and 6. (1) shows a significant association between biogeographical realm and endemism (many SIDS, where endemism is high, are in the Neotropical and Oceanian realms). (2) shows no association between whether the assessment occurs during or outside of the assessment cycle and if the species is endemic. (3) shows an association between whether the assessment occurs during or outside of the assessment cycle and the biogeographic realm of the species (Afrotropical species tested more often outside of cycles). Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
Appendix C Table 5: One-way ANOVAs of numbers of contributors to assessments against different variables

<table>
<thead>
<tr>
<th></th>
<th>Realm</th>
<th>Assess year (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Endemic (N)</td>
</tr>
<tr>
<td>F</td>
<td>30.11***</td>
<td>7.21***</td>
</tr>
<tr>
<td>p</td>
<td>(&lt;0.001)</td>
<td>(&lt;0.001)</td>
</tr>
<tr>
<td>N</td>
<td>627</td>
<td>220</td>
</tr>
</tbody>
</table>

Note: This table reports the one-way ANOVA results of the number of contributors to assessments. (1) shows a significant difference between contributor numbers in assessments of endemic and non-endemic species. (2)-(4) shows a significant difference between contributor numbers in assessments across different realms; restricted in (3) to all non-endemic species assessments and in (4) to all endemic species assessments (as realm and endemism are strongly associated). (5) shows a significant difference between contributor numbers in assessments conducted during vs outside of assessment cycles. Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
## Appendix C Table 6: Fisher’s Exact and Chi-Squared tests of factors affecting changes to Red List assessments

<table>
<thead>
<tr>
<th>F/χ²</th>
<th>Contributor change (Y/N)</th>
<th>Assessment change (Y/N)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Endemic</td>
<td>Realm</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F/χ²</td>
<td>4.25 (χ²)</td>
<td>22.34 (χ²)</td>
</tr>
<tr>
<td>p</td>
<td>0.24</td>
<td>0.09</td>
</tr>
<tr>
<td>df</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>N</td>
<td>510</td>
<td>510</td>
</tr>
</tbody>
</table>

Note: This table reports the Fisher’s Exact (FE) tests (2x2) or the Chi-Squared tests (χ²) for variables affecting changes in assessment outcomes or contributor numbers. As they test change, the first assessments of each 117 species are baselines (therefore N = 627-117); assessment changes across assessment years also pick up species-split baselines, which bring assessments tested down to 487 in (6) and (8) + (9). (1) – (3) show results of tallies of contributor change (yes or no) against variables; (3) shows the only significant result is whether the tests were conducted during our outside of assessment years. (4) – (9) show the results of tallies of changes in assessment outcomes against the three variables ((4)-(6)); only significant, again, when tallied against during vs outside of assessment cycle and, in (7) – (9), against contributor change (significant overall (7) but specifically significant in assessments conducted outside of assessment years (9). Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
Appendix D: Description of plastics database/statistical analyses (Chapter 5)

The plastic database analysed in Chapter 5 was compiled using the supplementary tables from Jambeck et al. (2015), three indices from the Human Development Index, and the single-use plastic legislation of 190 countries detailed in the UNEP report *Legal Limits on Single-Use Plastics and Microplastics: A Global Review of National Laws and Regulations* (2018b). Data taken from the Jambeck et al. (2015) supplementary tables are:

- Economic status, which I updated using the statuses published by the World Bank in July 2019
- Waste generation rate [kg/person/day], derived from authors’ calculations and World Bank estimates
- Plastic waste generation [kg/day], derived from authors’ calculations
- Inadequately managed plastic waste [kg/day], derived from authors’ calculations
- Plastic waste littered [kg/day], derived from authors’ calculations
- Mismanaged plastic waste [kg/person/day], derived from authors’ calculations

Country names that had changed (e.g. Eswatini, formerly Swaziland) were matched to the current country names as it appeared on the UNEP report. Where there were countries that had since split (e.g. South Sudan from Sudan), the newly established countries were included and were analysed with respect to legislation and HDI indices only.

Legislation from the UNEP report was tabulated into Excel format. Legislation types are listed in Table 6. As Jamaica’s legislation was updated to reflect the enactment of the ban in January 2019, updates were made on the dataset to March 2019. Finally, three indices from the Human Development Index 2019 were used (index description taken from HDI 2019):

- Employment in agriculture: Share of total employment that is employed in agriculture (source: International Labour Organisation report 2019)
- Exports and Imports: Sum of exports and imports of goods and services, expressed as a percentage of gross domestic product (GDP). It is a basic indicator of openness to foreign trade and economic integration and indicates the dependence of domestic
producers on foreign demand (exports) and of domestic consumers and producers on foreign supply (imports), relative to the country’s economic size (GDP).

- Foreign direct investment: Sum of equity capital, reinvestment of earnings, other long-term capital and short-term capital, expressed as a percentage of GDP.

Appendix D Table 7: Description of legislation types based on UNEP (2018b)

<table>
<thead>
<tr>
<th>Type of Legislation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restriction</strong></td>
<td>Trade regulations that include restriction on the manufacture, production, and distribution of single-use plastics (some restrictions only apply to single-use plastic bags of specific wall thickness). It also includes the mandatory provision of alternative reusable products. The review distinguishes between full and partial bans:</td>
</tr>
<tr>
<td></td>
<td><strong>Full ban</strong></td>
</tr>
<tr>
<td></td>
<td>Manufacture, Importation, and Retail Distribution</td>
</tr>
<tr>
<td></td>
<td><strong>Partial ban</strong></td>
</tr>
<tr>
<td></td>
<td>• Manufacture</td>
</tr>
<tr>
<td></td>
<td>• Importation</td>
</tr>
<tr>
<td></td>
<td>• Retail Distribution</td>
</tr>
<tr>
<td></td>
<td>• Retail Distribution and Importation</td>
</tr>
<tr>
<td></td>
<td>• Manufacture and Importation</td>
</tr>
<tr>
<td>** Levy/tax**</td>
<td>Taxation or levies on the manufacture, production, or use of single-use plastic bags at the national level which includes:</td>
</tr>
<tr>
<td>(12)</td>
<td>• Taxes on manufacture or import</td>
</tr>
<tr>
<td></td>
<td>• Consumer fees</td>
</tr>
<tr>
<td></td>
<td>• Waste disposal charges</td>
</tr>
<tr>
<td><strong>New regulation</strong></td>
<td>Where countries announced pending or proposed legislation, current legislative statuses were used in the review however proposals were documented. If the proposed legislation was explicit (rather than an ambition or target), I deviated from their categorisation in the review (Disposal regulation) and placed those countries in this dedicated category. Jamaica, whose legislation has since been passed into law, has been included in the countries with full restrictions.</td>
</tr>
<tr>
<td>proposed (9)</td>
<td></td>
</tr>
<tr>
<td><strong>Extended Producer Responsibility (EPR)</strong></td>
<td>‘an environmental policy approach in which a producer’s responsibility for a product is extended to the post-consumer stage of a product’s life cycle’ (UNEP, 2018b: p4). Includes:</td>
</tr>
<tr>
<td>(11)</td>
<td>• Deposit-refunds</td>
</tr>
<tr>
<td></td>
<td>• Product take-back</td>
</tr>
<tr>
<td></td>
<td>• Recycling targets</td>
</tr>
<tr>
<td><strong>Disposal regulation</strong></td>
<td>National legislation with mandates for post-use disposal to be implemented on national, municipal, or consumer levels. Includes</td>
</tr>
<tr>
<td>(47)</td>
<td>• Post-waste collection and recycling</td>
</tr>
<tr>
<td></td>
<td>• Fines for improper disposal</td>
</tr>
<tr>
<td><strong>No national law found</strong></td>
<td>Where either no law was found to be in place, or where municipal or state-level laws, rather than national or federal laws, were in place.</td>
</tr>
</tbody>
</table>
### Appendix D Table 9: One-way ANOVAs of plastic pollution against economic status

<table>
<thead>
<tr>
<th></th>
<th>Waste generation rate</th>
<th>Plastic waste generation</th>
<th>Inadequately managed plastic waste</th>
<th>Plastic waste littered</th>
<th>Mismanaged plastic waste rate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
</tr>
<tr>
<td>F</td>
<td>11.16***</td>
<td>1.05</td>
<td>2.02</td>
<td>1.05</td>
<td>15.05***</td>
</tr>
<tr>
<td>p</td>
<td>(&lt;0.001)</td>
<td>(0.37)</td>
<td>(0.11)</td>
<td>(0.37)</td>
<td>(&lt;0.001)</td>
</tr>
<tr>
<td>N</td>
<td>148</td>
<td>148</td>
<td>148</td>
<td>148</td>
<td>148</td>
</tr>
</tbody>
</table>

Note: This table reports the one-way ANOVA results of the amount (kg/day; in cases (2) and (4)) or rate of plastic pollution (kg/person/day; in cases (1), (3), and (5)) in countries of different economic status (HI, UMI, LMI, LI). (1) shows a significant difference in waste generation rate between countries of different economic statuses (highest HI – average = 2.40; lowest L1 – average = 0.61). (5) shows a significant difference in mismanaged plastic waste rate between countries of different economic statuses (highest UMI/LMI – average = 0.074; lowest HI – average = 0.01). Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***
Appendix D Table 10: One-way ANOVAs of development indices across different legislation types for all economic statuses

<table>
<thead>
<tr>
<th></th>
<th>Agricultural Employment</th>
<th>Export/Import</th>
<th>Foreign Investment</th>
</tr>
</thead>
<tbody>
<tr>
<td>HI</td>
<td>F 0.13</td>
<td>7.20**</td>
<td>1.59</td>
</tr>
<tr>
<td></td>
<td>p (0.98)</td>
<td>(0.01)</td>
<td>(0.18)</td>
</tr>
<tr>
<td></td>
<td>N 57</td>
<td>30</td>
<td>58</td>
</tr>
<tr>
<td>UMI</td>
<td>F 0.17</td>
<td>2.24</td>
<td>3.01*</td>
</tr>
<tr>
<td></td>
<td>p (0.93)</td>
<td>(0.15)</td>
<td>(0.02)</td>
</tr>
<tr>
<td></td>
<td>N 53</td>
<td>18</td>
<td>51</td>
</tr>
<tr>
<td>LMI</td>
<td>F 1.63</td>
<td>0.72</td>
<td>1.38</td>
</tr>
<tr>
<td></td>
<td>p (0.18)</td>
<td>(0.41)</td>
<td>(0.25)</td>
</tr>
<tr>
<td></td>
<td>N 39</td>
<td>18</td>
<td>42</td>
</tr>
<tr>
<td>LI</td>
<td>F 2.04</td>
<td></td>
<td>1.53</td>
</tr>
<tr>
<td></td>
<td>p</td>
<td>(0.17)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>N 18</td>
<td></td>
<td>20</td>
</tr>
</tbody>
</table>

Note: This table reports the one-way ANOVAs of economic statuses – high-income (HI), upper middle-income (UMI), lower middle-income (LMI), low-income (LI) – against specific HDI indices. Number of total LI countries with legislation = 29 (compared to 46 for LMI, 57 for UMI, and 58 for HI); this was not a high enough number to conduct ANOVA testing across the 6 legislation categories as the distribution was heavily skewed towards bans (N=21). (2) shows a significant difference in the amount of agricultural employment between high-income countries with full v partial bans. (3) shows a significant difference in the amount of export/import between upper middle-income countries across different legislation. (6) shows a significant difference in the amount of foreign investment between low-income countries with full v partial bans. Significance at 5% confidence level indicated by *; significance at 1% confidence level indicated by **; significance at 0.1% confidence levels indicated by ***