

# **Living in Elephant Worlds**

## **Human-elephant relations on the fringe of forest and village in Assam, Northeast India**

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A thesis submitted for the degree of Doctor of Philosophy

Department of Anthropology

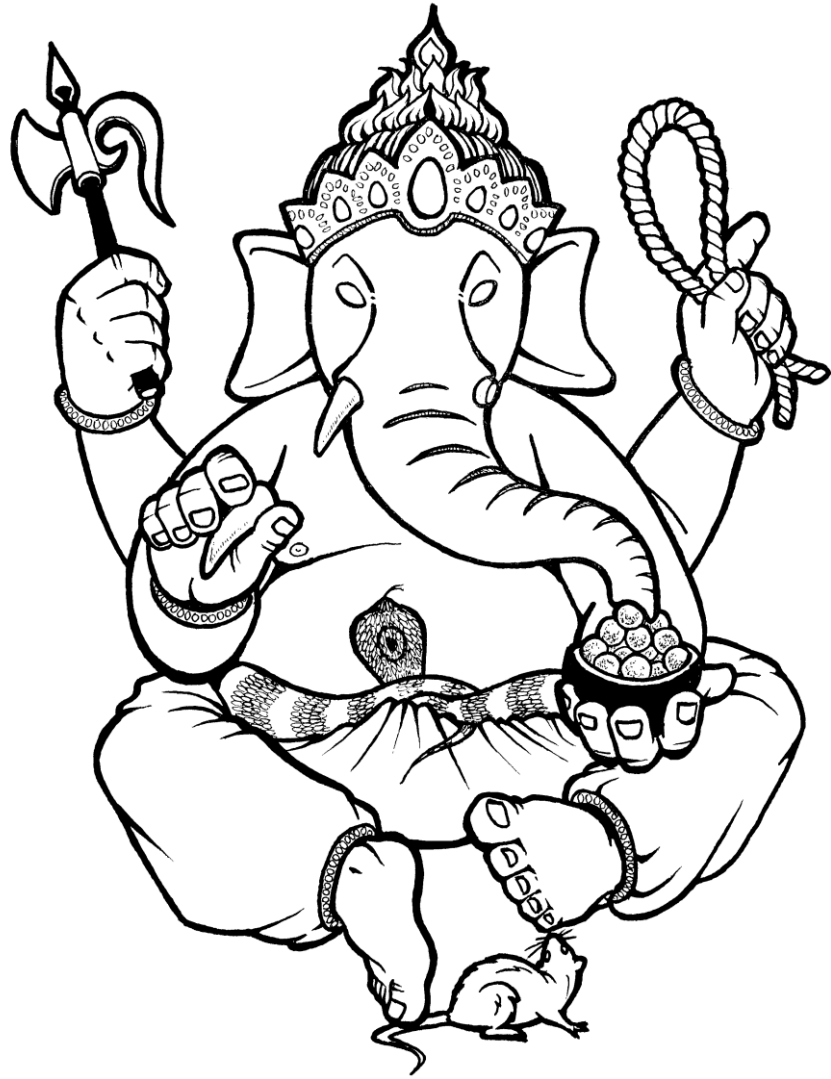
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# Contents

<b>List of Maps</b>	<b>vii</b>
<b>List of Figures</b>	<b>vii</b>
<b>Abstract</b>	<b>viii</b>
<b>Statement of Candidature</b>	<b>ix</b>
<b>Acknowledgements</b>	<b>x</b>
<b>Introduction</b>	<b>5</b>
Why elephants?	8
More-than-human anthropology and ethnoelephantology	10
Humans and elephants at the fringe of forest and village	14
Researching and representing animals	22
Kinds of elephant relations	29
Beyond human-wildlife conflict	32
Organisation and outline of chapters	34
<b>Chapter 1: A shifting human-elephant landscape</b>	<b>41</b>
Shifting human-elephant relations	44
Blurring the divide between forest and village	48
Managing the field and forest	55
Living in a fragmented world	60
Failing to tame the wild and maintain order	67
Conclusion	76
<b>Chapter 2: Feeding hungry gods</b>	<b>85</b>
The potential to be a god	87
From animal to divine person	94
Haathi as moral agent	98
Feeding a living god	103
At the mercy of a superior being	108
When gods become demons	112
Conclusion	114

<b>Chapter 3: Uncertain encounters</b>	<b>123</b>
Unusual behaviour	124
Uncertain connections	128
Unknowable limits of haathi	132
An alterity that decentres	139
Conclusion	141
<b>Chapter 4: Shared forest pathways</b>	<b>149</b>
The forest as a mutual ecology	151
Best to avoid crossing paths	155
Traces of elephant life	161
Shared affordances	163
The cognitive niche of elephants	169
Colonising India and a more-than-human history	170
Conclusion	176
<b>Chapter 5: Scaffolding animals</b>	<b>183</b>
The elephant owner, the mahout, and the elephant	186
Nonhuman incorporation into the human niche	193
The cognitive integration of mahout and elephant through work	196
Becoming domestic	200
The risks of scaffolding elephants	207
Conclusion	210
<b>Chapter 6: The elephant and the iron horse</b>	<b>217</b>
Conflicting ways of life	220
The blinders on the Iron Horse	222
Mobilising around the elephant	227
Integrating human and elephant ways of life	237
Conclusion	243
<b>Conclusion</b>	<b>249</b>
Living in elephant worlds	255
<b>References</b>	<b>261</b>
<b>Appendix</b>	<b>295</b>
Human Research Ethics	295
Animal Ethics	296

# List of Maps

Map 1: Map of India, Assam, and the Northeast	3
Map 2: Map of Chakardo and outskirts of Guwahati	17
Map 3: Elephant ranging area in local landscape	61
Map 4: Map of elephant routes through Chakardo	227

# List of Figures

Figure 1.1: Herd in the forest	39
Figure 1.2: Traces of elephants on a paddy field	39
Figure 2.1: Offerings of food for elephants	83
Figure 2.2: Elephant and forest puja site	83
Figure 2.3: Ganesh temple in Guwahati	89
Figure 3.1: Xiruxila	121
Figure 3.2: Elephant and Shiva temple	121
Figure 4.1: The knowing engineer	145
Figure 4.2(a): Elephant path	147
Figure 4.2(b): Human-elephant path	147
Figure 4.3: Forest path detail	147
Figure 5.1: Working elephant toppling banana tree	181
Figure 5.2: Working elephant in city street	181
Figure 6.1: Herd leaving the wetlands	215
Figure 6.2: Bull crossing railway tracks	215
Figure 6.3: Poster warning about elephant-train collisions	232
Figure 7.1: Herd feeding in wetland	247
Figure 7.2: Mahouts atop their elephants	247
Figure 7.3: Worshipping a dead elephant	247

# Abstract

The worlds and practices of the people we study are not produced by human intention and action alone. They emerge in interaction with other organisms, materials, and forces that constitute a person's field of relations. A multispecies or more-than-human approach to anthropology seeks to better understand other nonhumans' co-determining agency in the formation of "human" worlds, and that to be human is to be subject to and shaped by interspecies relations.

Elephants have played an important role in the formation of South and South East Asia. Certain histories, environments, societies, and cultures that constitute the region have emerged from the wild and captive relationships between human and elephant. Inhabiting a shared environment, these two socially and cognitively complex animals have over time become deeply entangled, interconnected along ecological, social, and behavioural dimensions. This thesis is a more-than-human anthropology and ethnoelephantology of human-elephant relations. Data is drawn from 18 months of ethnographic fieldwork in Assam, Northeast India studying communities who lived on the fringes of elephant-bearing forest. This research will seek to: untangle the factors that bind the two species and reproduce their interactions across time; examine how humans and elephants coordinate and mutually affect each other's behaviour; map how their respective habitats and perspectives coincide, and; understand how religious and other beliefs about elephants shape the dynamics of their interaction.

Studies of human-elephant interaction in the conservation and animal sciences tend to characterise the relationship as one of conflict and domination. This thesis explores modes of relation that are beyond this oppositional dynamic. Ethnographic observations resist efforts to situate each animal as belonging to incommensurable sides of the nature-society divide. Human and elephant worlds in Assam overlap and are deeply enmeshed. Across a single landscape, the interspecies dynamic is multifaceted, variation depending upon material and symbolic, social and ecological aspects. The perceptions and behaviours of both animals intersect at negotiated junctures, sometimes from radically different positions and intentions, and other times aligning in surprising ways, but always co-constituting the other as they learn to inhabit a shared environment.



# Statement of Candidature

I certify that the work in this thesis entitled *Living in Elephant Worlds: Human-elephant relations on the fringe of forest and village in Assam, Northeast India* has neither been previously submitted for a degree, nor has it been submitted as part of the requirement for a degree to a university or institution other than Macquarie University. I also certify that the thesis is an original piece of research written by me. Any help and assistance that I have received during my research work and the preparation of this thesis have been appropriately acknowledged. In addition, I certify that all information sources and literature used are acknowledged in the thesis. The research presented in this thesis was approved by Macquarie University's Human Research Ethics Committee, reference number 5201200282 on June 15<sup>th</sup>, 2012, and the Animal Ethics Committee, reference number 2012/032 on June 14<sup>th</sup>, 2012. Copies of ethics approval is included in the Appendix of this thesis.

A handwritten signature in black ink, consisting of a large, stylized 'P' followed by a long horizontal stroke that curves upwards at the end. The signature is written over a thin horizontal line.

Paul G. Keil (40318982)

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I must first thank the elephants. It was because of them this thesis was possible.

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In a certain country there existed a village of blind men. These men had heard that there was an amazing animal called the elephant, but they knew not how to form an idea of his shape.

One day an elephant happened to pass through the place: the villagers crowded to the spot where this animal was standing. One of them got hold of his trunk, another seized his ear, another his tail, another one of his legs, etc. After thus trying to gratify their curiosity, they returned to the village, and, sitting down together, they began to give their ideas on what the elephant was like: the man who had seized his trunk said, he thought the elephant was like the body of the plantain tree; the man who had felt his ear, said, he thought he was like the fan with which the Hindoos clean their rice; the man who had felt his tail, said, he thought he must be like a snake, and the man who had seized his leg, thought he must be a pillar.

An old blind man of some judgement was present, who was greatly perplexed how to reconcile these jarring notions respecting the form of the elephant; but he at length said – “You have all been to examine this animal, it is true, and what you report cannot be false: I suppose, therefore, that that which was like the plantain tree must be his trunk; that which was like a fan must be his ear; that which was like a snake must be the tail; and that which was like a pillar must be his body.” In this way, the old man united all their notions and made something of the form of the elephant.

W. Ward. (1811, pp. 323-324). *Account of the Writings, Religion and Manners of the Hindoos, vol. I*. Senampore; Mission Press.

Six blind elephants were discussing what men were like. After arguing they decided to find one and determine what it was like by direct experience. The first blind elephant felt the man and declared, “Men are flat.” After the other blind elephants felt the man, they agreed.

Anonymous, *Elephant Jokes*. Wikipedia.com





Map 1: Assam is a valley state situated in Northeast India. The surrounding hilly states include Arunachal Pradesh to the north, Meghalaya to the south, and in the east along the Myanmar border, Nagaland, Mizoram, and Manipur. Tripura shares most of its border with Bangladesh. The white circle indicates the location of the field site.





# Introduction

In his book, *A Naturalist in Karbi Anglong*, Assamese naturalist and civil servant, Dr. Anuwarrudin Choudhury (2001), wrote about “an elephant phenomenon” that occurred along a section of the National Highway 39 (NH39) that passed through the Nambor reserve forest, in the state of Assam, Northeast India. The phenomenon, beginning in the early eighties and lasting over a decade, was first officially witnessed by a government Forest Department officer when he observed a herd of 18 elephants stop a passing truck transporting sugarcane. The herd waited in the middle of the highway, and with their formidable size prevented the vehicle from travelling further. Once the driver had stopped, the elephants came forward and lifted the tarpaulin canopy that covered the truck’s load. They reached in and wrapped their trunks around large bundles of sugarcane. Once they gathered what they needed, they then disappeared into the forest. The two-lane highway, NH39, was constructed directly through the centre of this primary elephant habitat; the animals needed to cross the road and negotiate with incoming traffic to safely access the other side of their divided range. Trucks transported loads of sugarcane that were harvested from farms down south, and utilised the NH39 as a direct route to the nearby district of Golaghat where there was a sugarcane processing mill. By the time of the above-mentioned report, locals and truck drivers were familiar with the unusual habits of herds of Nambor, who would assemble along different sections of the highway in order to collect their “toll” (Choudhury, 2001)

In 1990, a “VIP” (very important person) from the nearby state of Nagaland visited the area and with a rifle illegally killed a male elephant for sport. No doubt the bigshot was attracted to the easy target that these animals afforded as they stood collecting their tolls on the open road. Following the male’s death, a herd loitered around the site where the elephant was killed, the family aggressively chasing away any incoming cars that attempted to pass. Many people believed that the increased presence of elephants on the road and their new tendency to engage all types of vehicles shifted the dynamics of the human-elephant relationship at Nambor. Choudhury speculates that possibly a frightened passenger of a harassed vehicle offered a spare banana to the angry elephants. From that point on, elephants became better practiced at soliciting gifts of food in the form of bananas and other fruits from all passing cars, not just sugarcane trucks.

A few years later, the interspecies exchange had drawn national media attention, and tourists began to travel along NH39 for the purpose of giving food to the elephants. Temporary fruit stalls were opportunistically set up at small towns just outside the forest to take advantage of this emerging human-elephant economy. Bold visitors would give food directly into the extended trunks of these animals, and even bolder elephants would reach inside vehicle windows. Those who came to meet and feed the herds did so to revel in the curiosity, fear, and excitement that came from facing such formidable beings, but also because these animals were strongly associated with the elephant-headed god, Lord Ganesh. On one page of Choudhury's (2001) book, he displays a photo of a man stepping out of his vehicle, laying bananas in front of a huge, tusker (male elephant with tusks), and touching the animal god's feet.

I begin with Choudhury's (2001) document of this remarkable interspecies encounter because it raises some themes and questions pertinent to the study of the human-elephant relations in this thesis. First, what factors brought humans and elephants together along the highway at Nambor and shaped the dynamics of the exchange across time? The answer to this question is complex and requires untangling the social, ecological, and historical threads that bind the two animals together at a particular place (Baynes-Rock, 2013). We would need to trace colonial histories of reserve forest management that enabled the preservation of elephant habitat. Understand how the construction of the highway coupled with the development of the sugarcane industry created a unique space for humans and elephant to interface. Account for the impressive cognitive and social capacities of elephants to intersect with the anthropogenic environment and interact with people. Figure the role of the media and religious beliefs surrounding elephants in shaping how people perceived and engaged these beings. Following that, we would also need to grasp how this relationship became unravelled. By the mid-nineties, another two elephants had been shot, the sugarcane processing mill shut down, and herds no longer ventured out onto the road to stop vehicles.

Can the event at Nambor be analysed with Western dichotomous categories that differentiate between wild and domestic relationships, or natural and social worlds? Anthropological research has challenged any assumptions that these binary divisions have universal application (Descola & Pálsson, 1996). During fieldwork, I found it was elephants who commonly subverted my understanding of place, of who can exist where, and what kind of relations were possible. Elephants are beings often situated as part of the wild imaginary

(Whatmore, 2002), yet, like all nonhuman animals, they frequently transgress the material and symbolic spaces in which we situate them (Philo & Wilbert, 2000). The highway of Nambor forest represents a place where it was difficult to distinguish the worlds of humans and elephant. Both animals interacted with each other in a shared environment, their places and activities interrelated.

What I found striking about the Nambor forest phenomenon is how active elephants were in shaping the encounter. Their huge bulk was employed to literally halt traffic, elephant intentions and intelligence were expressed through their opportunistic intervention, and it was the pachyderms who presumably initiated the phenomenon. At Nambor, human practices were subject to and appropriated by nonhuman desires, demonstrating the powerful agency elephants can have in shaping the worlds of the people they live with. Further, interspecies interaction emerged through the initiatives of both animals: tourists also perceived an opportunity to participate, and further determined the trajectory of the engagement. Our worldly interactions cannot be understood by primarily focusing on the agency of one actor over the other: entangled in a relationship, we both affect and are affected (Despret, 2004, 2013a). This thesis will seek to account for the ways human and elephant lives are mutually shaped by the other.

What happened at Nambor was a unique event; I certainly did not hear of or witness anything quite like it whilst conducting research on human-elephant relations in Assam. Where I worked, I found elephants to generally keep shy of human-dominated spaces; and knowledgeable locals maintained a respectful distance from these potentially dangerous animals. But in Nambor along the highway, both species adopted novel behavioural approaches, co-creating an opportunity to engage in mutually beneficial ways. The encounter seemed to be a form of exchange, with both animals receiving items and experiences of positive value. It is unlikely, however, that human and elephant held any shared meaning or norms about the event that organised their interactions, a characteristic that typically defines a social encounter. However, this should not negate the interspecies relationship as a form of sociality worth investigating (Ingold, 2013; Tsing, 2014). To overlook the exchange at Nambor because it does not conform to a narrow conception of the social, or that its actors are species whose study is typically relegated to different scientific domains, overlooks how interspecies relations are an important aspect of human social complexity (Lestel, Brunois & Gaunet, 2006; Lestel & Taylor, 2013).

## Why elephants?

Elephants are surprisingly adaptable animals; their physiological and cognitive capacities enable them to engage the environment in a flexible manner. Their trunks are powerful enough to tear down a tree, dexterous enough to employ a branch as a tool, and discrete enough to pluck a blade of grass (Sukumar, 2011). Elephants are generalist feeders thriving in different environmental conditions, their stomachs capable of processing a wide variety of vegetation (Sukumar, 2003, 2011). As migratory animals, they bind disparate ecosystems together through their far ranging seasonal travels, and their impact on their environment has widespread effects on the ecosystems biological composition, implicating countless organisms in their way of life (Haynes, 2006, 2012; Campos-Arceiz, 2009; Baskaran & Desai, 2013). Elephants are deeply “social” in Latour’s (2005) sense of the term: their lives enrol, connect, and form alliances with a broad assemblage of other actors, elephant and non-elephant.

Comparative cognitive research has revealed how elephants – like humans – have evolved the capacity for joint attention, cooperation, and self-recognition (Plotnik, de Waal & Reis, 2006; Plotnik, Lair, Suphachoksahakun, & de Waal, 2011). These social and cognitive skills are powerful and adaptable enough to extend to their relationships with people: the elephant’s social and behavioural plasticity has enabled individuals to be trained and recruited into intimate, working, augmentative relationships for the last 5000 years (Sukumar, 2011). In South and South East Asia, elephants have played an important symbolic and material role in function of society (Locke, 2013, 2016a). Eben Kirksey (2015), appropriating a concept from Peter Sloterdijk (2011), refers to organisms who are not locked in to specific ecological systems and modes of existence, who can move between different worlds, and form unexpected interspecies allies, as “ontological amphibians”. The elephants’ social proclivity and promiscuity are good examples of an ontological amphibian that draws nonhuman and human worlds together in surprising ways.

“Elephants are captivating”, an older man once confessed to me. I couldn’t help but agree with him. This was in 2014, and we were speaking in the village of Chakardo, my primary fieldsite in central Assam, located some 300km west of Nambor Forest. Occasionally at Chakardo, herds descended from the adjacent Rani-Garbhangra reserve forest (RGRF), and travelled through the village to submerge themselves in the waters of the nearby Deepor Beel wetland. The older man was bemused at the power of elephants to continue to magnetically

draw onlookers, despite local people living alongside them and having witnessed their comings and goings many times throughout their lives. The cultural status of elephants in India, especially their identity as animal gods, was an important factor that influenced this connection. For myself, a western trained anthropologist, the allure of elephants was their status as an archetypal “wild animal”, a figure inherited from histories of British colonialism in Asia and Africa (Garland, 2008). It was exciting to witness these wild animals in a domestic space.

Transfixed by the sight of elephants bathing and socialising at Chakardo village, I considered what other ties might have bound the older man and myself to these charismatic animals. Asian elephants are not as large as their better known African bush elephant cousins who live in the savannah, and with whom they shared a common ancestor approximately five million years ago (Sukumar, 2003).<sup>1</sup> Asian elephants also have a more pronounced forehead, smaller ears, less wrinkly skin, the ends of their trunks have only one tip and not two, and only males of the species grow tusks (although not all). These are only some of their obvious physiological distinctions, not including the behavioural, cognitive, social and ecological differences that exist between them (Sukumar, 2003). Relative to humans and our primate physiquess, however, Asian elephants are strikingly huge, powerful animals, and unusual in appearance. Despite their unfamiliar physiology and social cues, people can readily recognise their intense emotional relations with kin, and keen intelligence through their interactions with the environment.<sup>2</sup> Jamie Lorimer (2015) defines an animal’s charisma as an emergent relational quality, when a person’s embodied and enculturated phenomenological disposition intersects with the physical and behavioural traits of an organism. The magnetic pull of elephants is an affect driven by our cultural perspectives, as well as our evolutionary divergence and convergences.

The relationship between our two species as Piers Locke (2016a, p. 1) has argued, is one “between two cognitively elaborate and socially complex species that have influenced each other’s lives, environments, and imaginations in profound ways.” The ties between humans and elephants warrant further investigation.

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<sup>1</sup> Note: there are actually two species of elephants in Africa – the African bush elephant, and African forest elephant, the latter being found in the Congo Basin.

<sup>2</sup> The *Yajurveda*, one of India’s earliest Sanskrit literature, stated that only humans, apes, and elephants have hands; the elephant’s Sanskrit name – *mriga-hasti* – literally means “the beast with a hand” (Sukumar, 2011).

## More-than-human anthropology and ethnoelephantology

Anthropology has always been concerned with the ways that human and nonhuman beings live together (Marvin & McHugh, 2014). Cultures, identities, and livelihoods can be deeply organised around the animals that people keep, and nonhumans can be significant and powerful figures in the lifeworld's of our informants (for discussions, see Shanklin, 1985; Mullins, 1999; Hurn, 2012; Ingold, 2013; Ogden, Hall, Tanita, 2013). However, ethnographic analysis of human-animal relations, argued Barbara Noske in 1993, has often overlooked how animals can be “agents or subjects in their own right” (Noske, 1993, p. 185). Noske, challenged anthropology and asked whether “in addition to a *human-animal* relationship there also exists something like an *animal-human* relationship” (Noske, 1993, p. 186, author's emphasis). It was a provocative question for a discipline whose focus revolved around human and cultural worlds, and through analysis often relegated animals to passive roles as “food, stores of value, commodities, scapegoats, or stand in humans” (Mullins, 1999, p. 207; see also Shanklin, 1985). To take up this challenge, anthropology would need to take into consideration how nonhumans have their own position on the interspecies worlds they were engaged in, overcome its narrow disciplinary focus that relegated questions about more-than-human subjects to the natural sciences, and better conceptualise how human practices can be subject to and shaped by nonhumans (Noske, 1993).

Tim Ingold (2000) argues that anthropological research is incomplete if research questions centre exclusively on the individual over the environment, the human over the nonhuman, the mind over the body, or culture over nature (see also Hutchins, 1995). These dichotomies are not only Western-centric, but the separate domains within which we situate, differentiate, and study human and nonhumans, can obscure how our activities and worlds take shape (Descola & Palsson, 1996; Howell, 1996; Ingold, 2000). Human cognition and actions are an ecological and relational achievement emerging from the continuous and reciprocal interactions between humans and the environment (Bateson, 1986; Hutchins, 1995; Ingold, 2000). Immersed in the world, alongside the movement and growth of other organisms, materials, and forces, people learn to coordinate with and exploit these currents of activity (Ingold, 2010). Human agency is not distinct from the environment, instead our intentions and capacities take shape within, in relation to, and as part of our surroundings. Anthropology's analytical focus must be expanded beyond the human, to take into account

the broader “field of relations” that we are situated within (Ingold, 2000, 2013). A more-than-human approach to anthropology – or “an anthropology of life” as Eduardo Kohn (2007) has referred to it – is a study of “all too human worlds within a larger series of processes and relationships that exceed the human” (ibid, p. 6).

Anthropology recently has renewed its attention to human-animal relationships, part of a broader cross-disciplinary movement within the humanities, currently captured by the term multispecies studies (Kirksey & Helmreich, 2010; van Dooren, Kirksey & Münster, 2016).<sup>3</sup> This project both aspires to decentre the analytical focus away from the individual and the human, and better foreground the perspectives and agency of animals, plants, and other organisms implicated in people’s lives. Researchers are energised by “scrambling” and confounding the categorical and hierarchical distinctions that divide natural and cultural domains (Boyd, et al. 2015). The emphasis on animal agency – often represented in a manner symmetrical to humans (see Callon, 1986) – subverts traditionally supposed interspecies power and relational dynamics, revealing unexpected forms of human-nonhuman sociality. Donna Haraway (2008) has been a pivotal guide into these natural-cultural entanglements, arguing against the conceit that humans can be understood in isolation of their historically inherited, mutually affecting and mutually enabling relationships with other species (Haraway, 2008). Whether human or nonhuman, who an organism is, and what its affective capacities are, is dependent on their relationship to other beings (Buchanan, 2006; Haraway, 2008; Ingold, 2013; Ogden, Tanita & Hall, 2013), whether that be part of an interspecies dyad or a multispecies ecology.

More-than-human researchers immerse themselves in more-than-human social worlds (Tsing, 2014), and write about other organisms as historically dynamic actors with biographies and political affiliations, lively beings enmeshed with and capable of shaping human worlds, or indeed, co-creating shared ones (Kirksey & Helmreich, 2010). Ethnographers are researching unlikely nonhumans, and have expanded upon the spectrum of interspecies relational modes traditionally encountered within anthropology. Scholars are engaging coral in laboratory environments (Hayward, 2010); taking part in urban bee-

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<sup>3</sup> Multispecies emerges at the confluence of the cross-disciplinary study of human-animal relationships (e.g., Knight, 2005; Whatmore, 2002; Aluke & Sanders, 2006) and frameworks that emphasise the co-determining role of nonhuman actors in social domains (e.g., Actor Network Theory, Latour, 2005; Mol, 2010; and Jane Bennett’s “vital materiality”, 2007; Grusin, 2015).

keeping cultures (Moore & Kosut, 2013); tracking human-hyena relationships in a “multispecies commons” (Baynes-Rock, 2013); reflecting on affective relations between tourists and alligators (Keul, 2013); studying microbiological life in deep oceans (Helmreich, 2009), and tracing the connections between pine, fungi, and transnational trade (Tsing, 2015). Multispecies research situates these encounters as part of a deeply historical and ongoing, events constructed amidst unbalanced power relations, and structured by the specifics of the socio-ecological context and mediating technologies (e.g., Fuentes, 2010; Kirksey, 2015). Ethnography is especially informed by the embodied interactions and affective capacities of the nonhuman organism, and how those capacities enable and shape the course of interspecies relations. Multispecies studies aspire to write “‘thick’ accounts of the distinctive experiential worlds, modes of being, and biocultural attachments of other species” and how they come together with humans to “craft shared lives and worlds” (van Dooren, Kirksey & Münster, 2016, p. 6).

The human-elephant relationship in anthropology has received increased attention over the last ten years, especially in the South and South-East Asian regions.<sup>4</sup> In 2006, Piers Locke conducted the first in-depth ethnographic research centred on the interactions between both species. He investigated the skills required to be a *mahout* (captive elephant handler) and their role in tourism and conservation in Chitwan National Park, Nepal. Participating in the working life of mahouts, Locke learnt that he also needed to recognise, respond to, and form a mutual bond with individual elephant personalities (Locke, 2016a). Rather than simply a beast of burden, elephants in Locke’s ethnography could be persons participating with their human partners in rites of passage, and members of a hybrid (human-nonhuman) institution. Relationships in the domestic sphere serve as accessible sites for exploring the complexity of elephant agency, interspecies social intimacy, and cultural variation in practices, whether that be timber logging (Laine, 2016), the tourism industry (Hart, 2005), or elephant welfare parks (Klixbull, 2016).

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<sup>4</sup> Many earlier references to human-elephant relationships in anthropology were scattered and mostly from research in the African continent. A few examples: Elephants for the Bisa of Zambia were central to their hunting practices, dangerous animals to live with and of symbolic import to Bisa society (Marks, 1976/2005). Elephants for the Mende of Sierra Leone were powerful figures, ancestors who held dominion over and gave shape to the land before humans (Richards, 1993). For the Baka of the Congo, elephants could be animals poached for their tusks, but on occasion shape-shifting sorcerers (Kohler, 2000).



More-than-human research on wild elephant relationships tend to centre on the “boundary of fields and forest” (Münster & Münster, 2012, p. 41) where both species most often cross paths. More-than human geographer Maan Barua (2014a, 2014b) conducted his ethnographic work in Assam, representing a landscape defined by traces of interspecies encounters and colonial land governance, where alcohol can bind and mediate the relationship between the marginalised farmer and elephant. Jadhav & Barua’s (2012) interviews with rural villagers, who were injured by elephants or their properties damaged, revealed the destabilising psycho-social impacts of living with these sometimes-destructive animals. Ursula’s Münster’s (2016a, 2016b) research in South India situates the human-elephant dynamic as emerging from complex, interrelated histories between state and local actors, wild and domestic domains. Wildlife management in the Nilgiris, for example, is a practice made possible from the co-enabling relationships between colonial and post-colonial forest governance, indigenous knowledge and identity, and working elephants (Münster, 2016a). Michael Hathaway’s (2013, 2015) ethnographic research in South China frames elephants as historically dynamic beings, idiosyncratic to place, whose behaviour shifts and responds to changing socio-ecological circumstances. Hathaway (2015, p. 227) found that local farmers continuously accommodated to the elephant’s “presence in many ways, mediating the relationship between themselves and these large and dangerous animals.”

Some of these papers have been published in the recent, interdisciplinary volume on human-elephant relations *Conflict, Negotiation & Coexistence* (Locke & Buckingham, 2016). This collection of essays from historians, anthropologists, ecologists, geographers, and conservationists were mobilised in response to Piers Locke’s (2013, 2016a) call for an “ethnoelephantology” of human elephant relationships. Ethnoelephantology represents a rubric under which scholars from various disciplines can engage over this interspecies relationship, rethink elephants as agents, and begin to trace the multifaceted, human-elephant relationship across history, as well its current emerging forms. Within the project’s discourse, Locke proposes that elephants should be understood as cognitively and socially complex beings who inhabit rich, subjective lifeworlds, individuals who develop through skilful adaptation to the environment as well as intergenerational learning from their herd members (see Lee & Poole, 1999). Across historical and evolutionary time, argues Locke (2013), both species have been important co-determinants in each other’s development and behaviour at social, biological and ecological levels (see also Lorimer, 2015). For humans

and elephants living in a shared environment, an analysis of their behaviours must be situated within the context of this entangled relationship. Locke's argument for ethnoelephantology draws heavily on concurrent research conducted at the human-nonhuman primate interface in ethnoprimateology (Fuentes, 2010, 2012). It also bears mentioning the interdisciplinary research at Amboseli National Park in Kenya, that investigates the interrelated history, ecology, biology and behaviour of both elephant and human inhabitants of the park (see Moss, Croze & Lee 2011). While the project has a strong bias towards elephant concerns and does not employ the posthumanist conceptual resources foregrounded in Locke's proposal, the long-term studies at Amboseli are an important model for what an ethnoelephantology could look like.

This thesis is aligned with Locke's (2013) ethnoelephantology project, and aims to understand how human and elephant negotiate living together while inhabiting the fringe of village and forest. In a shared environment, the worlds of both species intersect at precariously negotiated junctures, sometimes coming into conflict, other times aligning in unexpected ways. The thesis hopes to contribute to the growing body of human-elephant literature and multispecies research by first, being one of the few studies that focuses on the wild relationship between human and elephant communities; second, expanding upon the animist, South India and elephant literature by further examining the religious significance and ontology of these animals in the Hindu lifeworld; and third, exploring how the human-elephant dynamic within a single landscape can be multifaceted, with both species activities and worlds enmeshed into the other to varying degrees.

### **Humans and elephants at the fringe of forest and village**

Assam in Northeast India is a productive site to explore the human-elephant relation (see Barua, 2014a, 2014b; Lainé, 2016 for human-elephant ethnographies on Assam). The region is well known for its deep history and unique practices of elephant capture and training (Sarma, 2011; Lainé, 2016). These nonhumans have been enlisted as beasts of war, timber elephants, animals used to augment imperial power, and have been central to the construction of pre-colonial and colonial Assam (Sarma 2011; Sukumar, 2011, Trautman, 2015). While elephants are of less use today, replaced by vehicles and other machines, they remain strongly associated with elite social status and power, and are beings venerated by many Assamese as deities.

Historically, elephants used to roam in vast interconnected forest tracts throughout the whole South Asian subcontinent. The landscapes of Assam, like elsewhere in India, have been shaped by centuries of human modification, with forest and field continuously in flux, trees growing and falling with the fortunes of kingdoms and practices of shifting cultivation (Karlsson, 2011; Rangarajan, 2014; Rangarajan & Sivaramakrishnan, 2014). Currently, Asian elephants living outside of the domestic sphere are found only in isolated, forested pockets. Approximately 9250 out of India's total wild elephant population of 27000 are in Northeast India (Baskaran, Varma, Sar & Sukumar, 2011). Rapid ecological changes over the last 200 years, beginning with large-scale elephant-catching and deforestation under the colonial administration, has resulted in a dramatic drop in elephant population (Sukumar, 2011; Trautmann, 2015). Historically, elephant herds and individual males have long coordinated their home ranges and foraging networks with farms, feeding on rice paddy and other crops (Sukumar, 2003). In the twentieth and twenty-first centuries, where viable elephant habitat has rapidly shrunk, herds are becoming more dependent on agricultural product (Balassubramanian, Baskaran, Swaminathan & Desai, 1995; Baskaran et al 1999; Choudhury 2004; Dublin & Hoare, 2004). Increasing interactions with humans, unfortunately, have had negative consequences in the Northeast (and elsewhere across South and South-East Asia), such as property damage, injury, and even death to both species (Choudhury, 1999). The existence of elephants in Assam are inexorably linked to humans, and, in turn, many human lives and deaths are also similarly tied to elephants (Locke & Buckingham, 2016).

Assam is a valley state in Northeast India, situated along the banks of the mighty Brahmaputra river which flows down from the Tibetan Himalayas. The state is landlocked, surrounded on almost all sides by mountainous tracts. The plains are predominantly cultivated and elephants are mostly found in the forested hilly areas, as in other parts of India (Baskaran, Varma, Sar & Sukumar, 2011). The hilly ranges that border Assam are connected to Bangladesh in the south, the Tibetan Himalayas in the north, and to the west, a mountainous zone that stretches throughout Myanmar, China, and South East Asia. The current human population of Northeast India is composed of a bewildering array of ethnic communities who speak approximately 220 different languages (Karlsson, 2011). The origin of many of these communities can be traced from the independent migrations of a diverse set of ethnic groups across history, who traversed the difficult upland terrain connecting

India to China and South East Asia.<sup>5</sup> Some, like the Ahom dynasty who migrated from Burma and ruled the Assam valley from the 13<sup>th</sup> to the 19<sup>th</sup> century, were migrants who significantly shaped the region's unique cultural and political landscape (Gogoi, 2002).<sup>6</sup>

The British Empire annexed Assam after the collapse of the Ahom dynasty and the Anglo-Burmese war of 1824-26. Northeast India was constructed by the colonial administration as a province on the frontier of the Indian British empire (Cederlof, 2014). Due to the war, which depleted the human population of the plains areas by up to two-thirds (Handique, 2004; Sharma 2011), the British encouraged the migration of peoples from Bengal, Nepal, and other parts of South Asia as a labour force and to vitalise commerce. The hilly regions remained the province of the indigenous, minority, non-Aryan communities, still referred to in 21<sup>st</sup> century India as “tribals”. Post-independence government attempted to maintain a politically unified and homogenous Northeastern state, however by the 1970s the region began splintering into smaller states, divisions following the fault lines between the hills and the plains, dominant ethnic identities, and previously established colonial demarcations. Assam is the Northeast's largest and most populous state, home to approximately 30 million people, predominantly identifying as Hindu and Muslim, and with the majority speaking the Assamese or Bengali language. Although these common traits fail to capture the discrimination between the peoples identified as “Assamese”, and the many “tribal Assamese”, such as Boro, Rabha, and Karbi. Ethnic minorities are often marginalised in Assamese society, and their quest for improved recognition, and political and cultural autonomy, was a significant source of internal conflict in the state from the 1970s until the early 2000s (Bhaumik, 2009).

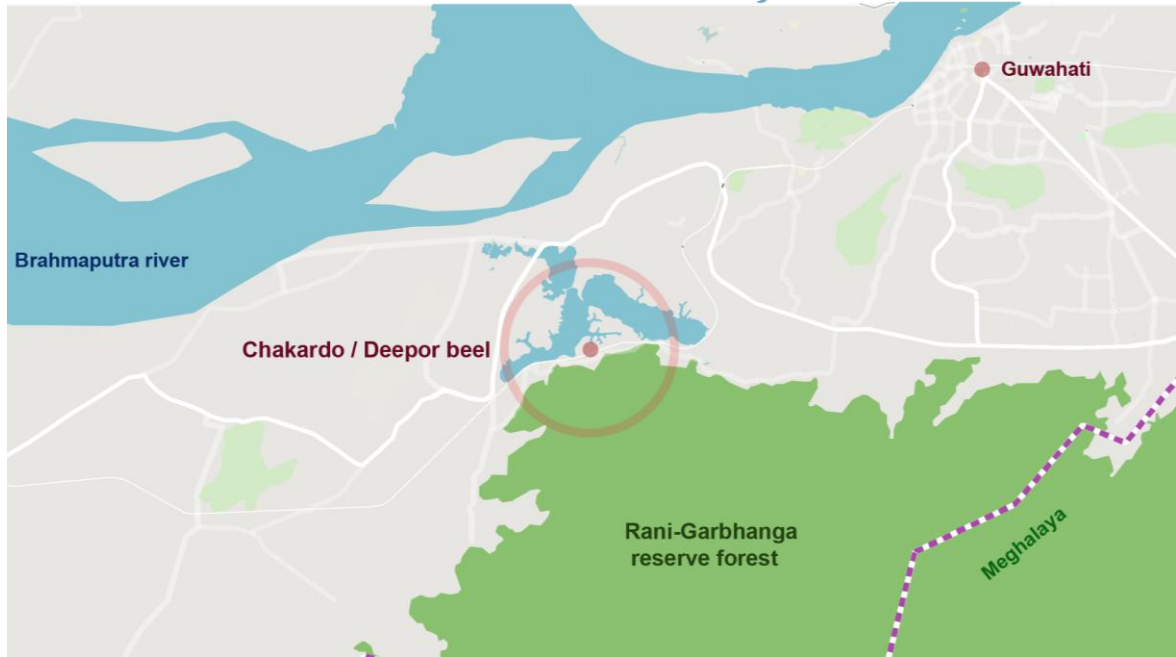
Chakardo village, my primary fieldsite, was located six kilometres from the centre of Assam's major city, Guwahati. The village was situated between the foothills of the Rani-Garbhangra reserve forest (RGRF) and the Deepor Beel Wildlife Sanctuary (*beel* meaning “water body” or “wetland,” in Assamese). It was one amongst a string of interconnected villages (*gaon*) settled along the northern foothills of the RGRF, a forest contiguous with a larger hilly, cultivated region which falls within the state of Meghalaya to the south. In

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<sup>5</sup> This includes elephants who historically moved back and forth through the hilly passes over the Myanmar border (Stracey, 1991; Chowta & Gautier, 2001; see also Chapter Four).

<sup>6</sup> James C. Scott (2009) referred to this expansive transnational region as “Zomia”, a geography shaped by the constant migration of diverse, relatively isolated, ethnic groups living amongst difficult terrain and moving between lowland states (van Schendel, 2002; Scott, 2009; Michaud, 2010).

Chapter One, I will explore in more detail the socio-ecological history of the area, and how human and elephant lives have been organised through colonial land governance and resource extraction. The RGRF formed some of the last viable, primary habitats in area, home to approximately 115 Asian elephants who ranged through this and other interconnected forests (Anon., 2009).



Map 2: Chakardo is located in between the hills of the Rani-Garbhangha reserve forest and the Deepor Beel wetlands. The green area represents a forested, hilly area, rising above the plains.

Chakardo was composed of clusters of 130 houses, broadly divided into three interconnected neighbourhoods: Nepali parah, Kalita parah, and Mikir parah. The Karbi (Mikir is now considered a derogatory term for Karbi) are a tribal community and the original settlers of the area. Early British surveys show that the village was established from at least the 1860's,<sup>7</sup> and "Chakardo", I was told, is a Karbi word, loosely meaning "the place of rice".<sup>8</sup> The Karbi

<sup>7</sup> Early surveys of Assam in 1865, forty years after the colonists claimed control of the valley, recorded Chakardo, and other Karbi villages in the area as already established. Map of Kamrup District, Sheet no. 124-5, 1865-69.

<sup>8</sup> *Sok* meaning "rice" in Karbi. Chakardo is pronounced Sokordeo. The Karbi of Chakardo are "Amri Karbi", one of three main Karbi language groups; the other two groups located in the district of Karbi Anglong (the area where Nambor forest is located).

at Chakardo were part of a larger population who were settled in various villages along the northern foothills of the RGRF. A large Karbi community also lived in the RGRF and the hills of Meghalaya, practicing shifting cultivation. There were noticeable differences between the hills and plains communities: for instance, Chakardo locals had not conversed in their indigenous language for several generations, while the language was still predominantly practiced in the hills. Further, the practices and beliefs of the plains Karbi were familiar to the surrounding Hindu Assamese population, compared to the Karbi hill villagers of RGRF, who expressed a set of traditions that were noticeably indigenous and animist in form.<sup>9</sup> The Nepali community was established in Chakardo prior to Indian independence in 1947. Nepalis constituted a significantly large minority in the Assam, originally encouraged to migrate by the British to work as labourers on tea plantations, and to settle farmland so that the administration might raise revenue (Devi, 2007; Sharma, 2011). The Nepali families at Chakardo were previously pastoralists and rice farmers, although these livelihoods have now been abandoned. The Kalitas, a common Assamese family name associated with the peasant class under the Ahom dynasty, was a community that originated from a few families seeking land in the late sixties and early seventies. Many of the farms opened up by the Kalitas along the wetland were no longer cultivated. I will discuss the shift in livelihood practices at Chakardo further in Chapter One. At the time of fieldwork, there were a broader mix of ethnic identities and families that had settled in the Chakardo and the surrounding villages in the last 30 to 40 years. While there were certain customs, dietary preferences, and modes of worship unique to each cultural identity, all identified as practicing Hindus.

Thakaekera & Thornton's (2016) research on human-elephant relations in the Nilgiris, South India, reported that socio-economic and cultural differences between communities and

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<sup>9</sup> Michaels (2003) notes that there is no one single homogenous Hindu world-view, it is a practice drawn from independent traditions, classes and expressing regional differences. For example, the Karbi identified their main figure of worship is Lord Shiva, an uncommon primary deity compared to the popularly worshipped Lord Krishna in Assam (The popularity of Krishna is related to the 15th Century saint-scholar, Sankardev, who was founded Vaishnavite (Vishnu worship) movement in Assam). Shiva is often associated with the wild jungle, a domain that Karbis often identified themselves with (however, their relationship with the forest was also a trait spoken about in a derogative fashion by non-tribal Assamese). However, on deeper enquiry, Shiva appeared to be a figure only appropriated in recent history, and that many Karbi recognised Shiva to actually be *Jahang* – an indigenous god who resided in a hill within the RGRF. The Karbi of Chakardo have adopted a number of Hindu practices and traditions that the Karbi community in the hills have not, and who still practice indigenous beliefs that could be identified as animist (although they too are slowly adopting Hindu traditions). Many Karbi of Chakardo also have not spoken the Amri Karbi language within their families for several generations, the *lingua franca* being Assamese. In comparison, the hill communities were less proficient in Assamese.

people were found to correlate with different attitudes towards elephants (Thakaekera & Thornton, 2016; see also Naveh & Bird-David, 2014). While there were some cultural differences between the three dominant ethnic groups within Chakardo village, I did not find that these differences significantly intersected with or predicted differences in the ways that people spoke about elephants and how they interacted with them.

Research began at the end of 2012, and I spent 18 months in the area, distributed over two-and-a-half years. Initially, I chose Chakardo as a fieldsite to study the relationship between four elephants and their mahouts. I was invited by their owner and employer, Kaushik Barua, who stationed the mahout-elephant teams at the village during the months of October to December to assist the Forest Department against “crop-raiders”.<sup>10</sup> Every harvest season from September to November, elephants would descend from the hills to feed on rice paddy. Trained elephants living in the village were deployed to drive the crop-raiding herds back into the forest. Unfortunately, by the beginning of my research period in 2012-2013 this relatively rare interspecies interaction had been suspended (see Chapter Five). Regardless, I spent the first five months of my fieldwork conducting participant observation with a team of eight mahouts and four elephants, both species proving to be valuable instructors on elephant behaviour and ecology. The elephants and the mahouts resided along the forest fringes 6km east, next to the village of Pamohi. I took up residence in Pamohi with a local Karbi family for the duration of my stay in Assam.

Chakardo village, however, maintained my interest, and on my second research trip in 2014 I realigned my focus from captive to wild relations with elephants. The questions I initially developed for mahouts were extended towards interactions between human and elephant populations who lived in the forest. These included: What were the historical, social, and ecological factors bound the two species in this context? How do humans and elephants coordinate and shape each other’s behaviour across time? In what ways do their respective habitats and perceptions of the environment overlap? How did their interactions produce emergent opportunities? And how do religious beliefs shape the dynamics of their interaction?

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<sup>10</sup> “Crop-raids” is the common term in animal sciences literature used to describe elephants feeding on agricultural product. While there are problems regarding the kind of intentionality prescribed to elephants with the term “raid”, it does to a degree reflect their strategic and stealthy behaviour.

Chakardo experienced relatively high volumes of elephant traffic – hence potential sites of human and elephant interaction – compared to other villages settled at the edge of the RGRF. There have been no biological or ecological studies on the community of elephants who passed through this area;<sup>11</sup> however, local opinion is that the primary reasons for the frequency of herds was that the nearby Deepor Beel wetland served as a major water source (Borah et al., 2005). In the evening, herds would follow habitual pathways through the village that connected the forest and the wetland, crossing through farms and across roads and train tracks. With torchlight in hand, I joined the government employed Forest Department officers and Chakardo locals who would monitor and escort the elephants through the village. Occasionally during the day, I found opportunities to follow main informants on walks inside the forest, where people and elephants would sometimes cross paths with each other while conducting their respective tasks of gathering wood and foraging for vegetation. During the harvest season, I accompanied farmers and observed them defending their rice crops and driving the elephants out of the village. The core research process was conducted through participant observation, joining with informants whose daily practices intersected with elephants. This included my continued relationship with mahouts and participation in their daily routines. The above-mentioned sites of interspecies interaction were not exhaustive of the possible forms of human-elephant relationships in the area, but were the primary nexus points around which my field research was structured, and consequently the chapters of this thesis. Outside of these encounters, my research was supplemented with informal interviews about elephants and the history of the area, and almost everybody who lived along the borders of the forest had at least one elephant tale they were eager to offer.

Intent on observing human-elephant interactions, I quickly learnt that I needed to become bound to the rhythms and habits and of these animals, and vulnerable to their unpredictable behaviour and appearances. When elephants appeared close to the village it was almost always at night. Sometimes herds could be completely absent from the local area for a month, on other occasions, repeatedly appearing every day for two weeks in a row. Over time, and as emphasised by their prolonged absence from the area, it became apparent that Chakardo only constituted only a small part of elephant lives. An elephant's ranging area is extensive

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<sup>11</sup> Biological and ecological studies on elephants in Assam, including the necessary funding, are usually directed towards projects centred around Assam's world-famous wildlife sanctuary, Kaziranga.



(Sukumar, 2003). A single herd, for instance, was potentially entangled with several different human communities aside from my local fieldsite. Over time, I began to receive reports from different villages across the RGRF: the sightings of a family in a marsh, a tusker that killed an old man outside of his home, a herd that had been loitering in an area for a week, or a lone adolescent male who had been electrocuted in a village.

Satellite maps and motorbikes played an unexpected role in comprehending a broader human-elephant landscape. Cartographic representations and speeding vehicles are modes of engaging the world which are detached from the grounded, intimate and localised exchanges that ethnography aspires to. Despite these disadvantages, as Ellis & Waterton (2005, p. 675) note, the “cartographic imaginary” can assist in accessing multiple locations, providing “a view of the connections and disconnections between different places and modes of engagement.” Judging by the topography of the landscape, contiguous forest, and human settlement, maps and motorbikes were tools that enabled me to locate and access potential sites where regular human-elephant encounters occurred. I drove between villages, both proximate to and within the forest, conversing with the odd farmer and store owner, spotting evidence of elephants’ recent passing such as dung heaps, or trampled crops. Geographer Maan Barua (2014), reflecting on his own fieldwork tracking an elephant herd through sightings across various villages, conceptualised the tracking as the performance of a geography defined and revealed by human and elephant interaction. Following these stories was a process of decentring myself from the human sense of the local and capturing a sense of the scale at which elephants lived, and how elephant ranges were co-constructed in relation to anthropogenic presence. This re-evaluation of my fieldsite was necessary to contextualising and better understanding human-elephant interactions Chakardo.

It should be kept in mind that elephants who regularly passed through Chakardo only intersected with the village at particular sites or with certain practices. Generally, not all people living on the fringes of forest encountered regularly, or were affected equally, by elephants. Individual elephants and herds visited some villages more than others. Further, at Chakardo it was predominantly the men of the village who mobilised to face herds in the rice fields, or gathered wood in the forest. Women generally remained in the household. (Of course, there were always exceptions, and different villages also did not necessarily follow this pattern of behaviour). Most importantly, and generalisable across the human-elephant landscape of this thesis, it was the impoverished villager, those people still dependent upon

subsistence agriculture and forest resources, who were most likely to cross paths with elephants. In Assam, it was the landless peasantry, especially the discriminated-against castes such as tribals, who were forced to move to the submontane areas and forest edges. Historically, displacement was due to aggressive land acquisition by other, more socially powerful parties (Bordoloi, 1986). Many farmers at my fieldsite tended to rely on a subsistence diet with no consistent methods to earn income. People most vulnerable to the negative effects of crop raiding were families unable to abandon farming, especially those in the rural outskirts where alternative, economic opportunities were sparse and land prices marginal. Only the poor continued to maintain a dependency on the firewood collected in the forest, requiring them to venture into dense elephant habitat and into unexpected and dangerous encounters with elephants. Wealthier families would simply use gas stoves. Those with less money also lived in housing that was structurally less secure, making them not only more physically vulnerable to elephants but also more financially effected by the significant damage caused by elephants (Thekaekera & Thornton, 2016). Some were economically effected by elephants feeding on domestic fruits that they intended to sell, while more privileged others were unconcerned with the elephants who continued to raid their trees. The humans represented in this chapter and this thesis, those who were most often entangled with elephants, were the rural poor.

### **Researching and representing animals**

John Knight's (2006) *Waiting for Wolves in Japan* explores the conflict between rural farmer and animals who damage crops and injure people. It is a rich ethnography of ambivalent attitudes towards wildlife, interpretations of their behaviour, and strategies employed to manage the incursions of forest dwelling animals into the village. Knight (2006) emphasises how rural villagers perceive cross-species continuities in wildlife – identifying in nonhumans similar desires, relationships, and behaviours. Knight distinguished human and animal predominantly by differences in interest and perspectives on the environment, fellow inhabitants and rivals competing over territory and resources. *Waiting for Wolves in Japan* is an important move away from a symbolic anthropology that reduces human-animal difference to one of opposing ontological kinds (Knight, 2005). Further, nonhuman animals are attributed with significant agency in shaping human worlds along the fringes of village and forest, their boundary transgressions both challenging and constituting domestic and wild domains. However, while reading Knight's ethnography it struck me that the boars,

monkeys, bears, and other animals, despite being the central concern, were also somewhat absent. I was reminded of a conversation I had with Asian elephant expert and conservationist Richard Lair, and his complaints regarding a book on mahout culture and elephant traditions in Thailand. “Where are the flesh and blood elephants?!” he jokingly asked in frustration, as I flipped through pages filled with interesting details on training practices and belief systems, but little about individual or species-level elephant biology, ecology, and social behaviour.

In comparison, the animals in Marcus Baynes-Rock’s (2013, 2015) research on human-hyena interaction in the town of Harar, were prominently featured as fully fledged social actors. The hyenas were represented as individuals with desires and intentions, identified by name within an intersubjective framework. Adopting a methodological approach that might be referred to as a mixture of both ethology and ethnology (see Lestel, Brunois, & Gaunet, 2006) research focused on following the nonhuman just as much the human inhabitants of Harar. Baynes-Rock traced the hyena’s intra- and inter-species political affiliations, and overtime even formed familiar relations with a few curious animals. Hyena ecologies and three hyena clan’s separate territories outside of and within the town were mapped. This intimate knowledge of hyena social lives was used to inform how the animals intersected and engaged with humans, shaping the dynamics of what he referred to as a “multispecies commons” (Baynes-Rock, 2013). The agency of Hyena individuals and clans were foregrounded, and their activities and preferred modes of inhabiting place strongly determined the concerns and sites of interest for the ethnography. I take Baynes-Rock’s approach to research and writing as an important representative of the recent more-than-human anthropology.

Questions about how animals and humans share cross-species continuities, and how they should be represented, have been core themes at the intersection of humans and animals in anthropology over the last twenty years (Ingold, 1994, 2013; Noske, 1993; Milton 2003; Knight, 2005, 2006). Acknowledging an animal’s cognitive and social capacities draws attention to the agency of nonhumans that otherwise might go unnoticed (Despret, 2004). Highlighting cross-species continuities enables ethnographers to figure them as participants in domains conventionally marked as exclusive to humans. For instance, elephants can be intimate working companions and persons (Locke, 2016b, 2017) and contribute their own skills, awareness, and expertise, collaborating with the mahout to complete tasks such as

moving timber logs (Laine, 2016). Animals too can be intentional beings, who can engage in joint actions with humans (Sanders, 2007).<sup>12</sup> In Chapter Five, I will analyse the complementary cognitive capacities of human and elephants within a working relationship, and argue that elephants demonstrate skilled expertise in working tasks, and can contribute to the solution of projects beneficial to humans.

Kay Milton (2005) argues that everyday relations with animals are embedded within an intersubjective framework: people across cultures generally recognise the points of view of other nonhumans because they are comparable to their own personal experiences, and embodied interactions with the environment. Anthropology has most commonly engaged with interspecies inter-subjectivity through research on animist communities from the Americas and circumpolar regions (Hurn, 2012). These people live in worlds rich with nonhuman points-of-view, what Kohn (2013, p. 16) refers to as an “ecology of selves.” Animals are, on occasion, able to engage people personally, communicate with them, and reveal an intimate understanding of human lives (e.g., Viveiros de Castro, 1998; Willerslev, 2007; Descola, 2013). Knight (2005, 2012) has contested whether personal relations is the right term, since, the ephemeral encounters between wildlife, or fight or flight responses during hunting, do not create the conditions for animals to become familiar with each other. Domestic relations in comparison, Knight (2005, p. 5) argues, enable humans and nonhumans to become attuned to each other’s “irreducible individuality” and hence amounts to a relationship we might consider personal. Knight’s critique of interpretations of animism, instead of undermining it, further exposes what makes animism so striking. Despite not living in proximity to each other, animals do reveal themselves to be participating in a lifeworld (or culture: Viveiros de Castro, 1998) very similar to humans. Animals can relate to people in ways unintuitive for the western anthropologist. Elephants in Assam are beings who demonstrate an uncanny awareness of what people are saying about them, and can discern and punish accordingly people who have committed moral transgressions. In Chapter Two and Three I will explore how elephants for my informants are god-persons, a

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<sup>12</sup> It should be noted that the argument that mammals and other organisms have conscious, intentional states is becoming a generally accepted western scientific position supported through comparative neuroscience. Low, 2012. Cambridge declaration of consciousness. *Francis Crick Memorial Conference on Consciousness in Humans and Non-Humans*, Churchill College, University of Cambridge.

relationship that bares interesting similarities and dissimilarities to the human-nonhuman interactions analysed in the animist literature.

More-than-human researchers have adopted concepts and frameworks that interpret animal behaviour through their subjectivity. Ethologist Jacob von Uexküll's (1934/2010) "umwelt" is the notable example, a bio-semiotic theory that all organisms inhabit a perceptual world determined by their neurophysiological traits.<sup>13</sup> Uexküll supposed that each organism's lives in its own interpretative bubble and subjective experience of the environment, a reality differentially revealed dependent on its unique biological disposition. In Chapter Three, the concept of umwelt will help think through the limits of what humans can know about the experiential worlds of elephants, and how this limitation shapes the ontology of elephants in Assamese culture. At the same time, the framework will also be fundamental in enabling elephants to be better figured as social actors in this more-than-human ethnography. Referencing umwelt, multispecies researchers have argued that some sympathetic understanding between human and nonhuman is possible; for instance, due to homologous physiological traits, there can be grounds for speaking about the affective and perceptual lifeworlds of some nonhuman beings (Fuentes, 2006; Kirksey 2015). Thom van Dooren (2014a) further notes that by acknowledging an animal's subjectivity we can understand that nonhumans, like humans, are engaged in meaningful relations with the environment. A study of human-elephant relations that conceptualises elephants as subjective agents – even persons (Locke, 2013, 2017) – and attempts to interpret overlapping places and practices of these two species, benefits from this flexible account of the umwelt framework. While interpreting nonhuman meaning and subjectivity makes the researcher vulnerable to misinterpreting animal behaviour, this thesis, when appropriate, will draw upon the animal sciences to make scientifically informed constructions of elephant points-of-view (a measured, hesitant anthropomorphism: Philo & Wilbert, 2000).

More broadly across chapters in this thesis, the theory of "affordance", developed by ecological psychologist James Gibson (1972/2015), will play an important role in analysing the overlapping and differentiated perspectives of human and elephant within a shared environment. An affordance is a quality or feature of the world that emerges from the

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<sup>13</sup> For some examples (of many) of more-than-human / multispecies / human-animal scholars who refer to Uexküll in their work, see, Lestel, Brunois, and Gaunet (2006); Despret (2013b); van Dooren (2014a); Kirksey (2015).

interaction between an organism and the environment, in which that quality enables or is perceived to enable a certain kind of activity. For instance, a flat piece of land affords easy movement for bipeds and quadruped (James Gibson, 1972/2015). Grasping the environment as a set of affordances (or constraints) for humans and elephants will assist in understanding when their respective positions on the world align (or are in conflict), and how environmental modifications by either species can open new opportunities (or limit them). For instance, in Chapter Six, I will analyse how Forest Department officers and Chakardo villagers work to momentarily modify the activity of people and vehicles within a human dominated space to make it more amenable to elephant movement.

When writing about animal agency there is a risk of overemphasising subjectivity, point-of-view, or personhood, and overlooking the embodied ways in which humans are shaped by animals through interaction. During my observations of human-elephant encounters I was guided by what anthropologist Edward Hall (1968) referred to as “proxemics”: the comfortable, personal distance an organism creates between itself and others.<sup>14</sup> Any incursion within that comfort zone, affects an excitatory state and response from the organism. This could be a subtle readjustment of a position, a step back, or alternatively a fight or flight response when challenged in close quarters. Proxemics is a concept of how space, territory, and hence place is created through an affectively charged and mutually shaping social interaction. Space varies as a function of who is being engaged (intra- or inter-species, and which species, whether they are kin or unfamiliar), the context of the encounter, and the developmental history of the organism. How humans and elephants inhabit space according to the contingencies of their encounter will be an important component in understanding human-elephant relations, their interrelated actions, and the construction of forest and village.<sup>15</sup>

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<sup>14</sup> While Hall developed the theory for human social studies he equally understands it as making sense across species.

<sup>15</sup> Proxemics is not a quality that can be located in an individual; instead, it is a relational quality that emerges through an encounter with another organism and varies according to who is being engaged. Proxemics often involves each partner within a shared space continuously adjusting to and shaping the conditions of the relationship as it emerges. The process of negotiating their positions relative to the other is part of an ongoing “dynamic dance” (see King, 2004). Through this dance, both animals affect and are affected, and their respective agencies cannot be isolated from the other; nor can their agency be attributed as emanating from an individual’s point of view, intention, or personhood. Rather each animal’s agency “always appears in the flow of forces” (Despret, 2013a, pp. 40), “rendering each other capable” (Haraway, 2016, pp. 126) in the ongoing process of interacting with the other. Interpretation of the animal’s subjectivity emerge embedded in the practical engagements with animals (Ingold, 2000; Willerslev, 2007; Keul, 2013).

Many of the ethnographic accounts of human-elephant interaction in the chapters are intended to represent mundane events in the lives of both animals. Elephants, as well as people, are revealed in this thesis through their responses to each other as they negotiated with the pragmatic problem of living in a shared space. In this respect, I am influenced by Ingold's (2000) emphasis on embedding an analysis of informants in their skilled, practical engagement with the environment. When possible, ethnographic descriptions will concentrate on specific events or places in space and time, and analysis will attempt to understand how both species co-ordinated to co-produce the event. This research method will be most evident and best employed in Chapter Five when I closely analyse the differentiated yet complementary cognition and behaviours of mahout and elephant as they coordinated to solve work tasks and navigate walking through a village. Focusing on the "embodied doing of social life" is potentially a "useful tool for analyzing interaction between individuals with very different bodies and bodily potentialities" (Goode, 2007, p. 12).

Where possible, I describe in detail elephant behaviour in human-elephant interactions, seeking to capture a lively and embodied presence that is usually abstracted in biological or ecological studies of elephants. Attending to interactions with elephants was necessary to draw out the agency of the animals in this thesis (who unlike their human counterparts, were unable to verbally represent their actions and intentions removed from the encounters!). Anthropologists are well versed in the arts of description (Tsing, 2014), a skill equipped to follow closely and represent in detail the mutually affecting behaviour that composes our worldly relations (Despret, 2013a). Ethnography also shares methodological approaches similar to those employed by some ethologists to study animals. For instance, primatologist Barbara Smuts (2001, 1985/2009) who engaged in a process akin to participant observation to become familiar with a troop of baboons, or the long-term work of African elephant researcher Cynthia Moss (1992) who richly documented through observation the history, and political and social lives of a herd in Amboseli National Park. Finally, anthropology's tendency to take "others seriously in their otherness" can be extended beyond people and to attend to the worlds of other organisms (van Dooren & Bird-Rose, 2016, p. 87).

However, unlike the work of Baynes-Rock (2013, 2015) on human-hyena relations, I did not become familiar with the biographies or identities of individual animals or families, map their social relations, or traced their seasonal movements and ecology throughout the year. While this thesis will contain context specific descriptions of elephants in their encounters

with people, I largely remained ignorant of *who* I was describing. My ethnographic research was confronted with several limitations for fleshing out elephants as social actors in the detail that more-than-human research aspires to. First, the participant observation method that structured most of my research was a practice I found best conducted on foot, joining with my informants and in resonance with their daily activities (see Ingold & Verngunst, 2011). My bipedal preference did not necessarily transfer to studying large and dangerous quadrupeds who lived in dense jungles, were anxious at the approach of humans, and migrated tens of kilometres and slept only a few hours in a single day! Nor was I versed in other methodological approaches established in the animal sciences that would have enabled me to study elephants better.<sup>16</sup> Second, limited comprehension of the community of elephants and their lives outside of the village was reflective of my informant's own experiences and knowledge. People generally maintained a healthy fear and respect for these animals, encounters were fleeting and proximity not maintained. Any opportunities for prolonged observations outside of the forest were usually in the evening and consequently individual elephants were difficult to distinguish. While both species had overlapping habitats, a familiarity was not necessarily fostered between human and elephant communities. Finally, studying elephants and conducting research on the other flora and fauna of the forest required lodging an application with the Forest Department and being approved by the Ministry of the Environment, Forest and Climate Change. I was not authorised by the Ministry – the process of acceptance through Indian bureaucracy for a foreigner can take several years – and so I did not conduct any separate studies on elephants outside of my observations of their encounters with humans in the village. Elephants are

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<sup>16</sup> With Piers Locke, we discuss the limitations of anthropological and ethnographic research methods. Locke, P. & Keil, P. 2015. Multispecies methods and human-elephant relations. *Engagement: A blog published by the Anthropology & Environment Society, a section of the American Anthropological Association*

<https://aesengagement.wordpress.com/2015/10/27/multispecies-methodologies-and-human-elephant-relations/> (accessed 14/01/17).



protected under the Wildlife Protection Act 1972 and the government is an important mediating body between humans and elephants in India (see Chapter One).<sup>17</sup>

Locke's (2013) proposal for an ethnoelephantology argues that the complexity of human-elephant relationships requires an interdisciplinary approach, a research program that integrates perspectives from history, biology, geography, ecology, anthropology, amongst others.<sup>18</sup> Madden (2014, p. 290) refers to this approach as an "interdisciplinary contact zone" where researchers are engaged across the natural and social scientific divides with each other's findings in order to produce a more nuanced and reliable portrait of multispecies worlds. As anthropologists expand their analytical focus to include other animals we also need to decentre our methodological and epistemological biases, and take seriously established research practices in the animal sciences (Watson, 2016). As lone ethnographer, this thesis does not encompass the lofty multi-methodological and interdisciplinary aspirations of an ethnoelephantology (Locke, 2013). However, during research and writing stages I frequently turned to the natural scientific literature on elephants to better inform my observations and representations. I will both reference natural scientific literature and employ some of its concepts to better explore the interconnections between humans and elephants. Literature on elephant ecology, biology, cognition, and social systems scaffolded and contextualised ethnographic observations, and enabled a richer account of the human-elephant landscapes found in this thesis.<sup>19</sup>

## **Kinds of elephant relations**

Elephant relationships are often broadly divided into two kinds. Within the animal sciences, "captive" is the generally preferred term for elephants who are kept by and live with humans, and "wild" represents those individuals and families that live in ecologies and geographies

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<sup>17</sup> While I presented myself to the Honourable Chief Conservator of Wildlife and gained casual permission to conduct research on humans regarding elephants, these were the prescribed limits and grey area I was allowed to occupy. As an anthropologist, it was often difficult to explain the scope of my research to government officials of villagers alike. My intent to study human-elephant interaction was often framed by others in terms of conservation biology or other animal-focused scientific research, non-governmental work to help people affected by human-elephant conflict, or people often wondered whether I worked for National Geographic or the Discovery Channel.

<sup>18</sup> Ethnoelephantology draws its inspiration from the similarly named ethnoprimateology (Fuentes, 2010; Gumert, Fuentes, & Jones-Engel, 2011), the study of human-nonhuman primate relations in a mutual ecology.

<sup>19</sup> It should be noted that natural scientific references on elephant are sourced from studies on both Asian and African elephants. While the two species do share a number of traits, there are some important differences. When necessary I will highlight for the reader when those differences apply.

not dominated by humans. The term captive implies unjust conditions for the elephant, an ethical claim based on the recognition that all elephants are biologically not domesticated animals, and therefore classed as wildlife. Despite the deep history of each species' relations in India and across Asia, and unlike other working animals commonly adopted into the *domus* or domestic sphere (Cassidy, 2007), elephants have not been morphologically or behaviourally shaped by human-driven selection (for accounts of biological domestication, see Clutton-Brock, 1994; Leach, 2003). Captive and wild elephants are genetically indistinguishable.

Defining and reifying captive versus wild elephant kinds based on demarcated habitat also proves difficult. Most captive Asian elephants originally lived with their families roaming the forests, until they were caught and trained to live in anthropogenic environments. Captive elephants also occasionally escape or are released into the forest and will integrate themselves into new elephant families and vegetative relationships. Even wild elephant populations do not limit their ranging areas to “natural” spaces absent of humans; herds have long adopted villages and agricultural products as part of their foraging routes (Sukumar, 2003). Further, taking into account their biological similarity, and capacity to shift between wild and captive states and locations, strict differentiations based on behavioural traits are also contentious. An elephant trained and partnered with a human can behave unpredictably and dangerously at times, and wild elephants, as we saw in the Nambor example, can engage humans in remarkably social and familiar ways. There is no clear-cut boundary between the two kinds (Locke, 2014). Certainly, the adequacy of either domestic or wild to capture the gamut of human-animal relations has undergone considerable debate (for a broader overview on animal relationships from an anthropological perspective, see, Russell, 2002; Cassidy, 2007).

In a review of the various nomenclature employed to describe the two different states of elephants (whether that be domestic / captive / tame / working or wild / free-ranging, and their associated qualities) Locke (2014) found them all to be insufficient for capturing the cultural variation and social complexity of the human-elephant relationship. The terms employed by my Assamese informants were no more precise. Assamese utilise the terms *njior haathi* and *ghoror* (or *ghorochiya*) *haathi*, which mean “own elephant” and “home elephant”, *ghorochiya* translating in English to domestic. These terms refer to an elephant in a working relationship or kept as a highly valued pet. *Bon haathi*, and *bonyo* (or *bonariya*)

*haathi* literally means forest elephant and wild elephant. These terms map loosely onto the binary of village and forest used by informants to construct the world they lived in, and bear some resemblance to the opposing qualities of “controlled” and “unruly” found in the domestic-wild dichotomy of the Western tradition (see Chapter One).

Considering elephant relationships so well evade definitions and dichotomous concepts, there could be an argument for dissolving binaries, further differentiating limited kinds, or circumventing terms altogether (Locke, 2014). I will return to this point in the conclusion. However, in this thesis I will persist in drawing the distinction between wild and captive elephant at my fieldsite. First, a captive elephant that maintained consistent and extended contact with humans, and is partnered with a mahout, will behave very differently towards people than a primarily forest-dwelling elephant who has had limited contact. This distinction is of practical significance (and possibly of life and death!) when approaching an elephant. Second, a wild elephant becomes a captive elephant through a dedicated and extended program of restraint, violence, and training after the initial capture. Making the transition into a highly intimate relationship requires the crossing a threshold that would very rarely occur spontaneously and without an organised regime, resources, and assemblage of actors (see Chapter Five). The captive elephant is a state hard won. When we write about human-elephant relations in Assam we need to acknowledge these differences in history and behaviour, without necessarily drawing any hard boundaries between them.

To distinguish between the two broad kinds of elephant relations at my fieldsite I will use the term “domestic” (captive is problematic as it fails to grasp elephant complicity in the relationship: Locke, 2015), and “forest-roaming” (to avoid dichotomous assumptions of between domestic and wild).<sup>20</sup> These are not stable states, but interactional processes, ongoing negotiations between human and elephant individuals and communities. Domestic elephant refers to an elephant who has partially adapted to a human-dominated environment, formed an intimate, personal attachment with a mahout (elephant driver/handler), and coordinates with their human partner through commands. Fijn (2011) refers to this as a “co-domestic relationship” where the animal is also an active partner in a reciprocally affecting relation. Forest-roaming elephants will refer to those individuals and herds who live primarily in the hills of the RGRF, occasionally cross paths with people, and whose ranges

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<sup>20</sup> Adapted from Locke’s (2016a) suggestion of “free-roaming elephant” being a replacement for wild elephant.

partially overlap with human-dominated habitats. Generally, these elephants are expected to become anxious or aggressive when in proximity to humans, and are significantly more dangerous than their domestic cousins who are managed by their mahout. I acknowledge they are imperfect terms, and not necessarily generalisable to other human-elephant kinds elsewhere. This nomenclature is to be treated only as a heuristic and will be employed when necessary to distinguish between the two relational states. Finally, and hopefully, the qualities that define the human-elephant relationship will not be presumed through the use of these terms, but will become evident within the detailed ethnographic accounts and analysis of the relationships themselves.

### **Beyond human-wildlife conflict**

Today's human and elephant populations inhabit the Anthropocene, a term for an emerging geological epoch driven by the pervasive anthropogenic transformations of the bio-geo-chemical systems of the planet (Crutzen, 2002; Steffen, Crutzen & McNeil, 2007). Some organisms have proven themselves very capable of flourishing in the increasingly human-affected ecologies of the 21<sup>st</sup> Century (see Tsing, 2015). For many others, it is a time of mass extinction, unique “ways of life” nurtured across generations fragmented and unravelling (van Dooren, 2014a). Asian elephants, whilst persisting in India in significant numbers, are also under threat.<sup>21</sup> While I previously lauded the adaptability of elephants, it is also the case that elephants are simply far too large and resource demanding to survive in landscapes densely modified for human purpose (Baskaran et al., 1999; Leimgruber, et al., 2003). Deforestation and habitat loss is the primary cause of Asian elephant endangerment and concerns about their possible extinction.

“Conflict” is the dominant and normative characterisation relations between human and forest-roaming elephants in the conservation and animal sciences: “When elephants and humans interact, there is conflict from crop raiding by elephants, injuries and deaths to humans caused by elephants, elephants killed by poachers for ivory, and habitat degradation caused by humans” (Williams & Johnsingh, 1999, p. 298). Conflict taps into a deeper ecological narrative of exclusivity and competition, of human progress almost entirely at the expense of the nonhuman. The extinction of much of the earth's megafauna population has

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<sup>21</sup> A recent estimate for the global population size of the Asian elephant was 41,410–52,345 animals. <http://www.iucnredlist.org/details/7140/0> (accessed 26/07/2017)

been linked to human colonisation of the planet over the last 100,000 years (Prescott et al., 2012; Sandom, Faurby, Sandel & Svenning, 2014), and studies of Asian elephants often draw attention to how the species has lost 94% percent of its historical range (Sukumar, 2011).<sup>22</sup> Asian elephants are one of the few megafauna to survive into and through the Holocene period, the earth's last geological epoch that began approximately 10-12,000 years ago; although the growing dominance of agriculture throughout that period has had a significant effect on the animal's distribution and population. Asian elephant expert Raman Sukumar (2003) argues that the start of agricultural and sedentary culture caused a shift in the primary mode of relation, from predator-prey dynamics to one of conflict, as elephants and humans fought over space and crops. This antagonistic relationship intensified as humans colonised and transformed elephant habitat, in what environmental historian Mark Elvin (2004, p. 9) refers to as a "protracted war, which the elephants lost."<sup>23</sup> Anthropologist John Knight (2000, p. 10) notes that human-wildlife conflict discourse invokes a "dichotomous view of people-wildlife relations, according to which animals in human space are deemed unnatural and something to be removed." With human-elephant conflict this concept is often inversed: the negative repercussions are understood from the perspective of the charismatic and endangered animals and it is human livelihood and landscape modification that is spoken about as encroaching on elephant habitat.

In Chapter One, I will analyse how antagonistic relations with elephants over rice paddy provokes the farmer to exclude the elephant, constructing boundary lines between forest and village, wild and domestic spaces. However, outside of these contexts I found other kinds of relationships that did not fit with the model of human and elephant worlds in opposition. Instead, both species were constantly negotiating and accommodating to the other, their respective worlds interconnected, coordinated, and overlapping in ways beyond that of conflict.

Biological anthropologist and primatologist Augustin Fuentes (2010, 2012) argues that animal researchers need to move away from the notion that human-wildlife relations are predominantly defined by conflict, and that human and nonhumans can only be understood living in distinct and incommensurable environments. In a "mutual ecology", the socio-

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<sup>22</sup> A domain that once spread from Mesopotamia and through almost all of Asia.

<sup>23</sup> Mark Elvin's (2004) book on the environmental history of China was entitled *Retreat of the Elephants*.

ecological niches of humans and nonhuman – that is the set of biotic and abiotic relationships that structure and sustain an organism's existence – are environments that can overlap (Fuentes, 2010, 2012). In a shared environment, elephants and other species form active constituents of a person's niche and conditions for that person's growth and development (see Ingold, 2000). This holds true of the reverse, and humans are also significant factors affecting the course of an elephant's life. Further, all species are continuously interacting and shaping aspects of their own environment, as well as the intersecting niches of other animals they live along side. The environment is co-constructed by all participating species.

Shifting socio-ecological conditions across time, may create opportunities for species to interface in unexpected ways (Fuentes, 2010, 2012). For instance, the human-elephant phenomenon at Nambor Forest was an excellent case: the highway that sugarcane trucks drove along and that elephants needed to cross, opened a space and set of conditions for a novel form of interspecies sociality to emerge. For Fuentes (2010, 2012) conflict is one possible mode of human-nonhuman relations that might occur in a broader mutual ecology. Especially with behaviourally flexible animals, such as primates and elephants, we can expect a shared environment to support a multifaceted set of interspecies relations varying according to social and ecological conditions (see McLennan and Hocking, 2014; Hocking et al., 2015).

## **Organisation and outline of chapters**

The first chapter introduces the human-elephant landscape of the fieldsite, and the problem of human-elephant conflict. The behaviour of elephants who lived in the nearby forest was reported to have significantly changed in the last thirty years, the animals becoming more unpredictable and antagonistic. To contextualise this shifting relationship, I will need to trace the environmental history of the region, as well as the political, social, and economic forces that have driven forest loss. The chapter also explores the historical role of the Forest Department, a government body that oversees protected forest areas and wildlife in Assam. Rural villagers often blamed the Forest Department for the encroaching presence of elephants and their seasonal raids on rice crops. To make sense of this argument, I will need to analyse how colonial and post-colonial governance have attempted to manage and control the relationship between humans and elephants.

Chapter Two and Three turns towards understanding what category of being elephants are for my Assamese informants. While elephants, in the context of crop-raiding, are animals to be driven out from the village, people simultaneously consider them to be incarnations of the elephant-headed god, Lord Ganesh. Chapter Two will attempt to flesh out how people could on occasion perceive elephants as divine agents, and how this ontological potentiality shaped the dynamics of interaction, including the ways people approached and communicated with them. In Chapter Three I further unpack those moments where the divine aspect of the elephant is perceived in encounters. Drawing on ethnographic observations of nonhuman personhood in the animist literature (e.g., Hallowell, 2002; Bird-David, 1999; Willerslev, 2007, 2010), theories of the unnameable in witchcraft (Siegel, 2006), and arguments that other animals inhabit different perceptual worlds (Uexküll, 1934/2010), this chapter will argue how it is from a place of “ontological uncertainty” (Servais, 2005) that elephants are revealed as “more-than-animal.”

The final three chapters look at three different social and ecological contexts in which human and elephant activities and worlds intersect, and the varying degrees in which they are enmeshed into the other. Chapter Four follows Chakardo villagers through the forest seeking to understand how their movement is shaped by the elephants who also inhabit this mutual ecology. I will focus on the forest trails used by human and elephant, and analyse how each species movements are deeply coordinated in space and across time through their mutual participation in these trails. Chapter Five turns to the process by which an elephant is captured and trained into a working relationship and how both animals work together as a team. Through close ethnographic analysis I will argue that the elephant handler can integrate their cognition into the behaviour of an elephant, enabling the team to successfully perform joint tasks and navigate through a human-dominated environment. I situate this interspecies relationship in a broader cultural history of Assam and India, where domestic relationship emerged from the assemblage between individual elephants, elite elephant owners, and subaltern mahouts (See Trautman, 2015, 2016). Chapter Six focuses on the problem of a railway line at Chakardo, its lethal relationship with elephants and how it threatens to fragment elephant habitat. This final chapter will “trace the connections” (Latour, 2005a) between the assemblage of actors mobilised to enable an elephant herd’s safe movement to the Deepor Beel wetland, and analyse how elephant ways of life are incorporated into the anthropogenic space.





Where there once had been several feet depth of cool mud there was now a series of forbidding stone walls rising from the ground, while to the right of them, men were working amongst great piles of timber. The Old Bull trumpeted with shrill rage. It had been bad enough some years previously when the jungle had been felled and burned, only to be replaced by coffee, but at least the zone of cultivation had not encroached upon the elephant trail. From time immemorial, as clearly understood in the spirit as though it had been a written treaty, there had been a truce between Man and the elephants. Each, by tacit consent, avoided the haunts of the other, for they had nothing to give each other except enmity. Man worked his rice fields in the jungle clearings and, to avoid these, the elephants made wide detours. Man, likewise, avoided the elephant feeding grounds and the trail which led between the low country and the high hills. Here, plainly, was a flagrant violation of the unwritten treaty.

From the novel *Elephant Walk* by Robert Standish (1948, p.9).





Figure 1.1: A hungry herd in the forest, loitering in the hills nearby to Pamohi village. While most of the farmlands here were sold several years ago, elephants will still venture to the area, searching for crops to feed on. Notice how thin and undernourished they are. Some herds were well fed, others less so.



Figure 1.2: The traces of a herd that passed through an already harvested crop field, running diagonally across the dividing path between farmlands.



## Chapter 1:

# A shifting human-elephant landscape

“Welcome to elephant country.”

I turned my gaze away from scenes passing by the backseat window and looked quizzically at Kaushik Barua, who had turned to face me from the front passenger seat of his four-wheeled-drive. It was 2011. Kaushik, 39 years old at the time, youthful face with intense, expectant eyes, was an energetic and charismatic man as well as an elephant conservationist, naturalist, book collector, and elephant owner, amongst other varied interests. He would become an invaluable informant, friend, and introduction to my fieldsite. I was confused about Kaushik’s claim that this was “elephant country.” I was disoriented, not only because of the thick fog that had enveloped the car for the entire trip, but also because only twenty minutes earlier we had been struggling to extricate ourselves from the unruly Guwahati traffic. In fact, we had just turned off the national highway NH37 a few minutes earlier. However, emerging through the fog ahead of us was a dark, green, forested hill silhouetted by the setting grey sun. This small hill was the northernmost extension of the Rani-Garbhangra reserve forest (RGRF); government-protected land originally notified in the late 19<sup>th</sup> century for the purpose of exploiting its valuable timber. I would live at the foot of this hill at a nearby school in the village of Pamohi, when I returned a year later to conduct more fieldwork in 2012.

We had entered the outskirts of the city, and I could see the radiating urbanisation tracing new boundaries and forms on top of the old demarcations of paddy fields. When the road reached the hill, we turned right, and paved tarmac gave way to dirt. The car travelled along the unsealed road for five kilometres, winding around the hilly tree-lined slopes to our left. The creeping development slowly fell away, and the roadside was left scattered with small properties adjacent to rice paddy fields only recently harvested. Some of the hills had been cut clean away by stone quarries, feeding the rapid construction of the nearby city. At one point, we crossed a railway track, and the road squeezed for two kilometres between the foothills and the banks of the wetland and bird sanctuary, Deepor Beel. This narrow stretch of land was an old farming settlement called Chakardo. The village was composed of clusters of houses along the roadside separated by the narrow farm fields that stretched between the

hills and the wetland. Kaushik pointed out some elephant dung in the middle of the road, apparently from the night before, and gesturing towards the hills stated that, “If we are lucky, we might see some elephant.”

Over the three years following my initial visit with Kaushik, a lot changed amongst the communities settled on the forest fringe. The dirt road was transformed into a bitumen thoroughfare, channelling cars through an alternate route between the city centre and the airport. Many of the fields that cultivated rice along the stretch of road from Pamohi to Chakardo had been sold and consequently laid fallow. The new owners built walls to demarcate their acquisitions and prevent illegal settlements. Schools had been erected, warehouses and other business built, and there was even a petrol station at Chakardo to service the increased traffic. Chakardo was the last frontier of agriculture along the plains of the northern foothills nearest to Guwahati, although it was following a similar trend with only a small percentage of households still farming rice.

One morning in Chakardo in 2014, I sat along the roadside gazing across some of the now empty farmlands, settled at the edge of the Rani-Garbhangra foothills. Someone had recently sold part of the land, and a seven-foot wall had been erected around the property. Only a few plots in this field were cultivated. Others were abandoned, either due to a shortage of labour, or because of the pressures of elephants who descended from the hilly forests to eat the crops. Crop raiding was especially a problem in this field, since herds had adopted it as a main passage to access the Deepor Beel wetlands.

I was busy conversing in Assamese with a local man, Mr Teron. Mr Teron was Karbi, the original ethnic inhabitants of the area, he was around his seventies and had lived in Chakardo all his life. Reflecting on the bitumen road and railway lines that ran outside of his home he said, “I could not have imagined it would become like this... It was very beautiful, there were *huge* sal trees, all around.” Sal trees can grow very tall, with straight and narrow trunks embraced by thick, green foliage. The trees were owned and managed by the Forest Department, falling within the bounds of the reserve forest. The trees around the homes and the fields had been so dense, I was told, a person could throw a rock in any direction from a house and not help but hit a trunk. In the late afternoon, it used to turn dark early amongst the forest, and other animals would begin to emerge close to the village: leopards, deer, black bears, and even the odd Royal Bengal tiger hunting for cows. Nowadays, the fringe hills were stripped bare, their cover mainly composed of smaller trees, shrub, bamboo, and

juvenile teak trees introduced by the Forest Department. “There were more trees and so more elephants,” I stated in reply to his reminiscing. “No” he corrected me. “There were less! ... Now we do not know when and where elephants will come from!”

I was initially confused by this claim: it was difficult to grasp how there might have been fewer elephants in the past. Rapid and extensive forest loss has been linked to a drop in the Asian elephant population in Assam and Asia over the last century (Leimgruber et al., 2003). Elephants in the Northeast and India have evolved to live in expansive forest ranges that support their dietary demands (Sukumar, 2003), and consume vegetation for the better part of their waking life, sleeping only several hours a day. Versatile, generalist feeders, these megaherbivores will forage on a wide variety of grasses, leaves, and seasonal fruits, and eat on average up to 150 kilograms of vegetation in twenty-four hours (Sukumar, 2003). Elephants need large, healthy forests to survive. The elephant that survives in the 21<sup>st</sup> Century lives in an environment that has undergone intense and widespread transformation: with forest habitats fragmented, reduced, and degraded.

Mr Teron’s statement concisely captured a shift in human-elephant relationships experienced by many people who lived at the edges of elephant habitat: a growing frequency and intensity of encounters, coupled with difficulties predicting how the animals would behave. Their changing presence in the world is a symptom of the environmental history of the region, the expanding agricultural and urban ecologies, and large-scale deforestation and degradation of primary elephant habitat. The challenge facing elephants is how to live together with humans in the age of the Anthropocene, a time of reconfiguration, in which ecosystems are modified or diminished, organisms are displaced, become invaders, or made extinct, and different species are rapidly being thrown into unexpected and new relations (Lorimer, 2015). Anna Tsing (2015a, p. 20) proposes that our current world is characterised by a “precarity,” an indeterminacy by which prior understandings will not necessarily hold in the future as “we are thrown into shifting assemblages, which remake us as well as others.” This chapter is an introduction to the human-elephant landscape of my fieldsite, and will investigate the shifting agency of elephants at Chakardo and their precarious relationships with humans across their broader ranging area.

For those people heavily affected by the increasing presence of elephants, the divisions between forest and village come into sharp relief. In times of human-elephant conflict these boundaries are re-made and called on to be reinforced. Assamese, like other agricultural

societies (see Morris, 1996; Knight, 1996, 2000; Descola, 2013), have inherited their own culturally-specific, material and symbolic understandings of the divisions between forest and village, domestic and wild places. A common argument amongst many of the farmers was that the state was implicated and responsible for the elephant's crop-raiding and constant transgression of the forest-village boundary. In Assam, the human-elephant landscape has been historically constructed through modernist spatial orders imposed by the colonial administration (Barua, 2014a). In the final part of this chapter I will need to consider the historical role of the Forest Department in managing the relationship between peasants, wildlife, and forest resources to make sense of the villager's argument.

### **Shifting human-elephant relations**

Chakardo is one amongst a string of Karbi communities that settled in the submontane regions of the northern foothills close to Guwahati, since at least the 1860s.<sup>24</sup> Elephants have been documented coming to the Deepor Beel wetlands next to the village for over a hundred years (Phukan, 1983). In 1897, a survey map of the region illustrated how the plains at the bottom of these hills were composed of a series of very large and interconnected marshes and wetlands.<sup>25</sup> Surrounding these wetlands were agricultural settlements, some likely claimed from the swampy yet fertile, alluvial grounds fed by the waters of the nearby Brahmaputra River.

Despite the marshlands partially receding under agricultural pressure over time, locals have memories of large herds in the 1960s and '70s, numbering up to a hundred individual animals, descending into the plains and spending up to a month moving within the expansive wetlands. Herds fed on aquatic grasses, socialised, frolicked, and bathed in these marshes. As per local accounts, a swamp nestled between the outlying spurs of the hills in nearby Garoguli, on which a college was recently built, was a place where elephants would use to give birth. Chakardo villagers also recall herds visiting around the monsoon months of June

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<sup>24</sup> Early surveys of Assam in 1865, forty years after the colonists claimed control of the valley, recorded Chakardo, and other Karbi villages in the area as already established. Map of *Kamrup District*, Sheet no. 124-5, 1865-69.

<sup>25</sup> Map of Guwahati Circle, Kamrup district 1884-97.



and July.<sup>26</sup> Elephants during that time would also make opportunistic raids on the *boro* rice crops that were cultivated along the wetland shores. Stracey (1991) also observed that elephants would come during winter period also (November to January), attracted by green vegetation and ripening rice. Sixty years ago, the plains areas beneath the hills still formed a significant part of the elephant habitat.

In 1972, the region underwent a geopolitical shift, which saw Assam and Meghalaya divided into separate states and the capital of Assam relocated to nearby Dispur, Guwahati. The marshlands and submontane forests further receded as agricultural settlements increased, in the area. In the seventies, elephants began to intensify their raids on the crops around the string of villages from Pamohi to Chakardo; these new patterns may have been a result of habitat loss from the expanding agricultural frontier in other parts of the landscape 50km to the southwest (Das, 1973, via Anon., 2009).<sup>27</sup> In the eighties and nineties, the first threads of urban Guwahati extended to the northern foothills, in the form of middle-class real estate prospectors purchasing farmland, as well as the construction of a railway line.

One day, I stood with a friend picking up his child from one of the new schools built on the old farmlands of Pamohi, farms that had been originally claimed from the now absent marshes. He pointed towards the hills and described how elephants used to descend along this route to raid crops and access the remaining wetlands. We then turned away from the hills towards the patchwork of homes, walls, and factories. Thinking about the aesthetics of the landscape, he mused, “It was all open ten years ago. Now it is all boundaries.” The shifts in practices and land use have altered the conditions under which humans and elephants can utilise the landscape, and encounter each other. Having sold their land, people no longer needed to protect their crops from elephants, and the marshes have all but disappeared, so the elephants had no reason to come to Pamohi. Further, the area had undergone a socio-economic shift, as locals in these villages became involved in new urban economies. The young are educated and no longer interested in farming. People were less reliant on and less likely to venture into the forest where human-elephant encounters often occurred.

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<sup>26</sup> John M’Cosh (1837, pp. 44) also writes how, “wild elephants are plentiful, and move in large herds and are very destructive both to the crops and to human life; entering villages at night, and plundering granaries, and stores of salt, of which latter they are very fond.”

<sup>27</sup> Das, P.C. (1973) *Working Plan for the Reserved Forests of South Kamrup 1973-74*.

Since the turn of the millennium, the acquisition and development of property along the northern foothills has driven a rapid transformation in the local plains ecology. With much of the wetlands depleted and livelihoods no longer agrarian, the stretch of land from Pamohi to Chakardo currently typifies what is referred to as “edgelands”. Edgelands are characterised as a heterogeneous landscape undergoing rapid and unregulated change: warehouses and mining businesses rise-up amongst the older bamboo homes and remaining paddy fields, creating new disturbance regimes and physiological stresses on human and nonhumans in the area (McDonnell & Pickett 1990; Shoard, 2000). The elephants no longer descended to the plains areas along this stretch of hills, except through Chakardo village to Deepor Beel, which was the last remaining wetlands in the area. Although on most occasions elephants, compared to the past, would not spend more than an evening in the shallow waters.

The empty farmland that I described earlier, that Mr Teron and I looked over in Chakardo, was one of the last open elephant passages to the wetlands. The potential conduits that herds might use to get to the beel have narrowed over time, especially as road construction altered the shape of the landscape and housing development increased. This passage through the village was a route only recently adopted by herds. Elephants demonstrate a tendency to habitually follow the same route, and fifteen years prior, elephants used to pass this way sparingly. But due to recent disturbances along a different corridor to the east in Chakardo, they began to search out new links to maintain their relationship with the wetland (Chapter Six will discuss this relationship further). Consequently, it was sometimes difficult to predict the direction from which elephants would emerge to access Deepor Beel.<sup>28</sup> This was what Mr Teron meant when he said that people did not know “where” elephants could come from these days.

As for “when,” Mr Teron was referring to the seasonal habits of elephants and their frequency in the area. Earlier, elephants visited in larger herd numbers, but only during particular times of the year, related to both seasonal changes and the rice harvest. During my fieldwork period, elephants could be absent from the area for up to a month at a time, but generally herds visited the beel year-round. Elephants, Chakardo locals believed, had become more dependent on the wetland as a source of water, especially during the dry months which can span from October to May. People observed a relationship between the

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<sup>28</sup> Even at the passage Mr Teron and I looked over, elephants would occasionally pursue different routes on the other side of the hill (pathways which were eventually also blocked).

loss of forest cover and rainfall in the area, with local climatic and weather changes affecting the availability of water in the forest. Consequently, elephants frequented the fringe hills and passed through the village to the beel far more often than was previously common. Environmental and habitat changes are tied to increased encounters with these animals.

The uncertainty provoked by this shifting dynamic was further reinforced by the observation that elephants appeared to be behaving differently towards people. Collecting firewood in the forest was said to be more hazardous than before, both due to the increased chance of encountering an elephant, and because the animals were becoming less intimidated by humans. In the past, elephants tended to be shy; upon hearing an approaching person, they would “keep to the side”, according to locals, which generally meant they moved up hill or out of the person’s way to avoid being noticed. Nowadays, villagers claimed that elephants became easily agitated and provoked to aggression.<sup>29</sup> In regard to crop-raiding, male elephants, being bolder, have always been problematic, especially when attaching themselves to a village to feed on paddy fields. Herds composed of females and juveniles have now also become audacious and no longer easily frightened off. So timid were they in the past, that even the playing of musical instruments was enough to frighten them away. Elephants have become habituated to the hollow threats of torches, shouts, flames, and even firecrackers, and they resisted being driven from the village: “Before, if you gave elephants torchlight, they would go away. Now if they see a torch, they will become angry and come charge at you!”

Michael Hathaway (2013) reported that villagers in Yunnan, China, found elephants to be bolder than previously, and more likely to remain close to human settlements. Karlsson (2011, p. 86) found that villagers in Meghalaya complained that in the past they could “talk” and coexist with elephants and tell them to stay away from fields, but now the animals attacked people. The animist Nayaka in the Nilgiris in South India, say that they no longer

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<sup>29</sup> Villagers liked to say how elephants charged at them when they encountered each other. While I have seen elephants chase people on a few occasions, I also have heard people describe elephants charging when the animal merely turned to face the encroaching human with body tense and ears flaring, giving a clear signal that their presence was not desired. The motif of “charging” might be used to embellish a story, or an elephant’s behaviour may have seemed threatening because the person was intimidated. Regardless, what these accounts point to are a noticeable shift in the inter-individual relations between humans and elephants in the last twenty years, and that the elephants have become less socially aversive, decreasingly tolerant, and increasingly agitated to be in the proximity of humans.

know the elephants, compared to the past where both animals mutually respected each other (Thakaekera & Thornton, 2016; see also Bird-David & Naveh, 2008).<sup>30</sup> Whether new elephant populations have moved in, displaced by environmental disturbance, or elephants have become more generally more agitated is unclear. The shifting nature of the human-elephant relationship is a familiar story across shared habitats regionally and globally. The human-elephant conflict literature in the elephant ranging states in Africa, for example, also report that heightened aggression and presence was a relatively new or rapidly increasing phenomenon (e.g., Barnes, 1996; Tchamba, 1996; Dublin & Hoare, 2004).

In Assam, the new relations were marked by elephants' shifting presence and absence in the landscape: in some areas, elephants disappeared along with the forests; in other parts, elephants appeared with seasonal regularity where ten years earlier they were non-existent. Local-level changes, such as loss of wetlands and farmlands at Chakardo, were implicated in these reconfigurations, but, as I will explore further on, there were also environmental changes in different parts of the broader landscape that drove both species into unexpected encounters. For villagers at my fieldsite who lived on the fringes of forest, elephants were experienced as unpredictable: people had begun losing confidence about when and where they might cross paths with an elephant, and how the animal would respond to them when they did.

### **Blurring the divide between forest and village**

For homes with no other means of earning a regular income, growing rice was central to a subsistence-based livelihood in Assam: a farmer's harvest can provide staple food for the family for at least an entire year, with the remainder available to be sold.<sup>31</sup> Rice is an important part of Assamese culture: it has given shape to the landscape, livelihood patterns, rituals, literature, and festivities of the region (Dutta and Bhagabati, 2007). For example, the main three *Bihu* festivals of Assam and their rituals of celebration have a seasonal basis,

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<sup>30</sup> Actually, in Thakaekera & Thornton's (2016) finding they referred to the elephants of the past as *anna-devaru*. Devaru is actually a manifestation of personhood in nonhumans amongst the Nayaka. I will touch on this further when analysing Bird-David's (1999) work in Chapter Three. Interesting to note here, is that the social relationship between human and nonhuman within the animist ontology is being adversely affected by environmental changes – it is experienced as a breakdown in social relations.

<sup>31</sup> Not all farmers are land-owners and will cultivate under the sharecropping *adha* (half) system. Under this system they will tend to the crops and harvest the grain and split the yield with the landowner as payment for their labour.

synchronised with patterns of agriculture and rice cultivation (Barua, 2009). When I first arrived, I had only an aesthetic appreciation for the rhythms of a people whose lives and activities were coordinated with the demands of rice. Locals would say that it was hard for outsiders to understand how difficult life was for farmers. After the first rains in May, and once the muddy fields were ploughed, new seedlings were transplanted into the wet fields. By September and October, the stalks had grown to approximately a metre-and-a-half tall. In areas like Rani, a predominantly agricultural region to the southwest of Chakardo, the land was a beautiful sea of near-fluorescent green. From this point the rice flowered a yellow grain, and the fields would be filled with people, engaged in the strenuous labour that lasts all day, for weeks on end, cutting the straw, bundling it, and leaving the bundles in the fields to dry.

Humans were not the only ones coordinating their lives with the growth of agricultural plants. Elephants also adopted these rhythms. Around September-October, about a month before the rice was ready for harvest, elephants began amassing in the nearby hills and forests. The growth of rice binds together human and elephant lives, its seasonal flowering incorporated into elephants' ranging patterns.

At Udaipur, a village 30km southwest of Chakardo and settled on the borders of nearby Jarasal Reserve Forest, men would gather along the road at sections of the tree-line where elephants were expected to emerge. Lining the road in front of them were patches of teak plantation forests interspersed between uncultivated rice paddy fields. These farms were claimed from the channels of marshy depressions that extended from the hills. The Forest Department opened the land for farmers around the fifties or sixties, but they were recently abandoned due to excessive crop raiding.<sup>32</sup> The villagers who assembled to form a boundary, were preventing elephants from crossing to the other side of the road, to where crops were still being grown. Men came armed with their three-cell torches, purchased for 230 rupees from the local store.<sup>33</sup> I had bought several packets of firecrackers for them to help frighten the elephants, twelve pieces at one hundred rupees a packet, which were usually too expensive for people to buy on a regular basis. Unlike Chakardo, elephants never came to Udaipur, except for the sole reason of raiding crops during harvest season. The teak forest

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<sup>32</sup> The land that these farmlands claimed were in the past swampland and possibly formed a part of elephant ranging areas.

<sup>33</sup> Approximately four US dollars.

plantations that grew adjacent to the village provided little sustenance and so no reason to inhabit without the lure of rice. In fact, the elephants had only begun appearing in Udaipur ten years ago.

The elephants were clever: during the day, they slept in these pockets of dense teak trees, and people were afraid to enter the plantation to collect wood. In the evening, herds would use the tree cover to creep closer to the farmland, while remaining relatively hidden behind foliage, where the torchlight could not easily penetrate. This strategy is common practice amongst crop raiding Asian elephants. We could see them though, hovering in the dark just beyond the reach of our lights, about eleven of them, restless, ghostly grey figures. Sometimes if the elephants could not find a successful opportunity to cross the road, they would move between teak patches to search for a detour around the guards. Herds were said to have adopted new strategies: in the past, they would frequently come together as a single group with up to fifty individuals. Recently, they were said to more often split up into smaller units of two, three, or four, and raid the crops from different locations along the road.<sup>34</sup> Standing watch was an exhausting, played-out affair for both parties. After a time, the herds that night disappeared deeper into the teak plantation, and the men scaled the trees up to the watch-houses (*tangi*), where they spent the entire night perched and watchful. The crop protectors could not sleep, lest their defences dropped and the elephants snuck their way onto the fields. I heard several horror stories in Udaipur of families losing entire yields in a single night. Herds also seemed to have an uncanny ability to know when people were most tired, committing raids during the witching hours of the early morning.

“See”, a farmer at Chakardo pointed out to me on another evening, gesturing towards the herd who were in full view feasting on someone’s crops, “with rice, the elephants cannot control themselves.”<sup>35</sup> The herd, returning from the wetland, took the opportunity to target the ripening paddy nearby. During the harvest season, people were generally conflicted about letting elephants move through Chakardo: they sympathised with the elephants’ desire to access the wetlands, but also needed to prevent the animals from leaving the forest and

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<sup>34</sup> Srinivasaiah, Anand, Vaidyanathan, & Sinha, (2012, pp. 8), in regard to other human-elephant conflict scenarios, argued that, “[a]ssociating in relatively larger numbers in highly human-disturbed areas could lead to greater detectability and hence, crop-raiding in smaller units could be a more prudent strategy for these elephants.”; and, “Individuals would associate in smaller groups, reduce social interactions and increase movement rates in highly disturbed area”

<sup>35</sup> *Manto xamoribo para nai* – literally “cannot control their heart”.

minimise the chance of crop raiding. That night, we had tried unsuccessfully to drive a family of elephants away for close to twenty minutes. Neighbourhood men and forest officers had gathered and were shouting, flashing their torchlights, waving flaming branches in the air, lighting firecrackers, and sitting on electricity-line towers, banging the iron frame – Tang! Tang! Tang! The elephants ignored the sounds and lights and simply continued eating, tearing the rice stalks out from the earth with their trunks and thrusting them into their mouth. It was frustrating for people to see five months of work and a year’s worth of crops being slowly devoured. Since all other methods had failed, someone began throwing large stones at the herd. After several lobs, the elephant’s obstinance caved, and a few of the bigger females turned to leave the paddy fields with the younger in tow. One last rock was thrown and at that point, a large female turned her attention towards us. She trumpeted, her huge ears flared, and she charged at us with lightning speed. We all ran. Conflict over rice paddies often resulted in reciprocally elevated, mutually agitated states, with each species becoming increasingly frustrated with the other’s presence. Affect can be contagious in human-wildlife encounters, especially when both animals are vulnerable to the other (Kirksey, 2015). Later on, when speaking to the same farmer, who had eventually been forced to give up cultivating his land due to elephants, he explained that, “Humans want to stay. Elephants want to stay.” Ongoing problems were inevitable.

The maintenance of the boundaries overwhelmed the farmers. People were forced to confront elephants, and to provoke these huge animals a person needed to engage them at close range. The work was dangerous. Elephants were unintimidated by people, and the tools farmers used to augment their capacity to affect elephants, such as three-cell torches, proved virtually useless. Everyone knew about other kinds of technology, such as high-powered halogen lamps, but these were beyond a subsistence farmer’s humble means, priced at five thousand rupees a torch – more than some people made in a full year. Attempts to construct barriers were only as good as the intelligence of the animals they were attempting to hold back. Elephants were well known for outwitting people, and even with complex constructions such as electric fences, the animals often found ways of overcoming them.<sup>36</sup> Many farmers needed to defend their crops almost every night for up to two months. People were pushed to the edge of exhaustion, and commonly said they “could not get sleep” and

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<sup>36</sup> Fernando, P., Kumar, M.A., Williams, A.C., Wikramanayake, E., Aziz, T. & Singh, S.M. 2008. *Review of Human-Elephant Conflict Mitigation Measures Practiced in South Asia*. World Wildlife Fund for Nature.

“no time [even] to eat.” In the worst affected locations, such as Udaipur, people became increasingly weak and sick, with their “heads not working” properly. Family members reported that people became emotionally frail, quick to anger, and some would resort to alcohol to get through the long, dangerous evenings. The conflict season came upon people like a rising tension: the month before elephants started arriving, people began to worry about their potential losses, and whether they would have enough to eat in the year. This anxiety would only increase during the peak of the raids. The maintenance of the boundary pressed against farmers’ physical and cognitive limits, yet proved barely sufficient against the increasingly bold elephants, who required far less sleep, and persisted in passing the tree line and entering the village, night after night, year after year. For the farmers at Udaipur, some felt as if they were in a hopeless situation. As one farmer pointed out, however, they had “no options” apart from continuing to farm and defending against elephants. Agriculture had to be maintained because people had no alternative means to support themselves. However, the consequences of attempting to maintain the rural livelihoods and relationship with rice were highly disruptive, dangerous, and detrimental to people’s health.

An order was perceived, whereby elephants belonged to the forest. As one farmer said, elephants cannot survive in the village, and “the real home of wild animals [*bonyo jontu*] is the jungle.” This statement is an ecological and behavioural insight that recognises elephants’ regular habits, their need for stress-free environments and food. The comment was also an assertion of expected norms for elephants and what can be considered their natural home. *Bonariya*, refers to things that are wild and untamed, is a word that extends to jungle and forests (*bon*) and wild elephants (*bonyo haathi*). Such inter-species norms are perceived to be violated when elephants persist in making forays into village space, eating crops and endangering people. Elephants were treated as “out of place” in these encounters (Knight, 2000): beings that needed to be driven out of the village back into the forest. Outside of the harvest season, people were unconcerned about elephants passing over their paddy fields at night, but when the rice ripened, boundary lines were drawn intending to separate the forest from the village. Knight (2000, p. 7) noted that forest edge cultivators have two kinds of work, “the labour of production and the labour of protection”: farmers must always guard against the animals who are attracted to village produce.



When the ground in someone's home had not been cleared, and was becoming overgrown with weeds and grass, people would joke that it was becoming *jangol* – “jungle”<sup>37</sup> The village was constructed as something maintained and controlled, in contrast to the vegetation and animal inhabitants of the forest. The division of the local environment into forest and village, and its associated symbolic meaning, was related to broader Hindu and Indian perspectives. *Jangol* has been characterised as a potentiality, a liminal space and a place yet to be civilised (Descola, 2013, Morrison, 2014) and within Hindu cosmology and myth is a place of power, filled with beasts, demons, gods and ghosts, and stands juxtaposed to the tame and profane human world of the village (Wardhaugh, 2005; Fibiger, 2012; Rangarajan 2014).<sup>38</sup> However, the forest-village distinction, while bearing some similarities, does not necessarily conform to the wild-domestic dichotomy of the western tradition (Descola & Palsson, 1996; Descola, 2013). At my fieldsite, the jungle was not absent of human activity; instead the boundary between forest and village was permeable. People were dependent on the resources of the hills, often venturing in to collect firewood. Further, and while it was less common these days, villagers would also enter the forest to gather vegetables, fish or hunt, and those who owned buffalos would shepherd and allow them to graze in the hills. Despite their different qualities, forest and village did not exist independent of each other: they were distinct but interrelated.

Elephants have never adhered to these material and symbolic distinctions, and historically have been recorded opportunistically foraging in villages (Sukumar, 2003), thus reinforcing the permeability and instability of these environmental categories. However, this is not to say elephants were ignorant of the difference in place. Elephants, like humans, displayed an awareness of where the tree line ended and the village started. They rarely ventured into a settlement until after dark, and when they moved through villages, they actively reduced vocalisations, a response that was possibly learnt living in proximity to humans (Srinivasaiah, Anand, Vaidyanathan & Sinha, 2012). In the forest, a farmer joked with me, humans run away from elephants, but in the village, elephants were afraid of humans. In this

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<sup>37</sup> Jungle and forest were terms used interchangeably by people.

<sup>38</sup> Further, the hills-plains binary was a common construct in Assam, as in other parts of India, often employed to emphasise the backward nature of those of who live in the forested upland areas (for e.g., see Scott, 2010; Wouters, 2011; Matthur, 2015).

instance, the forest and village is distinguished by differing human-elephant relational dynamics.

In Assam, elephants' persistent raiding over one to two months placed excessive pressure on and disrupted the qualities of the village that defined it in relation to the forest. In Udaipur, some fields located on the edge of forests had lain fallow for several years and were now covered with a wiry shrub. The land had to be abandoned because of excessive crop raiding by elephants, which made it too difficult to farm. "It has all become jungle," a local man said with some resignation, as we gazed over empty paddocks. From this perspective, the village fields were becoming, practically speaking, indistinguishable from the forest to which they were adjacent. Further, under the pressure of elephant raids, not enough rice could be harvested to support families, and defending against elephants disturbed the cognitive, physical, and social constitution of villagers. The elephants' presence threatened the village, a place of relative safety and order compared to the unruly dangers of the forest. In one example, a lone male elephant lingered near some villages near Udaipur at the end of the harvest season in 2014. At night, over the course of a week, he moved from home to home in search of food. People who exited their house to inspect the source of the noise were charged by an angry elephant within the walls of their own compound. One man was killed by the male who was reportedly quite agitated that evening. The threats of the forest had now entered the village, and when elephants were present, people could not inhabit their homes as when the boundaries remained intact. In extreme circumstance, the shifting human-elephant dynamic destabilised the ideal functioning of rural settlements. Anthropologist John Knight (1996, 2006) made a similar argument in regard to human-wildlife conflict in Japan. Knight concluded that that animal incursions were perceived as "undermining the quality of living space" and provoked disorder in the villages (Knight, 1996, p. 236). The underlying tension of human-wildlife conflict, Knight (2006) claims, is encompassed not only by the threat to resources but also the sense that there is an ongoing war with animals, a rival population who threaten to takeover human space. While none of my Assamese informants framed human-elephant conflict as "war", we can see that there exists a similar tension in regard to the maintenance of territorial boundaries between forest and village during times when elephants are increasingly transgressing human-nonhuman worlds.

## Managing the field and forest

I was in the backyard of Mr Robson's home in Nalapara, a suburb 13km east of Chakardo, also settled at the northern foothills of the Rani-Garbhangha Reserve Forest (RGRF). This neighbourhood at the turn of the millennium was all agricultural fields, but had since become densely populated with many homes, a growing extension of Guwahati's suburban outskirts. Mr Robson, in his fifties, had lived his life at Nalapara. Even when rice was farmed here, elephants rarely came down, he told me, unlike towards Chakardo. He then directed my attention to the three-foot-high brick wall that formed his property boundary. It had been partially broken by a large elephant stepping over it.

Beginning ten years ago, elephants came during the monsoon season when the fruit of his jackfruit and papaya trees had ripened. A few persistent culprits adopted Nalapara and the nearby neighbourhoods of Beharbari and Lakhra as part of their feeding route. For instance, one large, freckled and tuskless male with a bulbous wound on his right front leg, made national news in 2015 when he wandered out onto the nearby state highway, stopping traffic.<sup>39</sup> Mr Robson's daughter, Dr Sangeeta Robson, who was also with us at the time, commented that she did not go outside to look at the elephants because it was dangerous. In any case, she would rather not disturb the animal, aware that he comes only to feed and would eventually leave of his own accord. Neither she nor her father were particularly concerned about the minor damage the elephant caused or the fruit he took.<sup>40</sup> As we inspected the crumbled section of the brick wall, Mr Robson then turned and looked towards the hills of the RGRF behind his house, and recalled how beautiful and deep the forest was in the past. But now, he continued, the forest was ruined, and the animals needed to come down to the village to find food. This observation was a common explanation for the fact that elephants foraged in the village with unprecedented frequency. Local forest degradation and loss were believed to have affected the availability of the elephants' preferred food sources, as well as leaving insufficient space for the animals to live. Not all fringe villages were affected in the same way; only certain places were adopted by individual elephants or herds. In another village on the other side of the forest, for instance, a group of three juvenile

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<sup>39</sup> Some people suspected he might have previously been a domestic elephant, let loose in the forest, hence his familiarity with people.

<sup>40</sup> The daughter compared her response to other villagers who rallied together with flames and torches when an elephant was spotted. These people, she supposed, were afraid the elephant would damage their homes or harm someone, so chased the elephant out of the village and back into the forest.

males roamed the village streets and treated people's homes "like a bazaar," according to local accounts.

Locals have both witnessed and participated in the rapid degradation of forest habitat over the last thirty years. Stories of deforestation are common throughout northeast India. Karlsson (2011, p. 87) writes how, in Meghalaya, large trees and rich forests have been reduced to merely a memory, the denuded hills leaving "few traces in the natural landscape that tell you what kind of vegetation there once might have been." Prior to the central government proclamation of a nation-wide timber ban in 1996, a frenzy of unregulated timber logging occurred across Assam and the Northeast (Karlsson, 2011). At the RGRF, because of collaboration between corrupt forest officials, outside brokers, and locals, many of the large trees were felled, sold, and transported to other parts of the state and country. At Chakardo, over a ten-year period between 1985 and 1995, many of the sal trees were reportedly cut down. Ecological studies show a huge increase of open and non-forest areas between 1989 and 2009, replacing the moderate to dense forest cover around the fringe areas in the hills closest to Guwahati (Saikia, 2014b). Deforestation facilitated increased occupation by people along the foothills. At the time of research, illegal logging continued deeper into the forest areas, and amongst those recruited to log were villagers who lived around and within the forest, farmers who had little access to alternative incomes. The brokers who traded the timber made a much larger profit than the minimal sum earned by locals who cut and processed it. A similar group of actors enabled the large-scale logging of the Ri Bhoi district of Meghalaya, the hilly range contiguous with the RGRF (see Karlsson, 2011). People from Chakardo and in neighbouring villages also undertook casual employment as loggers in these areas.

While satellite photos of the areas in Meghalaya that bordered the RGRF appear as vast forested regions, in fact, the area is a densely modified, human-dominated environment; traces of the previous forest reduced to a few scattered patches of trees surviving amongst cash crops. Elephants used to be able to migrate and forage throughout this landscape fifty years prior, but these parts of the Khasi hills no longer enabled movement. Khasi communities originally practiced shifting cultivation amongst these hills – a farming process where the forest on a hillside is cleared and cultivated, and then left fallow to regenerate for several years. In the nineties, the Meghalaya government began promoting monocrop plantations to enhance poor rural livelihoods, particularly the cultivation of broom grass in

forests degraded from logging and intense shifting cultivation (Tiwari, Shukla, Lynser & Tynsong, 2012). For example, broom grass (*Thysanolaena maxima* (Roxb.) Kuntze) was a popular cash crop, a plant whose flower is harvested, dried, and sold as broom heads across the Northeast and rest of India (Tiwari, Shukla, Lynser, & Tynsong, 2012). This state-led effort was coupled with the development of infrastructure in the area, which facilitated settlement and further contributed to shaping the elephant's significantly reduced habitat. Currently cash crops, such as broom grass, tea, and rubber defined the boundaries of the reserve forest. Herds were bound on most sides within the government protected area of the RGRF. In fact, a population of elephants in the nearby Nongkhlyem wildlife sanctuary, only 12km south from RGRF in Meghalaya, had become isolated from the RGRF herds in the last fifteen to twenty years due to the cash crop agriculture (Anon., 2009).

The forest's incorporation into capitalist processes has a deeper history. When the colonial administration began overseeing Assam in 1825, the region was perceived as a frontier space of inexhaustible wilderness (Karlsson, 2011; Saikia, 2011). Exploitation of timber was encouraged to generate revenue, supplementing the demand from a still-expanding British empire (Handique, 2004; Saikia, 2011). The Forest Department in Assam was established in 1874 to begin managing the rapid decrease of valuable timber stock. The Department marked and divided the landscape into spaces of control – “reserve forests” – isolating tracts where valuable timber was common and exercising a monopoly over all trees contained within (Handique, 2004; Saikia, 2011). The zone where the Meghalaya foothills meet the plains of Assam – an area which included the forests behind Chakardo – had tracts of land prized for their sal trees (*Shorea Robusta*), but also extensive beech wood (*Gamari Aborea*) and common bamboo. The sal forests were once part of a community that stretched across large tracts of Meghalaya (Tripathi & Shankar, 2014). The RGRF was initially notified in 1882 and then expanded in 1926.<sup>41</sup> Timber was managed by burning off competing species and encouraging the growth of target ones. In other areas, teak trees from Burma were introduced, and experimental monocrop plantations planted for later harvesting. Management of the forest through plantations transformed pockets of elephant habitat, that, whilst still forested and providing shaded cover, had lost the varied foliage that elephants

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<sup>41</sup> *Progress Report for Forest Administration in the Province of Assam* 1921; 1926-27.

could feed on. These ecologies would have been desolate from an elephant's foraging point-of-view.<sup>42</sup>

Many forests in India were shaped by anthropogenic influences prior to colonial influence, and were not pristine environments (Morrison, 2014; Morrison & Lycett, 2014). The ecology of the RGRF prior to British annexation of the area was influenced by the practices of shifting cultivation (see Chapter Four). The boundaries between forest and field have been in constant flux in the Northeast (Karlsson, 2011). However, when the British assumed management of the RGRF, the Karbi communities who once practiced rotating cultivation across the landscape were permanently settled into "forest villages", and restricted to conducting wet rice agriculture in valley area. Members of a forest village were exploited as an unpaid labour force for the Forest Department: in exchange for continued access to forest resources (Saikia, 2011). The valley areas where these forest villages were settled were likely previously filled with swampland vegetation and important foraging areas for elephants. These settlements expanded over time, and at the time of fieldwork many scattered sections of the southern range of the RGRF were under cultivation, and were sites less frequently inhabited by elephants.<sup>43</sup>

Colonial demarcation and ordering of the landscape affected elephant habitats both inside and outside of notified boundaries. Large blocks of "wasteland", ecologies that were considered unprofitable, unsettled, and not capable of generating revenue, were sold off at favourable prices to tea planter entrepreneurs (Handique, 2004; Sharma, 2011). Southwest of Chakardo, for example, several tea plantations were established amongst the marshland plains at the foothills of Meghalaya, areas that were previously prime elephant habitat. The demands of the tea trade also drove timber logging, which required hardwood to construct tea boxes and sleepers for the railway lines that would transport the product out of Assam (Hilaly, 2007). The opportunity to create an alternative tea trade outside of China was a

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<sup>42</sup> Further, plantations in some circumstances seemed possibly to have been nurtured on areas of land that previously would have been part of elephant migration routes. The Kulsi rubber plantation for example, was created in an area with high elephant traffic; while initially elephants steered clear of the area, they would return later and cause significant damage to the original monocrop. Their return suggests that it might have been part of their original ranging area. *Progress Report for Forest Administration in the Province of Assam* 1980-81.

<sup>43</sup> The settlement of villages is based on some conjecture, on my part. Early survey maps do show Karbi villages at different locations to where they are now, signalling their shifting practices. The British did actively discourage shifting cultivation since they asserted that it damaged healthy forest stock. See Map of *Kamrup District*, Sheet no. 124-5, 1865-69.

powerful force for regional development and vast environmental change in Assam (Karlsson, 2011; Sharma 2011). By the mid-1800s, the forests of Assam had become integrated into a capitalist world-system (Handique, 2004; Karlsson, 2011). A significant amount of elephant habitat would have been lost to this emerging industry in the 19<sup>th</sup> century.

In post-independence Assam, land demarcated as unprofitable was opened as farmland to accommodate the demands of the landless peasant movement (Saikia, 2011, 2014). Land made available included the remaining marshes southwest of Chakardo (see Das, 1973, via Anon., 2009). Prior to colonial administration, dense rural settlements already surrounded these areas, but the demand for land in the sixties pushed the agrarian frontier right up against the hills, into all the available plains areas nestled in previously uninhabited gorges. Not only reducing elephant foraging space, this transformation also fragmented habitat contiguity in the plains areas and broke connections to other forests to the west (Anon. 2009).

While much of the dramatic deforestation has occurred since the mid-twentieth century, the colonial administration was a watershed in the environmental history of Assam and greater India (Saikia, 2011; Rangarajan, 2014). The composition of the landscape, and of the various multispecies relationships that constitute it, has been guided by colonial surveys which divided up the landscape according to resources of value. The environment has been shaped by a form of modernist governance that increased landscape legibility and control through the demarcation of nature and society (see Scott, 1998). Both human and elephant populations have been settled, limited, displaced, and directed in relation to this emerging spatial order. The construction of field and forest, and hence the fringes where elephants and humans are more likely to encounter each other, has been strongly determined by the region's colonial history and opportunistic exploitation of natural resources (see also Münster & Münster, 2012; Barua, 2014a). Capitalism and state governance have been central to expanding human-elephant interface, and the increasing frequency of encounters.

Communities of trees grow in relationship with humans; the surviving forests of Northeast India continue to thrive in affiliation with, in competition with, and sometimes despite of anthropogenic reconfiguration of the landscape (Karlsson, 2011). However, strictly speaking, we cannot claim that there is an anthropogenic environment differentiated from a non-anthropogenic environment. Rather forests and villages are deeply interconnected places characterised by qualitative differences in species composition and that share varying degrees of human interaction: forests are also spaces of human movement and connection

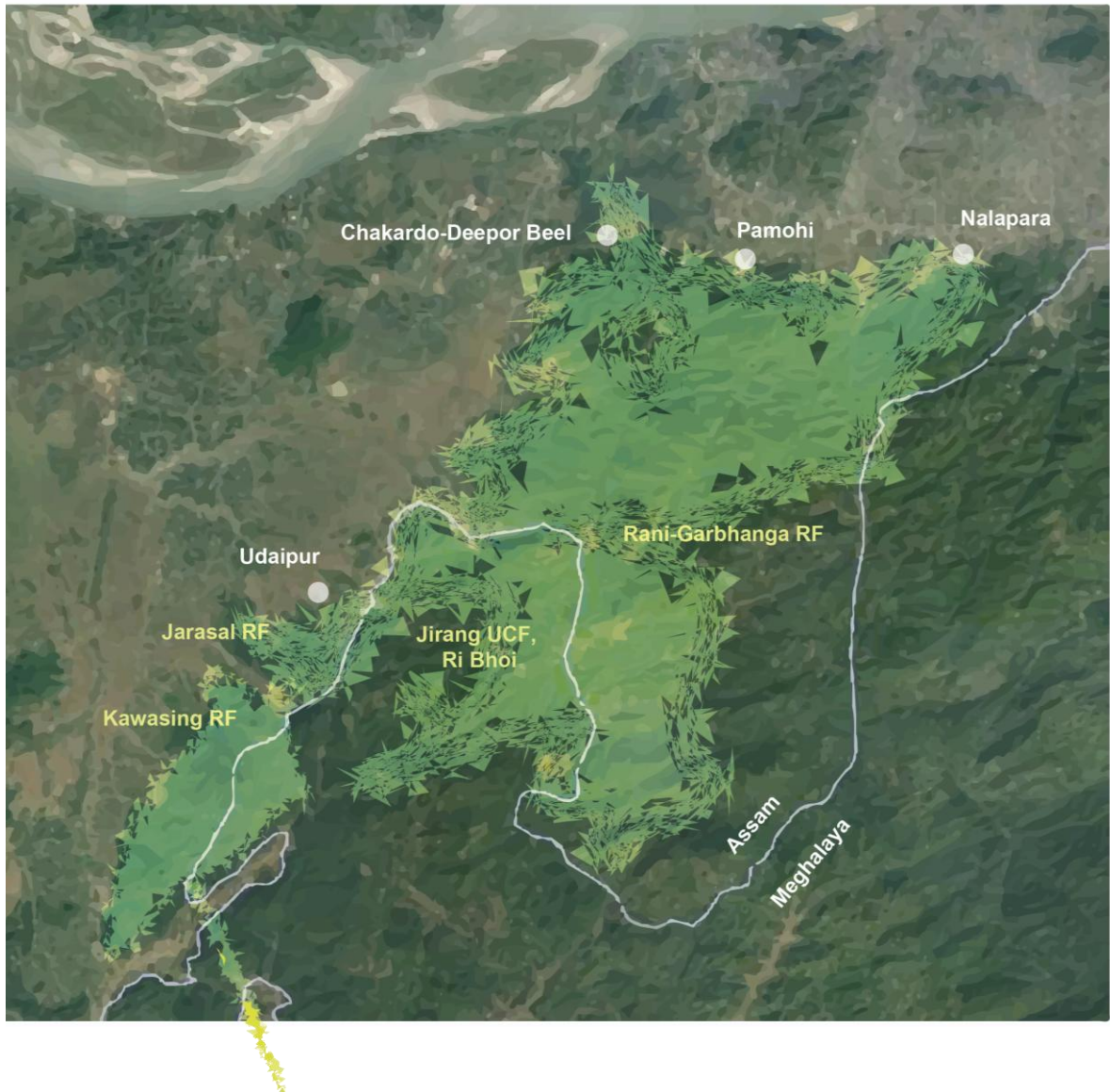
(Tsing, 2005). Nor are any of these ecologies specifically elephant or non-elephant habitat: some of these places support elephant life better than others. Villages also can be sites of elephant connection.

### **Living in a fragmented world**

We have zoomed out from the local level of the village, and the experiences of people confronted by elephants, to a broader historical and landscape level analysis. It was necessary to talk about the spatial relationship between forests and agricultural ecologies because they are important determinants in locating populations of elephants and humans. Elephants are dependent on dense and vast tracts of vegetation, and human lives revolve around domestic plants and animals. These growth of these two ecologies are interrelated, and at certain places, interface. It is at the fringes of forest and village that human and elephant most often cross paths. Landscapes open new ways of grasping interspecies relations, capturing “the configuration of humans and nonhumans across a terrain” (Tsing, 2015a p. 173), and how multispecies communities coordinate with each other over time (Tsing, 2015b).

Non-government organisations (NGO) and conservation biologists studying elephants think along the landscape level, dividing the world into forest and non-forest tracts, elephant and human habitat. Researchers are engaged at this height for several reasons. For instance, maps assist the documentation of forest loss, as well as translating conservation concerns about elephant habitat and conflict for state authorities, whom conservation biologists regularly petition. A second reason, the one that interests this chapter, is that a landscape level analysis is necessary to understanding how elephants inhabit a place increasingly transformed to human-purpose. Elephants live at much larger spatial scales than humans, and they will move not only within, but between forests. GPS tracking of elephants have changed the ways conservationists have understood the environment, shifting from a conservation model that preferred large island natural ecosystems, to a landscape that requires maintaining or establishing connectivity between separate ecosystems (Lewis, 2003; Jepson, Barua, & Buckingham, 2003; Lorimer, 2015).





Map 3: The lighter green area that is embedded in the darker green hill range, and resting flush against the plains of Assam, represents the range area of elephants as estimated by reports of sightings and local expert knowledge. All sides are surrounded by dense anthropogenic environment, except for the south-eastern area within the RGRF, where elephants do not venture. There are some Karbi communities settled in the southern half of the RGRF, but there might be more complex ecological reasons for their absence. In the plains, the land was predominantly agricultural on the western front, and urban edgelands at the northern foothills. In the hilly areas, along much of the southern and eastern fronts of the RGRF, the forests have been converted into broom-grass and other monocrop plantations, amongst other developments that have cleared or heavily disturbed viable forest habitat. The line that extends from the ranging area and juts out of the frame represents the possible migratory lines that elephants may take between other parts of the landscape that I was not aware of.

Nomadic, an individual or herd will remain and forage in a certain area for a short period before moving on to another part of the landscape to feed. A “range” is the familiar place elephants will trace out throughout the course of the year and the entirety of their lifetimes. An individual elephant ranging area can vary depending upon the landscape and available foraging space. Studies in India have recorded an area variation from 34 square km to 800 square km within a year (Sukumar 2003). Elephants demonstrate strong site fidelity; that is, they will return to the same place over their lifetime, and will often travel along familiar paths (see Chapter Four). For an individual elephant, the crop raids at Chakardo or Udaipur, or the jackfruits in the backyard of Mr Robson’s home, only represent a single locale within the larger, familiar range. By following how elephants utilise the landscape, researchers have learnt to understand how elephants construct home ranges, including their decisions to revisit certain sites for foraging, and avoidance of areas that have been significantly disturbed or altered by anthropogenic activity (e.g., Alfred et al., 2012). However, due to deforestation, rich forest habitat is not only reduced but broken up, interspersed with agricultural villages or plantations, in a landscape that researchers refer to as “fragmented”. Elephants range between disconnected forests, maintaining old home ranges or establishing new ones after being displaced. Herds who live in a fragmented world have been shown to travel significantly longer distances searching for food, and in their attempts to construct a viable habitat, must inevitably negotiate with human settlements (Sukumar, 2003; Alfred et al., 2012).

Map 3 is a rough sketch of the current ranging area for the estimated 115 elephants that live in the forests connected to Chakardo.<sup>44</sup> Elephants migrate across three connected, although partially fragmented reserve forests: Rani-Garbhangra, Jarasol, and Kawasing (Anon. 2009), as well as the unclassified state forest of Jirang, in Ri Bhoi, Meghalaya.<sup>45</sup> As explored in the section prior, the limits of this range area coincides with the boundaries of the reserve forest and areas densely modified to anthropogenic purpose. Since this representation was created from my own observations and information collected in the field, it does not include any

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<sup>44</sup> The range area outlined in the map is only a tentative estimation based on my own ethnographic observations: I lacked the equipment, training, logistical support and governmental permission to research elephants with any authority or detail. During my fieldwork, I made occasional trips along the broader fringes of the hills and forest habitat while attempting to grasp the range area.

<sup>45</sup> 115 is only a very rough estimate from a census conducted in 2009 was conducted by the Forest Department of Assam. Due to the jurisdictional limitations of the Forest department, the census did not take into account any populations in the contiguous state of Meghalaya, which I have demonstrated in the map.

data about individual movements, and how different herds utilise different parts of the landscape. A reader should not assume that a single herd will necessarily occupy all parts of the landscape. Among a community of elephants, individual herds will roam through independent range areas, with some expected overlap. Although places like Deepor Beel may represent a nexus point for much of the elephant traffic in the area, since it is one of the largest accessible water sources.

Importantly, this map, coupled with a historical sense of environmental change, helps to understand how the viable habitat for the 115 elephants that currently reside in it has become significantly reduced, fragmented, and isolated compared to the past. Previously, the potential ranging area was extensive.<sup>46</sup> At the time of colonisation up until the sixties, the hills of Ri Bhoi, Khasi, and Jaintia Hills of Meghalaya formed a continuous forest belt densely populated with elephants (Choudhury, 1999). Elephants lived alongside and interacted with a minor number of shifting cultivation settlements and small townships in a difficult and dense, malaria ridden jungle (Briggs, 1866; Stracey, 1967). Currently, infrastructural development, such as highways from Guwahati, together with expanding human settlement and cash crops, have severed large portions of this potential ranging area. The herds who lived in this landscape would have experienced the slow isolation and fragmentation of their ranging area over the last fifty years.<sup>47</sup>

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<sup>46</sup> Scientific studies on elephant ranges and individual herds have only taken place in the last fifty years in elephant habitat already fragmented and isolated. It is undetermined what elephant range areas were like prior, although there is historical evidence of elephants travelling even over the high mountain passes between Northeast India and Myanmar (Stracey, 1991; see also, Chowta, P. & Gautier, P. 2001. *The old elephant route. Aane Mane Foundation Report.*).

<sup>47</sup> A local explanation as to why elephants were more frequently encountered in the fringe villages along the Assam plains, was a blame directed the Khasi people of Meghalaya. Many knew the notorious stories of Khasi hunters in the hills and how they poached elephants for their tusks and their meat. Only a few had actually seen them, stumbling across a camp in the forest where the hunters had butchered the carcass and strung up pieces of salted meat from branches to dry in the sun. The theory was that herds refused to go into Meghalaya because they were afraid of being killed by Khasi. Khasi, like other tribal hill communities in Northeast India were often stereotyped as being voracious hunters, Meghalaya was painted as a place absent of all kinds of wildlife, and people said every Khasi household had a gun. There were strong prejudices regarding hill people, particularly the Khasi of Meghalaya, who were treated with suspicion, and their diet and beef eating habits spoken about with distaste. A more carefully considered perspective on why elephants avoid Meghalaya would call attention to the intense mono-cropping occurring on the fringes of the reserve forest. Further only a few Khasi communities engaged in elephant hunting and eating: the practice was only introduced in the 1980s, possibly by hunters from other Northeast states (Menon, Sukumar, & Kumar, 1997). However, I do not discount entirely this local theory of elephant refuge behaviour, and there may be historical ecological reality to it, aside from what it reveals about social and religious tensions between Assamese and upland ethnic groups.

Within an undivided forested landscape, elephants can relocate to another section when one aspect of their range becomes disturbed; elephants remember and avoid areas that stress them (Jachowski, Slotow, & Millspaugh, 2012). For some populations, however, limited habitat means that herds are confronted and must negotiate with anthropogenic activity. The expansion of the forest-field interface has increased the potential interaction zones in which humans and elephants are likely to encounter each other (Leimgruber, et al., 2003). Elephants are increasingly entering village spaces and are more likely to raid crops than in the past.

The reasons why elephants enter villages to eat fruit or raid rice crops are complex. Reduced and isolated forest habitat, limited access to and degradation of food sources, are all ecological drivers that force elephants to more frequently venture into human-dominated areas and feed out of necessity (Balassubramanian, Baskaran Swaminathan & Desai, 1995; Baskaran et al 1999; Chartier, Zimmerman & Ladle, 2011; Choudhury, 2004; and African elephants: Dublin & Hoare, 2004). However, elephants are not simply passive victims, reactive to changes thrust upon them, but will also exploit their increasing exposure to crops. Optimal foraging theory argues that elephants will purposefully return to villages because of the high nutritional value of domesticated grain (Sukumar, 1994); that is, elephants find rice paddy delicious. Either way, herds form new dependencies on rural villages. Aside from ecological and biological factors, there are individual differences between elephants that determine whether they will engage or avoid humans. The herds of lower status within a larger elephant clan, for instance, are speculated to be more likely to be forced to forage in areas with increased human activity (Balassubramanian, Baskaran Swaminathan & Desai, 1995). Further, only some elephants that range in proximity to villages will leave the forest to raid crops, suggesting more complex idiosyncratic explanations for human-elephant encounters (Srinivasaiah, Anand, Vaidyanathan & Sinha, 2012).

Michael Hathaway (2013, p. 239), drawing from human-elephant ethnographic research in China, frames the animals as active agents in their relationships with people, foregrounding their “desire to explore new places... to seek out particularly loved foods and to experiment with new ones, and to learn their way around new infrastructure.” Elephants have not only been constrained by the landscape changes, but have also responded to them by searching out and augmenting the web of food relations across the landscape that sustains them. The elephant at Nalapara, and the crop-raiding herds at Udaipur, are adapting to the new

fragmented environments and incorporating human-dominated habitat increasingly into their seasonal migration. Elephants, as Maan Barua (2014a) points out, citing Ingold (2011), are not “place-bound” – necessarily tied to the forest – but “place-binding”. The relationships that define their home ranges are increasingly extending beyond “natural” domains, cutting across forest and village.

Of course, elephants cannot inhabit human-dominated habitat on a permanent basis. Their entry into villages is often temporary, in silence and under the cover of night, and akin to guerrilla style raids. When in proximity to humans, even in the forest, elephants are observed to pause and demonstrate “vigilance behaviours” and elephants show signs of elevated stress when raiding crops (Srinivasaiah, Anand, Vaidyanathan & Sinha, 2012). This is experimentally found in cortisol counts in dung (Ahlering et al., 2012), but also commonly observed by farmers themselves. People would note that when elephants were driven away from fields, and prevented access to food, they would sometimes move to neighbouring villages, angrier and more dangerous than before.<sup>48</sup> Some farmers elevated these insights to the elephant’s broader experiential world, empathising with the kind of frustration an elephant must feel when driven out of different places throughout their range. They are adaptive animals and can acclimatise to novel environmental conditions and human disturbances (Munshi-South et al., 2008), but in rapidly shifting habitat, where human encounters are often hostile, stress must be pervasive. This is compounded by the elephant’s memory for negative experiences; African elephant researchers have speculated at the animal’s potential for post-traumatic stress disorder (Bradshaw et al., 2005). Living in a range where anxiety becomes a common feature of elephant existence likely explains their easily provoked and unpredictable aggression towards people.<sup>49</sup> Of course, physiological stress is not necessarily detrimental, but also beneficial as it allows the organism to adapt to changes (Jachowski, Slotow & Millspaugh, 2012). This includes meeting the challenges of living in a range area with high levels of human activity; for example, the heightened excitation levels and ability to drive people away enables elephants to raid crops or temporarily territorialise forest space.

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<sup>48</sup> That the farmers from one village drove off an elephant towards a neighbouring village was a common form of disagreement between people during conflict season.

<sup>49</sup> Elephants who have displaced have been argued to be more distressed and likely to depend upon the easily accessible resources of villages.

Research on human-elephant conflict and elephant ranging behaviour across both Asia and Africa have been not been inclined to conceptualise elephant habitat as including both forest and village spaces (for a recent exception, see Goswami et al., 2014). Alternatively, ethnoprimateologists argue that in the 21<sup>st</sup> Century, human and nonhuman primate habitats increasingly overlap, and researchers need to understand how apes socially, cognitively, and behaviourally adapt to and survive in environments shaped by anthropogenic forces (Fuentes, 2010; Hocking et al., 2015). Hockings and colleagues seek to understand chimpanzees based on their total range of behaviours across the settings of both agricultural and forest spaces. Apes display a remarkable degree of cognitive and behavioural flexibility, which allows them to increasingly exploit and better incorporate agricultural product into their diet (Hockings & McLennan, 2016; McLennan, Spagnoletti & Hockings, 2017). Different crop-raiding chimpanzee groups across different geographical locations also express unique social and foraging behaviours which can be transplanted between places and potentially inter-generationally transmitted between group members (Hockings, Anderson, & Matsuzawa, 2012; McLennan & Hockings, 2014). Asian elephant research has tended not to analyse elephant behaviour at the individual or group-level. The insights of ethnoprimateologists might be extended to human-elephant landscapes. Taking into account elephant's cognitive and behavioural flexibilities, it is possible that the hybrid range area of a single elephant herd is reproduced across seasons by idiosyncratic strategies passed between generations, strategies that have adapted to the socio-ecological conditions unique to that landscape. These foraging routes tie together a configuration of forest and village ecologies, and human-elephant relationships, peculiar to that elephant herd.

The Anthropocene has been described as the end of the “wild”, where concepts of natural spaces and animal lives untouched by human is no longer tenable (Lorimer, 2015). Anthropogenic forces have reconfigured and exploited twenty-first century ecosystems. Colonial and post-colonial society have been significant drivers in the emerging, natural-cultural landscapes in Assam. Elephants, however, are not simply victims of this rapid environmental changes. As an intelligent and creative species, they also are increasingly destabilising and blurring any constructed difference between wild and domestic, incorporating agricultural grain with their diet of forest vegetation, as they move through villages to connect disparate forest spaces. Elephants, despite their decreasing habitat and increasing marginalisation, remain a powerful and dynamic agency, actively adapting to these changes and in turn binding together fragmented forests-village landscapes into new

hybrid, foraging ranges. Their “transgressions” reveal them in the act of “creating their own ‘beastly places’ reflective of their own ‘beastly’ ways” (Philo & Wilbert, 2000, p. 13). The beastly places of the elephant in many cases can no longer be necessarily be defined or isolated to that of the forest or the wild: they increasingly defy our attempts to situate them in these geographies.

### **Failing to tame the wild and maintain order**

The presence of elephants can unfortunately have overwhelmingly powerful and destructive effects on villages. In some places, elephants disrupt the agricultural livelihoods of the rural poor to a point that growing rice becomes almost untenable. Yet, despite the difficulties that arose from crop-raiding, people at my field site were often sympathetic to the elephants’ predicament. Elephants, in most cases, were characterised by villagers as victims of excessive deforestation, lack of space, and diminished food sources.

The condition of forests, as land falling under the purview of the government, was often blamed on the ineffectiveness of the Forest Department and its failure to protect and maintain a suitable habitat. Speaking to Bipul Kalita, a representative of a farmer’s union in Rani that focused on problems of land rights along the fringes of the reserve forest, I asked why the government should be held responsible for the behaviour of wildlife.<sup>50</sup> Bipul argued a view that I had heard expressed elsewhere in different forms: the government was to blame. Deforestation was the main reason elephants entered villages to forage, and the government lacked foresight in managing or addressing the problems resulting from excessive deforestation. Bipul believed there was no proper planning to ensure adequate space and food for the elephants; the Forest Department should be planting trees, such as banana or bamboo, in the forest so that the elephants had no reason to come into the villages. Just as the village must be constantly maintained lest it turns to jungle, the forest also is a place that required proper maintenance in order to protect the integrity of the village.

Another common explanation in Chakardo for the changes in elephant behaviour was that “elephants are no longer afraid of people, because *shikar* is banned.” *Shikar* refers to hunting,

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<sup>50</sup> Rani wing of the national farmers union: *Sangrami Krishak Shramik Sangha*. Bipul Kalita is not his real name.

which could mean either killing or catching elephants. It was common knowledge that elephants avoided certain forest villages in the RGRF, allegedly because people there shot at crop-raiders.<sup>51</sup> While owning a gun is illegal in Assam, the government administered licences to certain persons authorised to kill rogue elephants. The Ram Phukan family, for example, were respected and well known in Chakardo and throughout the nearby communities.<sup>52</sup> For three generations, the Ram Phukans held one of the few licences to destroy rogue elephants in the state.<sup>53</sup> During the twentieth century, the family also held claim to the *mahal* (hunting rights to a specific area) for catching elephants from Pamohi, through to Chakardo, Rani, and as far as Chandubi Beel in the southwest. Regular elephant catching was an interspecies interaction that had existed in this region for hundreds of years, even before the arrival of the colonial administration.<sup>54</sup> In the past, locals said, elephant herds were afraid because older females associated humans with the traumatising capture of their young; for that reason, they made sure to avoid people. Villagers also argued that the elephant population was on the rise because capture no longer regulated herd sizes, and thus elephants had to look for more food (although, it should be noted that the observation that elephant numbers were increasing was incorrect, and likely a perception influenced by the fact that elephants currently keep closer proximity to the village).

The notification of reserve forests by the colonial government, development of strict legislature such as the Forests Act of 1878, and the increased presence and power of forest

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<sup>51</sup> As an example of elephant behaviour in response to guns and hunting: When there were Khasi hunters in the RGRF the mood of elephants reportedly shifted in that area. Informants stated that herds roaring out continuously to each other in the night and elephants were said to be more agitated than usual. Moving through the forest could be dangerous during this time as elephants were more likely to attack a group walking in their vicinity. I was told if a person walked silently, then the herds became suspicious and frightened and would hurriedly move away. Elephants reportedly were able to distinguish hunters, possibly by the smell of their guns and ammunition. The variable response to different people, to recognise the qualities that distinguish them, have also been found in African elephants. In a controlled study, elephants were found to be able to discriminate between two Kenyan ethnic groups: both pastoralists, but one, the Masaai, with a history of violent interactions with the elephants. Elephants could recognise particular cultural groups based on the smell of their clothing and the sound of their language (Bates et al., 2007). In the presence elephants would express more caution. These responses are not necessarily acquired through direct experience but also social learning through the herd.

<sup>52</sup> Freedom fighter and congress politician, Tarun Ram Phukan wrote tales about hunting elephants in Chakardo in the first quarter of the twentieth century (Phukan 1983). The Ram Phukans were seen as patrons and have also been representative politicians for the area.

<sup>53</sup> Rogue' used to entail any individual causing excessive damage to property, including crops, but elephants nowadays were no longer proclaimed by the government, unless they had killed at least several people.

<sup>54</sup> While not specifically at Chakardo, there were petty chiefs based in Beltola to the east, and Rani and Luki to the west who used to engage in elephant capture while under the rule of the Ahoms (Gogoi, 2002).



officials, were methods to demarcate, regulate, and construct strict, new material and symbolic boundaries between the village and the forest (Guha & Gadgil, 1989). Installing modernist divisions, the colonial administration attempted to disentangle people from nature (Barua, 2014a). The interrelationship of peasants with adjacent forests were policed, leading to significant social conflict with the agrarian classes (Guha & Gadgil, 1989; Saikia, 2011). These new borderlines were constructed through survey maps, boundary markers, and inspection bungalows for officials; in some places, the boundaries mapped upon the pre-existing lines that distinguished forest and village. In the reserve forests close to Guwahati, such as the RGRF, the local peasants were not the only ones suspicious of these new forms of authority. The numerous elephants would cause significant damage to boundary mounds each year, and were “probably disturbed by the unusual appearance of the posts, [which were] sometimes knocked out and thrown to a distance.”<sup>55</sup>

Just as the Forest Department controlled how peasants could access forest vegetation, interactions between humans and elephants also became strictly mediated. Catching elephants for royal stables was common in pre-colonial Assam and India; the colonists appropriated these practices for their own revenue and empire building projects (Handique, 2004, Sivasundaram, 2005).<sup>56</sup> Concerns about over-exploitation and possible extinction of elephants, and the administration’s realisation of the value of the animals as a source of revenue and labour, led to the Elephant Preservation Act 1879, which asserted a monopoly over all elephants in the colony (Nongbri, 2003; Saikia, 2011). Elephants were transformed from “an open access resource whose use had been loosely regulated by native rulers and landed classes into an exclusive privilege of the colonial ruler” (Nongbri, 2003, p. 3191). Licences were required to capture elephants, and the Forest Department dictated where and when capture operations could be conducted, serving as another strategy for ordering the landscape (Nongbri, 2003; Barua, 2014a). These regulations were implemented to minimise the effect on elephant population levels, and licences to hunt in certain tracts were given on

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<sup>55</sup> *Progress Report for Forest Administration in the Province of Assam 1879-80*, pp. 26.

<sup>56</sup> Early accounts in 1837 estimated that close to 700-1000 elephants were caught and exported to other parts of the country every year (Saikia, 2011). The administration began leasing tracts of land out to British and Assamese financiers who organised elephant catching operations, all who made small fortunes profiteering from the elephant trade (Stracey 1991; Saikia, 2011). Captured elephants were counted as minor forest produce, revenue also gained from their tusks.

a rotating basis to preserve stock numbers.<sup>57</sup> Killing elephants became strictly forbidden; licences could only be obtained to hunt elephants destructive to crops. Still, under the British, the level of capture reached unprecedented heights.<sup>58</sup> In some sites in upper Assam, forests that herds inhabited for centuries were emptied (Stracey, 1991). The protection of elephants was one of the earliest pieces of legislation dedicated to the preservation of wildlife. The practice of conservation had its roots in colonial control (Ranagarajan, 1996; Saikia, 2011).

Colonial forestry drove an important shift in how people perceived and related to the jungle. Assamese environmental historian, Arupjyoti Saikia (2011, p. 2) writes: “Over the years the wilderness of the forest was tamed and order brought about... Jungle, an erstwhile space for wild animals and ghosts... no more bore a story of unfamiliar and hostile territory.” Taming the jungle was achieved through the scientific management of reserve forests, the creation of ordered plantations, and through the powers that managed the human relationship with flora and fauna. The British administration asserted the need to control nature, Shresth (2009, p. 266) arguing that colonisers believed that “without this mediation by the superior colonial hand, the wilderness would overwhelm natives”. Prior to the Elephant Preservation Act, hunters killed elephants indiscriminately, operating under a policy that was focused on opening the country to agriculture and occupation (Stracey, 1967).<sup>59</sup> Killing wildlife was seen as a pragmatic solution, but also served as a symbolic expression of power and colonial paternalism over the peasantry (Rangarajan, 2004; Shresth, 2009). Further, as a consequence of claiming sovereign right over both elephants and the forest they lived within, the administration became responsible for the elephants that crossed those boundaries and

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<sup>57</sup> Some tracts, such as Kulsi, 15-20km from Chakardo, were purposefully protected from hunting, because they were considered to be good grounds for breeding and potential repopulation of nearby overhunted areas. The British over the years had fostered such an industry that they had difficulty maintaining a utilitarian approach – Elephant catching companies that had formed up around the industry demanded that the same forests were opened each year. The forest department needed to resist unrestricted catching. (*Progress Report for Forest Administration in the Province of Assam 1945-46*, p. 24).

<sup>58</sup> During 1903-1918, 5,029 elephants were estimated to have been captured – a number almost equivalent to the current population in Assam (Saikia, 2011; p. 288). By the early 20<sup>th</sup> Century, forest administration commented that elephants in the major capture sites such as Kamrup, Goalpara, Garo, Khasi, Jaintia hills and Nowgong had decreased greatly and required further regulation. (*Progress Report for Forest Administration in the Province of Assam 1912-15*).

<sup>59</sup> In South India, for example, elephants were found to be destructive to infrastructure and agricultural expansion, and thus revenue: road construction projects and newly settled villages were abandoned because of the pressures of elephants (Sivasundaram, 2005). The British also actively hunted tiger who they framed as pests that threatened the stability of profitable, agrarian frontier (Rangarajan, 2004).

negatively affected humans. Animal protection and their elimination as pests went hand-in-hand under colonial rule (Rangarajan, 2014).

On the fringes of forest and village, the already restrictive and unpopular Forest Department was politically compromised by “the damage done by wild animals to crops, [which] further fuels bad relations.”<sup>60</sup> The Department introduced the Elephant Control Scheme in Assam in 1934-5, reflecting the increasing problems and political pressures resulting from intensified contact with elephants. Elephant catching was no longer solely for revenue purposes but also deployed as a strategy of thinning herd populations and thus mitigating the effect of crop depredation.<sup>61</sup> Elephant herds were caught using large stockades called *keddah shikar*, or they were chased individually and lassoed by *melah shikar*. In the Khasi hills, contiguous to the RGRF, the agricultural and crop protection officer for the region, Lowell Reade, did an “immense service to the people of the rural areas” where elephants were reportedly holding back agricultural development (Stracey, 1967, pp. 28-29). Reade over his career, killed over 200 proclaimed male elephants who had raided shifting cultivation crops.

Despite the capture operations and licenced killings, the conflict between human and elephant continued to intensify. By 1949, when P.D. Stracey had become conservator of forests, he was resigned to the state of elephant depredations on cultivation. Stracey wrote that:

this continues to be a problem which defies complete solution, and it will probably go on being so ... it is impossible to exterminate elephants or completely eliminate damage to the adjacent cultivation, as some legislators expect us to do ... Meanwhile the public must be encouraged to defend their own property and crops.<sup>62</sup>

Stracey’s comments reflect not only the increasing problem of crop raids and damage to agricultural settlements, but also the seeming limits of the Forest Department to manage this relationship. As a political issue, elephant incursions continued to intensify (Barua, 2014a). Further preservation laws, such as the Wildlife Protection Act of 1972, restricted the reasons for lawfully killing elephants: only rogue males who had killed multiple people could be identified to be destroyed. Over the years, both for reasons of elephant control and for profit,

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<sup>60</sup> *Progress Report for Forest Administration in the Province of Assam 1924-25*. p. 17.

<sup>61</sup> *Progress Report for Forest Administration in the Province of Assam 1934-38; 1949-50*.

<sup>62</sup> *Progress Report for Forest Administration in the Province of Assam 1947-48*.

capturing operations continued at a very high rate, likely having a significant effect on the population level in the Northeast (Sukumar, 2011). Although licences for hunting would decrease towards the inevitable ban placed on elephant catching in the late seventies.<sup>63</sup>

I was interviewing a high-ranking member of the Forest Department at his Guwahati office. He asked how local people felt about the problem of human-elephant conflict where I was working. I translated their concerns, anxiety, and anger as stemming from the feeling of being unsupported by the Forest Department. Certainly, in the months leading up to the harvest season, tensions between Department officers on the ground and local villagers had become heightened in some places, especially when elephants were in the vicinity. Defensively, the official retorted that the villagers needed to accept the reality of elephant crop raiding. The Forest Department's position was not to defend the crops from elephants, he claimed. The Department had the budget to play an assistant role; the villagers, he argued, had the necessary skills since "driving elephants was in their blood." I understood the official's defensiveness: the Forest Department was notoriously underfunded and understaffed and in some respects powerless to properly stem the problems of human-elephant conflict in the state.<sup>64</sup> Nonetheless, his claims regarding crop defence as a traditional practice failed to take into account the shifting dynamics of human-elephant relationships, and that within this new climate, marginalised and poor communities were not resourced enough to sever the connections elephants had established with the village.

Villagers took the Forest Department's position as contradictory, a sign of the government's attempts to distance themselves from their mediatory role. People pointed out the Forest Department was active in preventing villagers from cutting down and selling trees, and fined people who caught wildlife that came into their homes. The government exercised their authority over the bodies of the forest, yet were unwilling to take responsibility for the effects caused by elephants. In certain parts of Northbank Assam, for example, negatively affected villagers angrily referred to crop raiders as the "government's elephants." Speaking to a man in Udaipur, he rejected a forest staff member's claim that the department's responsibility

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<sup>63</sup> After the ban, the government still maintained a policy of the occasional elephant capture operation until the late nineties in order to manage the size of elephant populations. Kaushik Barua, who performed the last Kheddah operations in the Garo Hills under the guise of elephant population management considered the process inefficient. The main offending crop raiders were the older elephants, not the younger elephants that were caught.

<sup>64</sup> Further, forest staff could also be the subjects of abuse and occasional violence when agitated communities reacted to the strain of elephants.

towards elephants ended at the forest. This assertion contrasted with a recent event where an elephant was electrocuted in the village: in that instance, the Forest Department was quick to claim and control what happened to the dead body, to remove the tusks, conduct an autopsy, and bury the animal. Further, rural farmers would point out that the concerned response to the death of an elephant, either by the government or the public, reflected a general apathy towards the problems of the rural poor, which barely received any attention, even when a person was killed by an elephant.

Villagers believed forest officers to be generally ignorant, absent, or unwilling to engage with their day-to-day work, let alone defending against elephants.<sup>65</sup> Angry farmers only saw a department whose attempts at mediation were ineffective. For example, speaking about the compensation scheme introduced to refund farmers who experienced losses from crop raiding, people said they generally did not bother placing an application. The compensation process was inefficient, and the department did not have sufficient resources to cover a backlog of debts (Choudhury, 2004).<sup>66</sup> At Udaipur, villagers complained about the broken promise to install a two-kilometre electric fence to block elephants' ability to cross the roads. The fence was never built, due to a bureaucratic and systematic failure of the department. Other failures were considered symptomatic of a general ineptitude in implementing effective solutions. For instance, a woman in Udaipur – whose property ran adjacent to the teak forest – directed me towards a trench that the department had dug that was designed to prevent elephants from crossing the threshold into the village area. She could not fathom what they were thinking: the job appeared half finished, and the elephants had merely found a detour route that now passed directly through her property! The Forest's Department's seeming incapacity to respond with alternative and viable solutions to moderate the pressure felt by the elephants undermined the department's authority.

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<sup>65</sup> The department's presence in these conflict zones were variable, depending on where in the landscape you travelled – at Chakardo for instance, officers were a constant fixture and in recent times more engaged in managing elephants. Yet in other parts of the landscape, such as in Udaipur, the department's presence was notably absent. There was a forest bungalow, but only one casual officer manning it.

<sup>66</sup> Recently the Assam government has increased the compensation for loss of life by three times the original sum, and has promised that the process has now been fast tracked. Press Trust of India. 2016 (11th August). Assam govt to raise compensation for man-elephant conflict. *Business standard* (web edition). [http://www.business-standard.com/article/pti-stories/assam-govt-to-hike-compensation-for-man-elephant-conflict-116081101203\\_1.html](http://www.business-standard.com/article/pti-stories/assam-govt-to-hike-compensation-for-man-elephant-conflict-116081101203_1.html) (accessed 19/12/16).

Anthropologists who have researched antagonistic human-wildlife encounters draw to attention the social dimensions, particularly how wildlife conflict can lead to tensions between different communities (see Knight, 2000). The crisis of human-elephant conflict can be also positioned as a socio-economic and political problem between the rural poor and the state. It is the marginalised farmer who is the most adversely affected by the elephant's behaviour, and from the farmer's perspective, the government is deeply implicated in the elephant's overwhelming agency. The intensified presence of the elephant was the glaring absence of the Forest Department, who were failing in their historically constructed role of maintaining the order that defined and mediated the division between forest and village.

It is important to note that non-governmental organisations (NGOs) have become vital players in managing conflict situations, supporting a resource poor and under-skilled Forest Department. International, national, and regional NGOs such as the World Wildlife Fund for Nature (WWF), the Wildlife Trust of India (WTI), and Assamese NGO, Aaranyak, are funded by international charities and other bodies, notably the United States Wildlife and Fisheries Service. While no major NGOs were actively present at my fieldsite grappling with the problems of conflict, these organisations generally would work closely with the Forest Department to design or implement solutions or mitigation practices for human-elephant conflict situations in other parts of the state. Conservationists were primarily concerned with conflict because of the problem of elephant deaths when farmers retaliated under intense pressure from crop raiding. To deter elephants from entering village space, the organisations dug ditches, raised electric fences, notification systems, installed high-powered searchlights, amongst a collection of other strategies.<sup>67</sup> Fringe-dwelling human communities were trained in alternative livelihoods that diverted them from entering elephant-inhabited forests to collect wood or other forest resources. Conservation solutions focused on reinforcing the boundaries between forest and village, keeping human and non-human separate. Preventing conflict was often informed by a model of conservation ecology that situated humans and elephants along a nature-society dichotomy (Knight, 2000), and aspired to create natural, wildlife habitat free of human agency. These spatial orderings overlapped with the governmental model of reserve forest and village, and conservation groups were often dependent on the same exclusionary powers.

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<sup>67</sup> Fernando, P., Kumar, M.A., Williams, A.C., Wikramanayake, E., Aziz, T. & Singh, S.M. 2008. *Review of Human-Elephant Conflict Mitigation Measures Practiced in South Asia*. World Wildlife Fund for Nature.

Elephants for villagers are animals “out of place”, disrupting material and symbolic differences between forest and village (see Knight, 2000). While the dichotomy of forest and village has its own cultural history and meaning in Assam, these meanings have been augmented through the colonial and postcolonial governance and protection of natural resources. State practices of creating places of exclusion, constructing and controlling the line between human and nonhuman, village and forest, has shaped people’s understanding of where elephants should be, how they should be behaving, and who must manage them when they threaten to overwhelm the village. As geographer Maan Barua (2014a, p. 925) argues, the relations between humans and elephants in Assam “reflect how modernist legacies are inherited and... internalised by postcolonial subjects.” While herds have raided crops throughout history, we should be careful not to necessarily conflate reports of their incursions into villages with what is called “conflict” today. Conflict is not simply the antagonism that arises between crop defenders and raiding elephants, but is a relationship that has been shaped and interpreted within a specific historical and political context.<sup>68</sup>

Identifying intersecting state, agriculturalist, and elephant actors, and their respective and interrelated place-making activities, is useful for thinking through the conflict and the shifting human-elephant relationship in the 21<sup>st</sup> century. Comparative examples from other landscapes, might express variations of these dimensions under differing historical, social, political, biological, and ecological conditions. For instance, African elephant-ranging states

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<sup>68</sup> Finally, in India, the colonial administration appropriated forms of wildlife relations and management that were already in place under local kings, including catching and driving out elephants (see Sivasundaram, 2005, on South India). More than simply characterising British environmental rule as a crude, modernist imposition onto the Indian socio-ecological landscape, we might also consider how the colonial government inherited a deeper material and political history that demanded their role in maintaining civilizational order. Untrained, forest-roaming elephants simply are too large and resource demanding to share human-dominated space. The exclusion of wildlife, notes Knight (2000, p. 6) is a common theme in various cultures: agricultural and human settlements in general are “predicated on the environmental displacement and territorial expulsion of other large mammals” (see also Richards, 1993; Marks, 1976/2005 on elephants in Africa). Driving out or killing threatening wildlife was seen in some communities as the social and political duty of certain members of society (Knight, 2000).<sup>68</sup> In the *Matanga Lila*, an ancient Sanskrit text on science of elephants, the origin story of the first domestic elephant began with a king responding to the pleas of his subjects to stop elephants destroying their crops (Edgerton, 2010). The first elephant catchers, trainers, and drivers were a creation of the gods who perceived “that the world was wholly oppressed by the elephants with their vast bodies, spirit and might, and with their fierce power” (Edgerton, 2010, p. 109). Prior to British rule, earlier forms of mediating forest and village by petty chiefs and local landholders in Assam was to drive out elephants from farmer’s fields, or capture them, with trained elephants called *koonkis*. *Koonkis* were previously forest-dwelling elephants themselves, caught and trained specifically to engage their non-captive cousins (see Chapter Five). Elephants augmented the capacity for humans to intimidate crop raiders who ventured in the village.<sup>68</sup> The formation of a domestic relationship with mahouts, is a case of the wild being tamed, appropriated and turned in on itself. The world was inhabitable, or at least could be cultivated and settled, with the suppression of elephant power.

share similar histories of colonial land governance, although the establishment of wildlife parks emerges from elite hunting reserves, private land ownership, neoliberal wildlife tourism, conservation lobbying, and cultures of apartheid (Spierenberg & Wells, 2006; Cousins, Sadler & Evans, 2008; Garland, 2008). African bush elephants can have ranging areas ten times that of Asian elephants, a social and behavioural adaptation to the savannah ecology (Sukumar, 2003), thus tying together hybrid landscapes at a scale larger and more complex than that of Assam. As a case study, Amboseli National Park would serve as a fruitful comparison, the protected area's initial notification excluded the Maasai people from traditionally used pastoralist lands (see Browne-Núñez, 2011; Kangwana & Browne-Núñez, 2011). Consequently, if wildlife roamed outside of the park boundaries and killed livestock, the Maasai would retaliate by killing animals within the park. This conflict was interpreted as an act of vengeance against park authorities, rather than against the animals themselves (see also Kamau, 2017 for another example of elephant resentment). For the last twenty years, NGOS and elephant researchers have deployed various mediatory techniques to limit retaliatory spearing, increase tolerance for elephant border transgressions, and enable the confident expansion of elephant range areas (Browne-Núñez, 2011). The problem of conflict is an ongoing negotiation between these actors, a pattern of relationships that can emerge under different conditions and be expressed in different forms.

## Conclusion

This chapter has been an introduction and overview to the shifting human-elephant relationships and landscape of my fieldsite. Both species lived in an environment characterised by rapid ecological change and were put into uncertain relationships with each other. To contextualise the human-elephant relationship at the village, the analysis has shifted between current and local experiences, to a historical and landscape level. While this chapter concentrated on a human perspective, understanding the broader context also enabled us to gain some insight into elephant's experience of having to construct a home range in a fragmented landscape.

From Udaipur, to Chakardo, to Nalapara, the ranging area for the herds of the RGRF was multi-faceted, as they had to adapt and learn to live with a varied human population, in different ecological conditions, with different attitudes and histories of interaction. Overall, the shifting topography of interspecies configurations across the landscape, found elephants



more often in contact with the socio-economically marginalised. At my field site, the impoverished rural villager, those people still dependent upon agriculture and forest resources, were most likely to cross paths with elephants. The ecological transformation occurring in the Anthropocene adversely affects certain species, and certain people, more than others (Crate & Nuttall, 2009; Cassidy, 2012).

Understanding this interspecies relationship required attending to the ways in which stricter boundaries were constructed in response to the elephants increasing transgression of the material and symbolic lines that separate forest and village. Marginalised farmers attempted to reinforce the difference between human and elephant place by driving elephants out from the fields. To control the overwhelming uncertainty that elephants came to represent, people also called upon the powers of the Forest Department who had historically constructed themselves as a mediatory body. In general, the State has been a powerful figure in determining conditions under which humans and elephants encountered each other. While the current human-elephant relationship is often regarded as an ecological problem, it could also be interpreted as a manifestation of the failures of colonial modernist governance. Conflict has emerged from the compartmentalisation, control, and commodification of the environment. Further, the elephants' persistent incursions into the village reflects the state's incapacity to maintain the established order that had been constructed and that have sought to determine ecological relations over the last two hundred years.

For elephants, like the poor farmers they were entangled with, Anthropocene could be a time of uncertainty and stress. Speaking about displacement, memory and loss of home, Owain Jones (2015, p.10) reflects on how "landscapes are always made up of losses, absences and presences." The dense sal forests were only a memory in Chakardo, rural life was transforming, and people like Mr Teron had become displaced without having been relocated. While we can only grasp imperfectly the experiential world – the *umwelt* – of other animals, and their meaningful relationships with place (van Dooren, 2014a), what we know about elephant cognitive and behavioural capacities would indicate these animals do have some understanding and memory of the shifting horizons of their home ranges. Elephants demonstrate a remarkable memory for place. Some translocated elephants will travel hundreds of kilometres to return to their original, home range (Fernando, 2012), and elephants can, under certain circumstances, return to a place they had not frequented for

decades.<sup>69</sup> Perhaps the Anthropocene for the elephant is also composed of absence and presence, fragmented familial relations, dislocation from prior ranging areas, and the new and stressful challenges of having to negotiate living closer to humans.

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<sup>69</sup> Not all elephants are the same. Fernando and colleagues (2012) reported three types of translocated elephants: homers, wanderers, and settlers.





I prostrate myself before you, O Ganeshvara

Your icon is a hallowed charm

That assures fulfilment of all desire.

With the fanning of your broad ears,

You scatter away all obstacles,

As though they were weightless as cotton

From the 12<sup>th</sup> century South Indian Sanskrit text, *Mānasollāsa*, quoted by Royina Grewal (2012) in *The Book of Ganesha*.





Figure 2.1: An offering of rice, banana, and painted vermillion on trunks for Ganesh.



Figure 2.2: A domestic elephant, named Babul, feeding close to a site of worship for Ganesh (foreground), at the entrance to the Rani-Garbhangra Reserve forest.





## Chapter 2:

# Feeding hungry gods

Kaliya Boro, ex-*mahout* (elephant handler) and now farmer, recalled an encounter with an elephant in the village of Chakardo. A bull elephant came out of the forest in the early evening and was loitering around homes, looking for some seasonal fruit to eat. What followed that night was a series of advances and retreats, as the elephant was driven back into the forest by the neighbourhood men several times. The male would wait behind tree cover for a while, and once people had returned to their homes, he would quietly descend again to have another swipe at the ripened jackfruit.

Although I was not present on that occasion, I accompanied the local men numerous times to assist with warding elephants in the village. The men were usually armed only with three-cell torches and blood-curdling yells to intimidate the animals. With male elephants, the men must keep their distance; while rarely intimidated, elephants can be provoked to aggression and will charge, or at least threaten to, with trunks rapping loudly against the ground and ears flared. Sometimes the elephant would leave with little resistance; other times it took some effort. Generally, the animals would eventually submit, with people directing them back toward the path from which they descended. Villagers closely observed signs of weakness in the elephants' response. When the animal conceded, the men, sensing victory, would charge as one, yelling and screaming, sometimes laughing, as the elephants turned tail and hurriedly returned to the cover of forest. Occasionally frightening, often frustrating, these engagements were also enjoyed by the men, providing for occasional displays of machismo, and experiencing the adrenaline and excitement of chasing animals much more powerful than humans.<sup>70</sup>

Kaliya thought that he had finally driven the bull back, but, strangely, around six in the morning after the sun had risen, the bull elephant returned, this time visiting his home. I think that Kaliya at this point was probably both exasperated but also wondering what he

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<sup>70</sup> Occasionally, groups of young men tested their bravery by seeing how close they could get to an elephant, a provocative practice I was never comfortable with, physically or ethically. I also attempted to take representations of haathi as Ganesh seriously to respect the community.

had done to cause the elephant's persistent attention. At that moment, Kaliya explained, he finally understood that this was Ganesh. The elephant was standing by the entrance to his compound, and Kaliya emerged from his home and pleaded with the lone bull, asking why he continued to return. Kaliya did not address Ganesh with spoken words, but "in my mind," he said. He internally announced that he had not harmed the god during the evening, and that as a farmer he always left the elephants a portion of his rice paddy to eat during harvest season. Considering this, why had Ganesh come to disturb him again? After he conveyed his thoughts, Kaliya tells me, the elephant simply returned to the forest.

The forest that bordered Chakardo and other fringe villages were home to a variety of other animals, including leopards, deer, porcupines, and gibbons. They were all subjective beings, with points of view, desires, and intentions, and each animal had varying degrees of social sophistication attributed to them. Elephants were animals of the forest also, but were considered exceptional, and were not spoken about in a manner equivalent to other nonhumans. They were admired and acknowledged for their remarkable intelligence and social complexities, but were also beings communicated and engaged with through relational modalities that escaped other animals. The elephant – or *haathi*, in Assamese – possessed divine personhood and supranormal powers of perception. To live in the vicinity of elephants was not only to encounter an animal that would occasionally damage a person's property, but also a being who could hear what was said about them at great distances, perceive whether a person was morally good or corrupt, and find and punish those people if necessary. Haathi, for many, was the manifestation of Lord Ganesh, a creature who was both animal and god, and like the elephant headed deity, occupying a category unto its own (Berntson, 1988). The forest-roaming incarnation of Ganesh, however, was considerably more frightening than the approachable form that he often takes in popular Hinduism, where he is the most loved of all in the Hindu pantheon (Dwyer, 2015).

Various ethnographies have explored the relationship of Hindus and deities, particularly through modes of worship (Babb, 1970; Mearns, 1995; Jhala, 2000; Fuller, 2004). However, fewer studies have investigated how communities engage Hindu gods in their earthly and nonhuman animal manifestations (for exceptions, see Haberman 2010, 2013; Gandhi, 2012; Peterson, Riley & Ngakan, 2015). Studies of Ganesh have largely neglected the role of actual elephants in worship, even as a symbolic figure (see for instance, Brown, 1991). Locke's (2016b) research on the elephant as animal, person, and god is a rare ethnographic account

that has attempted to understand the dynamics of what it means to live with a divine being, and how reverential attitudes give shape to their interactions with a living, breathing god. I will employ Locke's framework of "relational modalities" to make sense of how people like Kaliya engage elephants as both animals and gods. Relationships with elephants at my field site bared some resemblance to human-nonhuman interactions found within the animist literature on the peoples in the Americas and circumpolar region, where animals can be persons and can engage humans as social agents with complex intentions (e.g., see Vivieros de Castro, 2004; Descola, 2013). This chapter will employ animist examples as comparative case studies to highlight differences and similarities in relational dynamics.

Forest-roaming elephants pose a different problem in understanding the relationship with a deity because the dynamics with humans can be dramatically different compared to an image in a temple or with a trained elephant. Living with a "living god" (*jiwa debotah*) was difficult, a farmer told me once: they are unpredictable and dangerous and can negatively affect the lives of those who live alongside them. This material potency shaped the kind of being Ganesh was, and how and why individuals negotiated with him. In this chapter, I will extend anthropological and religious studies insights on worship in Hinduism to make sense of the ways in which farmers and other individuals attempted to manage their relationship with these animal gods. I will look at offerings as an attempt to establish a mutual, but not mutually obligated, relationship with elephants. Villagers believed that religious gifts and practices more commonly seen in temple worship, could mitigate the negative and destructive effects that resulted from sharing place and space with these awe-inspiring beings. Gift-giving relations and the moral agency of elephants give new insights into the dynamic of human-elephant conflict in India.

### **The potential to be a god**

Several times a year, herds would linger in Deepor Beel wetlands past daybreak, and persons from Chakardo and nearby villages enjoyed observing the large animals as they interacted socially: frolicking, bathing, drinking the water, and feeding on the aquatic plants. People would while away the time with friends for hours, sitting on the banks of the wetland, gazing at the elephant herd, discussing how they interacted, marvelling at their beauty, and pondering what the animals might be thinking. Some days, Deepor Beel was teeming with

visitors, with carloads of people, even from Guwahati, coming to witness these charismatic nonhumans.

On one occasion, a man threw a stone at a nearby elephant – not directly at him, but close by. For some reason, people decided they needed to pressure the elephant to move towards a different spot in the wetland. This exchange soon became a game for many, and others also began hurling rocks. A young man became overly excited and lobbed one too close to the elephant; the elephant was not bothered, but everyone chastised him for it. An older gentleman nearby stepped out of his car with his wife, and walked up to the bank yelling out at everyone in response to the general stone throwing: “You can’t do that! You can’t!” He turned towards the elephant, placed his hands together to his head in a gesture of prayer. He then reached into his pocket and pulled out a mobile phone which he aimed at the elephant, taking a photo. Observing from behind, perhaps every second member of the thirty-odd onlookers had their hands raised, not in prayer but clutching small phones, attempting to catch a picture of the herd in the distance.

One afternoon, Amiya, a professional videographer visiting to film the elephants for a music video, noticed me closely attending to what people were doing. He leant over and gestured towards the crowd, drawing attention to their response, and told me that as they watched the elephants they were “thinking about Ganesh. Even me, when I see an elephant, I do like this...” Amiya touched his forehead and then his chest, a reverent gesture of acknowledgement for the deity. I admitted to him I was puzzled by the contrast between the elephant as a photographic spectacle for this thronging crowd and as a figure of reverence. Amiya replied that people did not often get to see wild animals, and that it was unusual for elephants to emerge so close to the city. The possibility, and seeming contradiction, that an elephant could be both animal and deity was a concept I struggled with throughout fieldwork.

When I asked someone how elephants were associated with Ganesh, people often framed the reply with the origin story of the deity. Variations of the story exist, although the common account is that the deity, Parvati, was left alone by her husband, the wandering ascetic Siva (for other variations, see Grewal, 2012). Parvati desired a son and so created Ganesh from her bodily fluids. Many years later, Parvati asked her now adult son to stand guard in front of her chambers as she bathed. Siva, at that point, returned home and was confronted by Ganesh, neither father nor son aware of their filial relations. Siva, angered at being prevented from seeing his wife, promptly cut off Ganesh’s head. A furious and inconsolably upset

Parvati demanded that Siva return her son. Her husband obligingly sent his *vahana*, the bull, Nandi, to the forest with instructions to decapitate the first being he came across. Of course, the bull encountered an elephant. Nandi then returned the head to Siva so that he could place it atop Ganesh's headless body. The hybrid figure of Ganesh, his head drawn directly from an animal, suggests that he shares both a divine and earthly status (Alter, 2004; Dwyer, 2015). The origin tale expresses what Courtright (1985) considers to be the ambivalent qualities of Ganesh, a being that straddles the threshold of two worlds (see also; Berntson 1988; Doniger, 1989). Ganesh, being both the creator and destroyer of obstacles, is among the most approachable, yet most powerful deities in the Hindu pantheon, and must be honoured before any new venture is undertaken.



Figure 2.3: Ganesh temple in the suburb of Ganeshguri. One of the several main Ganesh temples in Guwahati.

Hindu cosmology envisions a universe filled with wondrous anthropomorphic and zoomorphic agents (Krishna, 2010; Olivelle, 2013). A variety of nonhumans are represented as the *vahanas*, the vehicles of deities: Nandi is the bull that Shiva rides, Ganesh sits atop a rat, Saraswati rides a swan, and Indra mounts the great elephant, Airawata (see Doniger,

1989; Krishna, 2010). Vishnu, one of the powerful Hindu triumvirate, has had nine previous incarnations, several of them in animal forms, such as a boar, a fish, and a tortoise.<sup>71</sup> Vahanas, avatars, and other beings affiliated with deities are often identified by Hindus as extensions of their divine partners (Doniger 1989; Haberman, 2013). In mythology, animals can reveal themselves as “more than merely animal,” as was the case in the story of Gajendra, lord of the elephants, who was in a prior life an ascetic King, cursed to rebirth in animal form (Nelson, 2006, p. 188).

In South Asia, animals, plants, as well as inanimate things can sometimes be respected as manifestations of deities, specifically those nonhumans closely related to zoomorphic mythological figures. Temple visitors will tolerate and feed rhesus macaques who inhabit temple grounds, perceiving them to be incarnation of the monkey god, Hanuman, faithful devotee of Lord Ram (Southwick & Siddiqi, 2011; Gandhi, 2012; Govindrajan, 2015; Peterson, Riley & Ngakan, 2015). Nelson (2006) recounts a fantastic report in the newspaper, *The Deccan Chronicle*, about a monkey, who, despite the best attempts by the organisers of a public event to shoo away the pest, ended up behaving in such a manner that the audience agreed they must be in the presence of Hanuman. In this example, what was initially considered merely an animal, revealed himself to be a deity. Certain kinds of trees, such as the pipal, banyan, and neem tree, are often worshipped as manifestations of, or intimately connected to deities, and devotees will interact with them as having personhood (Haberman, 2010, 2013). Large rocks also can be marked as present with the divine and must be approached by Hindus in an appropriately reverential manner. Of course, the great river Ganga is worshipped as the goddess in her earthly form. Other animals may not be perceived as manifestations of deities, but are nonetheless respected and considered as embodying divine power due to their affiliation with god. The mouse, for example, who is the vahana of Ganesh, was never killed or actively removed from the home where I lived. To have the mouse at the home was considered a blessing. By not chasing the mouse away, appropriate hospitality was shown, and people believed that Ganesh would be pleased by the respectful treatment.<sup>72</sup>

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<sup>71</sup> Nanditha Krishna's (2010) book, *Sacred Animals of India*, details the large number of animals sometimes revered and often associated with the sacred texts.

<sup>72</sup> Although in the house I stayed in prior, they would kill mice.

Aside from cows, elephants are perhaps the most popularly revered animal in India. The most common example of elephants being worshipped is the practice of temple elephants, found especially in the southern states such as Kerala, Maharashtra, and Tamil Nadu. Individual elephants, in some cases, have become superstar deities and will parade for huge appearance fees. For instance, at the Vinayaka Chathurti festival in Tamil Nadu, a celebration of the birth of Lord Ganesh, handsome tuskers are adorned with golden costumes and put on display (Fuller, 2001).<sup>73</sup> These popular festivals are a recent phenomenon, and the celebration of elephants in this manner has become a widespread spiritual and cultural practice, endorsed by religious and political institutions (Fuller, 2001).

Ganesh worship in Assam was comparatively less significant and extensive than in South India. The identification of elephants with Ganesh in Assam was not celebrated and authorised in public ceremony or temples.<sup>74</sup> Nevertheless, the elephant commanded reverence from many people, in urban and rural areas alike. I mostly encountered worship of elephants, not at religious occasions or sacred sites, but during impromptu moments when an elephant, together with her or his mahout, walked through the streets of Guwahati, or in the towns and villages close to my fieldsite. Working elephants have long been a common feature of Assamese society. Many people still own elephants, a sign of wealth and status (Saikia, 2011), and some even keep the animals within the city limits. On the forest fringe where I worked, several elephants were kept on a nearby property belonging to Kaushik Barua (see Chapter Five); these animals would often pass through neighbouring villages to collect fodder to eat. Their presence would draw the attention of curious onlookers and devotees alike. Opportunities to worship were impromptu: small “hasty rituals”, gestures and practices not based on any formalised system (see, Descola 1996, see also Haberman, 2010). Upon viewing an elephant, some persons briefly halted what they were doing to raise

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<sup>73</sup> See, for example, Romig, R. 2013 (14<sup>th</sup> August). The Hard Life of Celebrity Elephants. *New York Times* (web edition). [http://www.nytimes.com/2013/08/18/magazine/the-life-of-celebrity-elephants-in-india.html?\\_r=0](http://www.nytimes.com/2013/08/18/magazine/the-life-of-celebrity-elephants-in-india.html?_r=0) (accessed 29/08/16).

<sup>74</sup> There was only one occasion in Assam where I witnessed an elephant attached to a Hindu festival, and who became a focus of worship by devotees. During Ganesh Chathurti, a major Ganesh festival throughout India, the first day attracted long lines of devotees to the Ganesh temple in Lataasil. A local group, hired out an elephant for the day and accompanied her as she led a gathering, which I joined, through the winding backstreets close to the temple. Residents were waiting in the streets to offer food to the elephants, and money to the mahouts. Adults offered gestures of reverence and parents guided their children on how to salute haathi, hands pressed together clasped in prayer. The elephant was not attached to the temple on a permanent basis and returned to work the next day.

their hands together in prayer and greeting – *namaskar* – or find the chance to offer the elephant some food.

The strength of a person's association of an elephant with Ganesh was inconsistent across people I encountered in Assam, and cannot necessarily be correlated with social or religious identity. I witnessed Muslims give offerings of food to haathi, spoke to two Hindu priests from the same temple and village who had different opinions about whether the elephant was a god or not, and listened to a story about a Christian Baptist who believed that the animal had supernatural powers. While some people argued that Ganesh had a merely allegorical relationship to elephants, I found that the people I questioned in Chakardo and other villages settled on the fringes of the forest were more likely to assert that elephants literally *are* Ganesh – a living incarnation of the god. Mearns (1995) and Fuller (2004), for instance, found similar divisions in beliefs regarding the status of *murti* (images of deities) in temples, whereby some people regarded murti as merely symbolic or a referent to a transcendent being, and others made “no absolute distinction between and image and its corresponding deity” (Fuller, 2004, p. 61).

Yet, even amongst my informants, it was difficult to achieve a consensus about who elephants were and how to interpret their capacities. Very few people asserted that elephants were just animals; although, opinions could be divided as to whether they were exceptionally intelligent animals, or whether, unlike other animals, they possessed supranormal powers. Some others also would claim that haathi was not a god in-itself, but suggested there was a strong connection between the elephants and the presence of Ganesh. For these people, the proper treatment of elephants was believed to be pleasing to the deity. Finally, for the many who believed that elephants were gods, there was nonetheless potential for debate as to their precise ontological status. For instance, haathi were often referred to as “god-like” (*debotah nichina* or *debotah boshtu*). In this case, elephants could be regarded as a manifestation of the divine, a god in their own right, but not necessarily Ganesh.<sup>75</sup> However, I generally found that people were comfortable moving between the position of the elephant as god-like, and

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<sup>75</sup> Haberman (2010) found in his research on the worship of the neem tree, and the tree's identification with a goddess, that the tree was not necessarily the manifestation of any particular goddess in the pantheon. Some believed the tree to be Durga, but others simply referred to it as “Neem Mother”. Another option for understanding an elephant's divine status is that they are gods in themselves, without a direct association to Ganesh.



the elephant actually being one of Ganesh's earthly incarnations.<sup>76</sup> An exact and consistent position was not possible to pin down even within a single community, and possibly reflected the ambivalence and ontological liminality of a being constituted by both the earthly and the divine.

One morning I was visiting various roadside stores in the neighbourhood of Pamohi, speaking to shopkeepers about why they gave food to passing working elephants the day earlier. One woman, a tobacco vendor, simply told me that she gave elephants food because they liked it, just as they enjoy having oil rubbed on their foreheads. She then went on to explain that all elephants were connected by the same soul: if one elephant had good feelings about a person after receiving food from them, so would all elephants, and thus so will Ganesh. Divine agency was both transcendent, and simultaneously manifest in the life of all individual elephants. A forest-roaming elephant, a human-partnered, domestic elephant, and a murti in a temple, could all be identified as the incarnation of the same deity, despite taking on a different form, having different behavioural responses to people, and being present in multiple places simultaneously. That Ganesh or other deities can have innumerable forms but still be "one" was a common theological truth understood by my Hindu informants.<sup>77</sup> This understanding reflects the Hindu cosmological position that *atman* or *Brahman*, the eternal self or soul, is manifest within every living being. Organisms will live and relate to the world according to their nature and personality, yet all are manifestations of the one ultimate reality and divine substance (Haberman, 2010; see also Locke, 2006). This relation to the divine reflects the belief that Ganesh can be both a transcendent deity while also immanent in and expressed through the habits and behaviours of individual elephants. The various earthly and embodied forms of deities are the all equally channels by which people can establish intimate connections with gods (Haberman, 2010).

A cosmology that asserts an underlying unity that transcends difference logically challenges any rigid distinction separating human and nonhuman beings (Doniger, 1989; Nelson, 2006). Humans and nonhumans are all expressions of the divine and share the same divine potential. Ecological interpretations of Hinduism have stressed that the innate understanding of interrelatedness and interdependence encapsulated by Hindu philosophy demands a

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<sup>76</sup> Some people would lend haathi the honorific title often reserved for elders, "Haathi baba" or "Ganesh baba".

<sup>77</sup> The logic of Karma and reincarnation also predicts that all humans were once animals, and likely all animals were once human.

reverence for all living things (Robinson & Cush 1997). In previous lives, people may have been animals, their souls translated across these reincarnations, and so technically all animals are potential humans and can ascend the hierarchy of being. Yet, in Hindu cosmology, where gods, humans, animals and other beings are minutely differentiated in kind and then ranked, animals are represented as lower on the hierarchical scale (Nelson, 2006). Generally, in day-to-day practices, Hindus do not necessarily have a high estimation of the moral or cognitive capacities of other life forms compared to humans (see also Michaels, 2003).<sup>78</sup> For this reason, elephants are hierarchically ambivalent due to their status as both animal and god (Locke, 2016b).

Haberman (2013) argues that, in theory, all animate and inanimate beings have the potential to be engaged as divine manifestations, but some beings are more charismatic or contextually authorised than others. Less privileged forms are recognised as merely mundane, earthly things, and treated as such. Some beings, such as trees, rocks, elephants or monkeys, are decorated, or situated in locations, such as temples, that confirm their divine status. These contexts dictate how a person should approach and engage these concrete manifestations as devotees. Outside of designated sacred places, monkeys and elephants might simply be responded to as animals. However, they can potentially reveal their divine personhood or agency at certain moments: as was the case in Nelson's account of Hanuman, and Kaliya and Ganesh at the beginning of this chapter. Although, even when engaging elephants merely as animals, as Amiya noted, people still reflected to some degree on the elephant's divine nature. Peterson and colleagues (Peterson, Riley & Ngakan, 2015) found a similar set of conditions when analysing how macaques are perceived and responded to as sacred in Bali. Macaque sacredness "cannot be viewed through a singular lens; rather, it is multifaceted, deriving from the convergence of multiple factors and contexts" (ibid. p. 74) such as morphology, behaviour, symbols and textual reference, historical connection, spatial location, and interspecies social engagement.

### **From animal to divine person**

Locke (2016b), based on his observations of mahout-elephant relationships in Nepal, notes that some degree of interpretation is required to understand how elephants can have multiple

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<sup>78</sup> The lower beings are more likely to have a duller consciousness, according to Hindu philosophical texts (Michaels, 2003).

ontological states, becoming either animal, person, or god (divine person). Depending upon different contexts and activities, the mahouts would foreground a particular state, which would be reflected in a shift in the person's "attitudinal stance" towards the elephant. When the elephant's animal nature is foregrounded, it is creature lower on the Hindu scale of beings and who is dominated under the mahout's command; when the elephant is a god, the human should approach and venerate the creature in the proper fashion as a devotee. An inversion of the hierarchical dynamics between the two beings occurs, and the mahout adopts a different "relational modality" when engaging haathi.<sup>79</sup> The shift between ontological states and hence modes of relating to the elephant were fluid. Further, the foregrounding of one ontological state did not necessarily exclude of the presence of other. Even when dominating haathi as a working animal, the Tharu mahouts of Nepal always maintain awareness of the being's divine nature: "we ride you as a servant, but we know you are a god" (Locke, 2016b, p. 171).

The story about Kaliya's confrontation with haathi at the beginning of this chapter demonstrated a shift between ontological states and mode of relations: interacting with haathi as animal and then haathi as god. In the first mode, Kaliya initially engaged the elephants through provocation, communicating with them through shouts and flashes of light to impress upon a formidable animal, generally unintimidated by most displays. The torchlights and the yells of villagers generate anxiety and movement, placing pressure on the elephants and provoking them to flee from humans. The social dynamics and channels of communication are crude, and to some degree engaging elephants in this manner can be partly reduced to what might be regarded as a "fight or flight" interaction – apply pressure from this direction, and elephants will flee in another direction, or charge towards you (or on some occasions, do something completely unexpected: see Chapter Three). This kind of interaction requires skill and a good understanding of elephant behaviour: what they can perceive, general psychology, as well as knowledge about how they move through the

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<sup>79</sup> For each ontological state, Locke also assigned a term to describe the different relational modality: domination (animal), companionship (person), and veneration (god). I will use the term "mode of relation", or "relational modality" to highlight the attitudinal stance, forms of communication and approach taken by villagers towards elephants depending on whether they were god or animal. However, I will not reference the assigned terms of domination, companionship and veneration, since I do not believe they precisely map onto my informant's experience, particularly the "animal" mode of relation. Further, it should also be noted, that Locke developed his theory independent of Descola (1996, 2013), who also proposed modes of relations, which he defined as cultural "schemes of interaction, which reflect the variety of styles and values found in social praxis" (1996, p. 89). Descola identifies several modes, including predation, reciprocity, and protection.

landscape. The villagers of Chakardo spoke about elephants as emotional, intelligent, and strategic beings with rich social and affective lives and remarkable insight. Negotiating with elephants can be at times a frustrating battle of the wits, where the animal is agitated or frightened, but also may attempt to outmanoeuvre villagers' attempts to drive them off. Elephants, generally, are often afforded a level of tolerance and respect not given to other forest-dwelling animals, particularly because of the dangerous consequences of excessively provoking them, but also because as god-like creatures, to do so is disrespectful.

The elephant in Kaliya's story persisted in returning, even after the sun had risen. Kaliya was struck by this unusual behaviour. Generally, elephants will not come back after being driven off, and will only appear during the evening and keep to the forest in the daylight. At that moment, Kaliya recognised that the elephant was Ganesh. Just like the monkey who was at first perceived as a pest, and then treated reverently as an incarnation of Hanuman, Kaliya's perception of haathi shifted. The dynamics of the engagement and channels of communication with haathi changed to suit this ontological potential. Kaliya began communicating with words to haathi through an internal dialogue, rather than with shouts and torchlight. The negotiation with the subject became more sophisticated, akin to what might occur between persons. Of course, in this case the subject was a divine, supernatural being, so a psychic exchange was possible. Kaliya engaged haathi with the belief that the nonhuman being was aware of his history of relations with elephants, understood the ritual meaning of offering his rice crop, and that Ganesh could recognise the merit of these acts. Further, foregrounding haathi's divine aspect meant that the hierarchical dynamics had shifted in the relationship. When Kaliya engaged haathi as Ganesh, he took on the role of a devotee and explained himself according to his role within a relationship where he was required to treat haathi with reverence and worship them with gifts. That haathi walked away once Kaliya had made his plea, was confirmation that it was in fact the divine aspect that had visited him.

The shift experienced by Kaliya arose spontaneously within the encounter and in response to the elephant's behaviour. There was no discontinuity or contradiction slipping between engaging haathi as animal and as god. These modes were not necessarily exclusive: divine agency was foregrounded in this case, yet the understanding that haathi was an animal was still present (see Locke, 2016b). I imagine that Kaliya upon meeting the elephant raised his hands in prayer and saluted Ganesh, yet he still expressed caution and maintained an

appropriate distance from the animal, so as not to disturb haathi and provoke the possibility of being charged. People cannot not ignore the real consequences of engaging this formidable and potentially dangerous being exclusively through one mode of relation or the other. If a farmer persisted in engaging an elephant merely as an animal and did not acknowledge and honour its divine nature, then haathi may one day take offence, and the elephant may punish the farmer. Alternatively, if a farmer always treated an elephant as a god and engaged him solely through prayer without keeping distance or defending his crops, he then failed to respect the haathi's nature as dangerous animal, and put himself at risk of being killed or losing all his rice paddy. The creature that Kaliya faced was not solely one kind of being or the other, animal or god, rather an expression of both.

These accounts of elephants occasionally revealing themselves to be “more than merely an animal” bear resemblance to anthropological accounts of animists. A broad interpretation of animism is the experience of living in a world where humans interact with nonhumans who share the traits of personhood, particularly subjectivity and intention (Viveiros de Castro, 1998; Willerslev, 2007; Descola, 2013; Sahlins, 2013). In human-nonhuman encounters animals can demonstrate remarkable insight into human customs and personal lives, and a capacity for meaningful communication and exchange. Thus, the domain of relationships referred to within Western cultures as the “social” extends beyond human-only interactions. In the case of my informants, the deity-devotee relationship with Ganesh can extend to interactions beyond temples and imagery, with divine personhood occasionally manifesting in mundane encounters with elephants.

Among animists, the ontological status of nonhumans as social agents often depends upon their potentiality to be persons. Nonhuman personhood is not consistently expressed or perceived across all human-nonhuman interactions (Howell, 1996; Bird-David, 1999; Ingold, 2000; Willerslev, 2007, 2010; Kohn, 2013). Among the Ojibwa, nonhumans and inanimate things are grammatically included within social and animate categories; however, stones are not always perceived as or engaged with as animate (Hallowell, 2002). Viveiros de Castro (2004) notes that an animal's capacity for social agency is reified in the attribution of a “soul” to nonhumans, but this does not necessarily mean they always engage humans in the manner we would expect of a fully-fledged social agent (see also Howell, 1996). Bird-David (1999) argued in relation to the Nayaka animists in South India, that elephants only revealed themselves as *anna-devaru* (“elephant-super persons”) during certain encounters,

but for the most part, they were only *anna*. Willerslev's work on Yukaghir hunters asserted that his informants attributed no fixed status to nonhumans; nonhumans "move in and out of personhood" depending upon context (Willerslev, 2007, p. 75). For the Yukaghir, especially during hunts which involved coordinating, mimicking, and partially taking on the perspective of their prey, the social agency of the animals was most apparent. However, in other contexts, such as when discussing hunting with local administrative officials, nonhumans tended to be represented as merely objects (Willerslev, 2013). Nonhuman social agency is not a stable quality across all encounters.

Likewise with elephants, the exchange with a hierarchically superior being was not consistent across all human-elephant encounters. The nuance explored in the animist literature, that personhood is a potential and not an ever-present quality, is an important dynamic to consider when attempting to grasp the day-to-day relations of humans and *haathi*. During most of the human-elephant encounters I witnessed, elephants were mainly communicated and engaged with as animals. This status, however, did not preclude the possibility that elephants, on occasion, might reveal themselves as a divine person.

### **Haathi as moral agent**

Like other animals, elephants move as per their own concerns and diets. They remain mostly hidden in the hills, foraging on plant life, shy and distant from the lives of humans. Only occasionally, a person will cross paths with an elephant in the forest, or an elephant will come into a village searching for food. Often a single male enters the village alone, silently creeping in and exploring people's homes. A person may not know an elephant is in their yard until they hear branches breaking, or walk outside to investigate a noise and find a shadowy figure looming nearby.

Sometimes, however, elephant's cross paths with humans in other, intentional ways: *haathi* might come to a person's home for a reason other than food, or purposefully wait on the forest path in order to confront them. At Chutter village, a small settlement in the forest approximately four kilometres walk from Chakardo, I spoke to an older woman outside her home, which was situated on a hill between patches of forest. She was particularly anxious about living close to elephants and described for me how *haathi* would pass near her house in the evening, occasionally feeding on fruit and young coconut trees. Elephants come without making a sound, she said, but even if they disturb you, you cannot get angry at them:

“If you scold them, later on that night, they will come and kill you.” She touched the ground after saying this and lifted her hand to her forehead in a reverent gesture. When she told me about a man who was killed in the forest the previous year, happened upon by an elephant at a river bed, she again touched the ground, leaning in and speaking in a hushed voice. She later mentioned that elephants have big ears, and even if they are not in your direct presence, they can hear you.

Elephants know many things, another person said, informing me that even now as we spoke in their home, *haathi* knew what we were saying. The belief in the elephant’s supranormal capacity to both perceive and understand what was being said about them at times extended into an awareness bordering on omniscience. It was often said, *haathi antar jane*: an “elephant knows one’s heart,” or one’s intentions, and what remains hidden from view. *Haathi* were perceptive of human attitudes, and as powerful beings, their response was sometimes fearsome.<sup>80</sup> Elephants acted vengefully against those who were hostile towards or spoke poorly about them.<sup>81</sup> They were highly discriminating and would seek out and target a single person within a group, or travel across the forest directly to a person’s home in order to punish them.<sup>82</sup> As a result, even if a person had suffered considerable loss to property, getting angry would only provoke the elephant and make it worse. “What can be done?” a farmer asked me with a degree of resignation, as we looked at the remains of his crops that a lone male had silently consumed during the early hours of the previous night.

Alternatively, not talking in a hostile fashion about elephants meant that an agreeable relationship could be established or maintained. One evening, my friend Nripen Teron invited me to his home in Chakardo so he could tell me about a large *makhna* (tuskless male elephant) who had recently used his backyard as a shortcut to the nearby wetlands three nights in a row. This individual elephant often frequented Deepor Beel and the hills of

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<sup>80</sup> For example: A farmer, I was told, for some reason promised elephants visiting Deepor Beel that he had some food to give them, knowing full well that he had none; the herd that evening came via his house when returning to the forest. Upon finding no food, they promptly destroyed his house. In another account: a young man within my neighbourhood (I did not know him) apparently became very angry and abusive when he was chased by wild elephants in the forest. He later became so terrified that the elephants would come to his house and kill him that the man began to worship the elephant-headed Lord Ganesh once a week in order to appease the elephant’s anger.

<sup>81</sup> This might include for teasing, taunting them, saying untrue things about them, or acting cruelly towards them.

<sup>82</sup> Marks (2005) accounts for similar behaviour amongst elephants in Zambia. A crop-raiding elephant was shot, but lay still apparently feigning death. When the villagers came with gifts to the “hero”, the elephant promptly rose and directly targeted and gored the shooter.

Chakardo, although it had been a while since he had passed through Nripen's section of the village. When inside their compound, Nripen kept emphasising that the elephant "did not go near one thing," in particular, refraining from eating a bunch of ripe bananas recently harvested from the family's trees. Nripen's mother, who was also present, replied that the elephant's behaviour could be explained by a Teron family "belief". Nripen clarified in English: "It is our belief that we do not harm elephants, so accordingly he did not harm our things." His mother continued to add that she worshipped Lord Krishna and Lord Ganesh above all other gods.<sup>83</sup> Because of her devout attention to the deity, she believed she had no reason to fear the god-like haathi.

On the third evening, Nripen described for me, the elephant "took advantage of the opportunity" provided by the dark and the loud torrential rain to feed on some of the ripe bananas. Nripen walked outside and climbed on the roof of his house for a better look. I couldn't help but chuckle at how very calm and nonplussed Nripen was in re-enacting the encounter with the makhna. With a relaxed upward wave of the arm and a casual shoo – "hoy! hoy!" – he told the elephant to go away. The makhna gave no resistance, and at Nripen's suggestion, he left the banana trees and wandered off down to the wetland. The ease of the exchange was an example of the family's and the village's ability "to coexist with elephants."<sup>84</sup> Nripen challenged me to go to anyone in the village and ask them if they had "ever rebuked an elephant." He assured me that this was the reason that the village had relatively few problems from the haathi that frequented Chakardo and Deepor Beel. These statements were made against a backdrop of increasing human-elephant conflict (*haathi-manuh xonghat*) in nearby villages, as well as throughout the state of Assam, as regularly reported in the regional newspaper. The claim implied that elephants' unwanted attention and conflict resulted from other people failing to treat elephants – creatures who were both powerful beasts and deities – with the proper respect they deserved. As explained by Nripen's mother, the acknowledgement and worship of the elephant's divine aspect as Lord Ganesh fostered the favourable attention of elephants. In some circumstances the demonstration of an elephant's respect toward a person or a person's property, especially

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<sup>83</sup> Nripen's mother was born to Kalita family, and married a Karbi man. Amongst Kalitas and other non-tribal Assamese, Krishna is the most revered deity.

<sup>84</sup> I suspect that the Karbi inhabitants of Chakardo, felt that they, compared to other ethnic groups, shared this relationship of mutual acknowledgment with elephants, although generally other ethnicities or castes who lived in Chakardo would also make similar claims. Nripen's mother for instance, was not Karbi.



when the elephant made no attempt to eat any home-grown fruit or vegetables, could be interpreted as an intentional visit and a blessing bestowed upon the household.

Proper treatment of and good relations with an elephant could also influence the interpretation of a person's morality. The way in which a person treated an elephant or other spiritually important animals – such as cows, for instance – was often a gauge used to discriminate character. When talking to local farmers across the RGRF about driving away elephants who came to raid their crops, some people would make judgements about others for using excessively harsh methods, such as throwing stones. A similar form of discrimination was present when Assamese informants criticised the Khasi people of Meghalaya on the basis of their diet, which included both cow and, reportedly for some, elephant flesh. Khasi were accused of being dirty and immoral; critics said that if haathi saw a Khasi person, the elephant would try to kill that person. If treatment of elephants reflects a person's character, then chastising, teasing, treating cruelly, and especially killing a haathi was a sign of their low moral worth.

Haathi could discriminate not only simple hostile intentions. A person's prior moral transgressions, or their pious behaviour, explained preferential or damaging treatment by an elephant. I spoke to a Chakardo informant about a report of an elephant stopping at a small private temple in someone's home and saluting it with his trunk; the man responded by expanding with another account of an elephant who walked through the village. Despite a house having a number of easily accessible mango trees, the elephant did not stop to feed. Instead, the animal walked by and went on to forage at other homes. The informant's point was that the elephant did not disturb that home, or its attractive fruit trees, because the family regularly conducted puja and were considered pious. Similarly, Nripen's devout mother claimed that haathi would always bypass their family's crops, despite the farm's highly accessible location close to the forest. The inverse, of course, also held. If person's crops or home was targeted, it might be because of transgressions committed which haathi was somehow aware. The elephants' uncanny capacity to recognise *xutro* (enemies), and their unusual behaviour only towards certain people, was believed to reflect moral comprehension and constitute a morally appropriate response. Indeed, the animals' actions were characterised on some occasions as divine punishment.

In summary, underlying the basic and aspired to relationship between humans and elephants at my fieldsite was mutual recognition as well as mutual non-disruption. The maintenance

of an agreeable relationship required that humans understand they should not unnecessarily upset or disrespect these hierarchically superior and formidable beings, lest the elephants respond angrily in turn. This attitude extended across both the relational modalities that foregrounded haathi as either dangerous animals or as gods. An elephant will reciprocate angrily if hit with rocks, or if he hears a person speaking about him in a hostile manner. Each case was taken to be an example of disturbing haathi and provoking retaliation. There were other animals that similarly demonstrated complex interactions with humans: snakes and monkeys were said to be capable of revenge, and dogs could also interpret a human's hostile intentions, but none were attributed with the insight and omniscient presence of haathi. Even when they were not immediately present, elephants were always on some level oriented to what people said about them.<sup>85</sup> Generally, people always spoke about elephants with caution, even from great distances, and living alongside these dangerous beings meant that people needed to learn to modulate their anger and maintain a suitable level of tolerance and respect for this sacred being.<sup>86</sup>

In Assam, for the most part, elephants did not necessarily orient their behaviour according to how humans saw the world: their perspectives did not align. For instance, elephants and humans were attracted to jackfruits, both perceived it as delicious, although the elephant did not recognise that it could belong to a person. Nonetheless, sometimes, especially in those moments when they revealed themselves as Ganesh, elephants did intentionally engage people's property in a sensible manner, for instance, by respecting or destroying it. In these cases, they could recognise who owned what property. This discrimination was often explained by referring to the elephant's capacity to perceive immoral behaviour or piouness, or the merit accumulated through virtuous practices. Elephants were also seen responding in

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<sup>85</sup> Amongst anthropological interpretations of animist human-nonhuman relations, particularly Vivieros de Castro's (1996) "perspectivism", the capacity for humans and animals to share the same perspective on the world often meant that one of the creatures had adopted the other's form (see also Willerslev, 2007). To achieve this overlap of perspective is dangerous: if a hunter sees the world like his prey, then the human has probably turned into a prey animal themselves (see Willerslev, 2007; Kohn, 2013). As simultaneously always animal and god, elephants did not transform into humans. Elephants were exceptional agents; as physical incarnations of a god they were "imbued with the divine substance of Ganesh" (Locke, 2017, p. 361). This divine composition enabled elephants, along with their specific attributes such as large ears, to not only engage with humans along the spiritual dimension, but also demonstrate far more penetrating insight and relationship with the cosmological order and people's place in it.

<sup>86</sup> It is worth noting that this relationship bears similarities to ethnographic accounts of animists refraining from stating their intentions when hunting animals, or mistreating and talking badly about animals in general (see Bakel, 2003; Willerslev, 2007, 2013; McIlwraith, 2008). For example, the Kui elephant hunters from Thailand at the beginning of the 20<sup>th</sup> century, were said to use an entirely different "spirit language" when moving through the forest to capture these animals (Giles, 1929).

appropriate ways to places of divine power such as temples. Their behaviour could be interpreted as being sensitive to *dharma*, the divine laws of Hindu cosmology. When elephants acted meaningfully and their perceptions of the environment overlapped with those of humans, at some level both beings perceived and participated in a shared spiritual lifeworld.

### **Feeding a living god**

For farmers living on the fringes of elephant habitat in Assam, elephants can come as destructive forces. Not only are haathi dangerous to confront when attempting to defend crops, but if a person does not diligently defend his fields, a single herd could descend and wipe out an entire year's worth of food in one evening. People who farm under threat of elephant crop raids will engage the animal god through offerings of food – whether it be fruit or portions of their rice paddy – hoping to appease and affect haathi so they will treat them favourably.

Again, animist communities are the prominent example in the anthropological literature for exploring gift-giving relationships with nonhumans. Exchange is an important means of positively affecting the possibility of catching prey. Animals, during the hunt, give themselves over to human hunters, and sometimes this will be a conscious action on the part of the animal (Nadasdy, 2007). This relationship is not merely metaphorical, argues Nadasdy (2007): both human and nonhuman are active and reciprocating participants. In response to the animal gift, hunters must pay thanks through ritual observances. Often the exchanges are not with individual animals, but with their spirit masters, of which individual animals might be incarnations (Vitebsky, 2005; Willerslev, 2007).<sup>87</sup> Gift-giving and proper engagement are ways of maintaining good relations. Amongst the Yukaghir and hunter-spirit relationship, if prey is plentiful, the hunters have the right to demand and in turn the spirit is “obliged” to honour that request (Willerslev, 2013, p. 53). However, this relationship can be reversed, notes Willerslev, and the spirit can in turn demand from the hunter under certain circumstances. Exchanges between human and animals in the animist life world are bound by mutual obligation (Hurn, 2012).

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<sup>87</sup> The return gifts can be the necessary rituals of thanks after the killing (Nadadsy, 2007), a set of rites and ways of treating the body that earn the appreciation of the animal (Vitebsky, 2006), or tricks to avoid invoking the wrath of the animal spirit in response to killing the animal (Willerslev, 2013).

There is an important difference between the relationship between Hindu farmers and the animist hunter-gatherers in the above example. While my informants gave gifts in order to engage the deity in a mutual relationship, haathi in turn was not obligated to return the gesture. The gift did not necessarily bind a relationship or necessitate a response. To understand this dynamic, we must investigate the act of gift-giving in the context of the deity-devotee relationship within Hinduism.

In India, relationships with deities such as Ganesh are established primarily through *puja*, the ritualised act of worship. Jhala (2000) identifies several interconnected meanings associated with *puja*; here, I am most interested in *puja* as a series of services, gifts, and other gestures employed to engage, communicate, and establish a relationship with a divine figure. This relationship is achieved via the two primary aims of *puja*: *darshan* and *prasaad* (Fuller, 2004; Pinkney, 2013). Commonly, a devotee will visit temples to have *darshan*, the reciprocal experience of gazing and being gazed upon by the deity in the form of a *murti* (Fuller, 2004). *Prasaad* is a sacrificial portion of food offered to deities with the desire to feed them. After the offering, the food is then returned to the devotee as leftovers of the god's meal, a substance now transmuted and imbued with the powers of the divine, which the person then consumes (Fuller, 2004). The god expresses his or her willingness to engage the devotee, by receiving offerings during *puja*. In Ganesh's case, gifts were typically flowers, vermillion, incense, and food, such as *laddus* (ball shaped sweet). Gift-giving and other gestures are often forms of good hospitality, respectfully greeting and entertaining an earthly incarnation of the divine in the proper manner. The fundamental purpose of *puja* is to please the deity, and hope that this attracts the attention of the god towards the devotee (Pinkney, 2013).<sup>88</sup>

Ganesh is worshipped at the beginning of ventures to procure his blessing and ensure obstacles that might prevent success are removed. Alternatively, if one ignores paying Ganesh his due respect, he will take offence and actively create obstacles to prevent success (Courtright, 1985). Fortunately, he is generally considered easy to placate, and can be directly approached by all peoples regardless of social class or caste. Shopkeepers in Assam, for instance, will conduct *puja* to a small *murti* of Ganesh installed in their store to have good business for the day. Ganesh is linked to prosperity and merchants, and to come under the

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<sup>88</sup> Although an incorrect approach may risk causing the deity offence (Mearns, 1995).

gaze of this deity is to be blessed and increase the likelihood of favourable conditions in a person's daily existence (Mearns, 1995; Alter, 2004; Fuller, 2004, p.191).

Offerings are an important mode of engaging deities, and require some further explication. Gift-giving in South Asia is a practice guided by complex cultural standards and the performance of hierarchy, notably the asymmetrical relations of exchange between those with higher and lower status. The good gift is given to someone superior, and thus an offering is an announcement of a person's lower station (Heim, 2004). Practices of gift-giving developed in South Asian religious traditions often emphasise the lack of mutual obligation involved in this exchange. While a devotee aspires to engage a deity such as Ganesh in a mutual relationship, or at least to receive their attention, Ganesh as a superior being is under no commitment to respond to the gifts and hospitality, or the requests associated with them (Parry, 1986). Of course, at the temple, people will pray with pragmatic returns in mind (see Gandhi, 2012, in regard to feeding divine monkeys), but the gift does not have the power to bind or place any expected demands on the relationship as it might with an equal.<sup>89</sup> While reciprocal exchange is often downplayed, there are associated benefits received from worship. Offerings, hospitality and other reverent gestures are "fundamentally part of the religious structure of the world of karma" (Heim, 2004, p.40) and when given to a superior and without pragmatic purpose, they can bestow merit and good fortune upon the giver (Babb, 1970; Michaels, 1997). Accumulated merit is a sign of piousness and moral worth but is also a blessing that enables a better life, either in this one or the next. The gracious and relational gesture that threads together the fabric of South Asian life, is not only a fundamental mode of engaging humans and deities alike, but also, traditionally, seen as essential to one's moral and religious duty (Heim, 2004).

Anthropological literature exploring Ganesh worship makes no reference to offerings made to the deity in his animal form (Courtright, 1985; Brown, 1991). Locke's ethnography of Tharu mahouts and their working elephants in Nepal is the exception (Locke, 2017). Much like the human-elephant interactions in Assam, relational modes of gift-giving hover

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<sup>89</sup> Babb (1970) argues that while there might be a sense of payment in the sense that one receives merit or is blessed for a better existence, through this life or the next, "if the gods are to be gods at all...their superiority must be affirmed" through hierarchical distance and asymmetry. A crude concept of exchange runs counter to the actual worship and attribution of the powers of godhood which the devotee is attempting to invoke. This would explain why people tend to downplay the nature of exchange that emerges in worship, or that asymmetrical exchange is idealised in Hindu tradition. However, this asymmetry does not preclude the attempt to establish a mutual relationship.

between mahouts engaging haathi as god and as animal. Mahouts offer grass bundles containing rice, molasses, and salt to elephants as a dietary supplement and as a delicious gift of food, this practice helps build rapport with the animals. However, Locke highlights the name of the gift – *dana* as significant because it suggests the unreciprocated religious offering. While on one level, the food hopes to solicit affection and obedience from the working elephant in return; on the other level, the gift seeks to please a superior being with a reverential gesture that acknowledges their divine aspect. The placation of Ganesh likely also has some reciprocal effects: Assamese mahouts, for instance, would often tell me that as long as a mahout loved Ganesh then their elephants would never harm them. On one occasion when I asked a mahout how he expressed his love for elephants, he answered my question by later making a detour to an elephant-apple (*dillenia indica*) tree, picking several of its fruit, and then feeding them to the elephant.

In Assam, reverent gestures towards domestic elephants by the public were ways in which people engaged Ganesh in his animal form. Offerings would often be impromptu moments when people saw passing elephants in the street, with their mahouts riding atop. Children and adults would call out “haathi!” and stop to look, whilst others would pause to raise their hands in a reverent gesture of *namaskar*.<sup>90</sup> Roadside shopkeepers would call over elephants and their mahouts to offer food to the divine animals. Mahouts were obliged to respond, at the risk of offending people if they ignored, while haathi themselves would never reject an invitation for food (see Chapter Five). Human-elephant teams were often invited into homes with sifting trays filled with uncooked rice given to the animals. On a few occasions, a woman of the house applied vermilion and mustard oil to the trunk of the elephant, like what is done to an image of Ganesh in a temple.<sup>91</sup> One person performing this act claimed that the elephant “enjoyed it.” She then proceeded to touch the trunk with outstretched fingertips and brought her hands to her head, receiving a blessing from the animal god. On other occasions, others touched the feet of the elephant, a sign of hierarchical deference and respect. In the absence of food, or material items for the elephant, people passing by would often insist on giving money to an elephant directly, passing it to her trunk; the elephant would then in a well-trained movement raise the note above her head for the mahout to

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<sup>90</sup> The meaning of Namaskar is not necessarily stable and can change over time, though a common interpretation is that gesture is an honour is paid to the soul inherent in all beings.

<sup>91</sup> Oil is considered to be free of impurities.

take.<sup>92</sup> The donation was given with the intention and the expectation that the mahout would later buy the elephant food, although, givers also grudgingly noted that the mahouts were more likely to spend it on themselves.

The pattern of seeking to please the god, and nurture the conditions for a good relationship with the divine are clearly present. Gifts of food and other gestures to working elephants are seen by many givers as offerings to please haathi. As with idealised forms of deity worship, these actions are not pragmatic or planned; people often reported that there was no reason for the gesture and any response was not expected apart from the elephant's receipt of the offering. That haathi is *bhal lagiche* – feeling good, or enjoying himself – is enough. To invite an elephant into the home, and treat him or her to food is a respectful act of hospitality that mirrors some of the basic meanings of puja. To touch a murti, just like touching a passing elephant in the street, is a way to both gain access to divine power, and a gesture that simultaneously communicates the lower status of the devotee (Batra, 1986, p.168; Fuller, 2004).

While devotees consider their acts of giving to be an offering to a deity, I found it to be rarely associated directly with an act of puja. The dissociation is likely because the puja ritual has rigid performative and social structure, and proper practices of approaching a deity are clearly absent in regard to human-elephant interactions. Further, a central aspect of puja is a concern regarding cleanliness and the transmission of impurities (see Raheja, 1988; Fuller, 2004); it is possible, because of the dual nature of haathi as both animal and deity – a hierarchically ambivalent being – that concerns about cleanliness are not foregrounded. Finally, unlike prasaad, people do not consume the leftovers of food given. However, I have on two occasions witnessed people retrieving some of the offerings. One man sprinkled the leftover rice offered to the elephant onto his head, and brought the rest inside his home.

The relational modalities, bodily comportment, and communicative gestures learnt through the practices of temple worship, are translated into ways of engaging domestic elephants. Haathi is established within the relationship as an honoured and superior being worthy of receiving a gift. Again, because of the variety of beliefs regarding elephant's ontological

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<sup>92</sup> Incidentally, this gesture was referred to as *salaam*, a movement reminiscent of the salutation offered by Muslims, an acknowledgement and greeting of peace. Such a gesture indicates the giving of a blessing by haathi.

status, some persons here may have worshipped the elephant because it pleased Ganesh, not necessarily because it was him (see Batra, 1986, on cow worship). I believe that for many, these forms of worship were putting persons in direct contact with and affecting a response from Ganesh himself (manifested as the elephant). As one temple priest pondered, perhaps giving food to haathi was more “real” than the act of prasaad in temple puja, since Ganesh actually consumed the food. Since offerings were an attempt to establish a relationship and solicit the favourable gaze of haathi, people were engaging the elephant on a level of sociality that extends beyond feeding an animal out of affection. Although, as with Locke’s (2016b) Tharu mahouts, modes of relations were not exclusive to treating the elephant as either animal or god. Take for example, a man who gave biscuits to working elephant on the street. The man after giving the offering, proceeded to rub his hand on her trunk and then knelt to reverently touch her foot, finally bringing his hand to his chest to receive a blessing through touch. This interaction did not halt there: he continued to stand by and rub the elephant’s trunk, as one does out of curiosity or affection when interacting with a pet. Ganesh was also communicated with by appealing to his animal form.

### **At the mercy of a superior being**

*Bonyo haathi* – “wild elephants” – also can be engaged by humans through acts of reverence that seek to please the animal deity. Unlike domestic elephants, who are habituated to people and interactions mediated by mahouts, people cannot simply approach their forest-roaming cousins; they are likely to become agitated and potentially aggressive. Devotees sometimes do offer these elephants gifts directly, but I have never heard of such an interaction at my fieldsite. A mahout suggested that it was possible, assuring me that haathi would recognise my intentions. I was told I should venture into the forest and take some food, perhaps bananas. Locating an elephant at a distance, I should raise my hands in prayer and call out to Ganesh, “namaskar”. I should then place my offerings on the ground and back slowly away to a safe distance and allow haathi to come forward and take the offering. As with any other manifestation of Ganesh, the mahout’s assertion was that through offerings and gestures familiar to temple worship I would be able to communicate and engage in a relationship with the elephant. By acknowledging haathi as Ganesh, he would consequently enact his role in the deity-devotee dynamic and come forward to receive the gift. To engage the animal deity, a person must be skilled in the proper practices that allow them to affect and please a god. I must admit, I was never sure if the mahout was being completely serious,



and whether I could perform the ritual gestures correctly or with the necessary inner sincerity that the divine animal could no doubt perceive. I was never really game enough to follow his suggestion!

Occasionally, those who ventured into the forest found themselves face-to-face with these powerful beings. For example, a man recalled a time he was walking with some friends collecting firewood, when the group unexpectedly crossed paths with a huge tusker. The man reacted to the dangerous situation by raising his hands in prayer and respectfully pleading, “Ganesh Baba, we have only come here to work. I am a poor man. We won't harm you.” After announcing his pitiable position and good intentions, haathi changed direction and left the man alone.<sup>93</sup> The man felt his life was potentially threatened, and whether he could successfully flee or not was unclear. He engaged the elephant through a modality that foregrounded haathi's divine self, the performance an enactment of a hierarchical relation that acknowledged his lowly status. He was at the mercy of a being greater than himself, both as a fragile human and as a devotee faced with the larger-than-life powers of a god. Finally, he asked the elephant to recognise his non-hostile attitude. The man's pleas were not simply to please haathi through worship, but an attempt to affect the immediate dynamics of the encounter. I had heard similar stories several times of haathi responding favourably to people when they reverently gestured towards him. Even at a distance, he would occasionally move aside from the path and let the person pass. The fact that the elephant did not attack or continue to obstruct the person's passage was a sign of haathi's divine and moral agency, recognising and being pleased at the person's obsequious behaviour, good character, and merit-worthy performance.

Living on the forest-fringes, cultivators are strongly affected by elephants. Protecting crops from haathi is gruelling and exhausting work, and there is a great risk of losing years' worth of grain. Lakhindra, one of my primary informants at Chakardo, owned a narrow piece of land in a valley nestled between two low lying hills. He had to abandon farming several years ago because he would lose too much of the harvest to elephants each season to make it worthwhile. I knew Lakhindra well and he did not harbor any ill-will against elephants,

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<sup>93</sup> Naveh and David (2008, p. 64) also found that indigenous, animist Nayaka would engage elephants through speech, saying surprisingly very similar things to them “I am not coming to disturb you, or to do any harm to you”, and “You are living in the forest, I am also living in the forest; you come to eat here, I am coming to take roots (fruits, fire wood, etc.)...I am not coming to do any harm to you.”

despite his clear assessment that “haathi are the greatest problem facing farmers.” Assamese regard themselves as having a high tolerance and respect for haathi: several conservationists I met claimed that this disposition has assisted in the preservation of elephants in Assam. This tolerance was driven by haathi’s identity as deity, people’s empathic concern for the animal’s loss of forest habitat, and the anxiety and potential consequences of speaking out against the animals. Further, several supporting local beliefs seemed to buffer negative responses against elephants. For instance: the loss of a crop in one season by elephants will result in an overflowing bumper crop the next; any damage to property by an elephant is a blessing in disguise and somehow the victim will inherit riches in the future; or a person killed by an elephant will achieve instant *moksha* (transcendent liberation), and escape the cycle of rebirth. Some people stated that “if an elephant comes to eat, let him eat” – thinking it best to maintain a relatively harmonious relationship at the expense of crops.

These attitudes, unfortunately, promote a passivity that a subsistence farmer understood full well would only result in losing a year’s worth of food and future hardship. Farmers attempted to mitigate overwhelming negative effects by protecting their crops and driving elephants away, as discussed in Chapter One, but also by engaging haathi through offerings. Acknowledging and empathising somewhat with haathi’s desire for rice, some farmers would set aside a portion of their crops for the elephants to eat.<sup>94</sup> These portions were not to be harvested at the end of the season, whether an elephant consumed them or not. Alternatively, some farmers, upon completion of harvest would leave a pile of rice straw and grain in the paddy field for elephants to eat. These gestures are a form of sacrifice, an object of value surrendered to the Ganesh.

At Chakardo, agriculture was a dwindling practice, and only a few, like Kaliya, practiced the tradition described above, although I understood that many houses previously conducted similar practices.<sup>95</sup> Kaliya would also perform a small, personal puja in the forest with incense, vermillion, and fruits laid on the ground. At the *bhel* tree between the Kalita and Nepali neighbourhood of Chakardo, the community used to conduct a puja to Siva, Ganesh’s powerful father, so he may protect the crops, and would also leave bananas for haathi to eat. In Udaipur, where rice agriculture was still the dominant mode of family labour and wealth,

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<sup>94</sup> Apparently crop offerings were common throughout Assam.

<sup>95</sup> Admittedly, I did not have a chance to witness the rituals that demarcated crops as offerings.

many houses set aside harvest as offerings for elephants. One year, in response to particularly bad raids, they conducted a Ganesh puja at a large rock inside the forest, the community leaving all kinds of edible foods that the elephants came and consumed, such as rice, sugar cane, and fruits. One particularly pious woman carried a large bundle of bananas into the forest every season after the raiding had ended, and would leave them for haathi to eat. I asked her whether Ganesh knew that she left them for him as a gift. and she replied, that even if other animals ate the bananas, it did not matter, Ganesh would know and understand her intentions. Like the person in the forest who acknowledged the elephant as divine by emphasising their lowly status, a gift enacted the hierarchical dynamics of a deity-devotee relationship and was a form of worship.

In some circumstances, offerings were felt to be necessary tributes of appeasement demanded by the haathi. One morning, Guddu and I walked amongst the homes of Nepali-parah in Chakardo the day following a visit from a grand tusker that had stayed in the general area for a week or so. We followed the heavy footprints left throughout the village, the broken fences, the uprooted banana trees. During the night, persons from the neighbourhood had harangued and screamed, and sometimes fled from the surprisingly nonplussed elephant walking through the dusty lanes and back gardens. Guddu and I spoke to residents who had remained fearfully quiet inside their houses as haathi passed through their yard. It had been a few years since a tusker had appeared in the village, and while I personally cannot remember seeing this detail, I was assured by two people that the elephant had one tusk shorter than the other. Incidentally, and although the conclusion was not explicitly drawn by anyone to me, this asymmetrical trait resembles the tusks of Lord Ganesh. Guddu spoke to several older members of the community about gathering some money to conduct puja in response to the unusual visit. He and a few others were concerned that since farming was no longer done in this area, puja was no longer conducted with haathi in mind. The tusker's appearance in the village was a response to this neglect. In this case puja was argued as a requirement to acknowledge and reaffirm the hierarchical order that exists between human and haathi.

The gods of the Hindu pantheon intervene in human affairs in both positive and negative ways and the "human responses to these beings are analogous to interpersonal relationships, and include offerings, confessions, supplications, and prayers." (Keyes & Daniel, 1983, p. 120). It was from a position of vulnerability that farmers found cause to worship and make

offerings to the elephants that occasionally crossed the tree line into the village. Tolerance, gifts of fruit or rice, and other behaviours that signalled a deferential position, were the proper forms of treatment corresponding to the elephant's status as a deity. These reverential gestures assisted in the establishment of mutual recognition and an interpersonal relationship with the elephant. Just as in temple worship where laddus are given to a Ganesh murti because the deity enjoys them, rice or bananas were items that elephants liked to consume and pleased the animal god, and so solicited their favourable attention. Recognising the individual's respectful behaviour and the merit generated through gift giving, the elephant would be more likely to treat them sympathetically and bypass their paddy fields. Offerings were made with a clear pragmatic purpose in mind: to reduce the possibility of haathi consuming a person's rice crop or causing damage to a person's property, and so attempting to affect the dynamic between human and elephant.

Returning to Kaliya's confrontation with Ganesh at the beginning of the chapter, we can now gain further insight into the dynamics of the encounter. Kaliya knew that elephants as gods could understand what he said, and as moral and perceptive beings were sympathetic to his good intentions. When Kaliya asked why Ganesh persisted in disturbing him, Kaliya's reaction was one of confusion, uncertainty and perhaps frustration as to what reasons might have caused the elephant to target him. Kaliya felt that he had behaved appropriately and the practice of offerings and reverence towards haathi should have earned him some merit and favourable treatment. Kaliya's question to Ganesh, however, was not directed out of anger, or the right to demand an appropriate response. Kaliya had no right to expect anything in return and was vulnerable to the desires of this powerful being. In fact, there were many occasions that haathi turned a blind eye to the pious, or a farmer's attempt to respectfully engage them with gifts. Offerings of crops, or other forms of worship could be made but an elephant would still persist in eating all the rice paddy. The non-obligatory and hierarchical model of devotee-deity relationship within Hinduism captures the dynamics of human-elephant social relationships at the fringes of forest and village. Under this model, the difference in behaviour of gods and animals were at times difficult to distinguish.

### **When gods become demons**

A relationship with a living god who is not obligated to reciprocate can potentially become a problem, especially when humans and elephants are engaging each other with heightened

frequency and intensity. People at Chakardo expressed having a good relationship with elephants; however, their interactions were no doubt also shaped by an extended history with the animals who have been visiting the wetland for generations, and the mediation and support of the Forest Department over the years.<sup>96</sup> In different parts of the landscape, such as Udaipur where elephants have only appeared in the last ten years and there was no Forest Department support, the respectful and reverential perception of elephants have become strained. Visiting Udaipur with my Assamese research assistant, a farmer unduly apologised to my companion at the time, when he expressed that he did not believe that elephants were Ganesh. He justified his point, asking how they could be gods, since, “if we keep on praying, they still come.” While not everyone’s faith was undermined by this complete lack of response to prayer, others became frustrated and angry at the injustice of the elephant’s response, since haathi were expected to disturb people only in retaliation. Speaking to another farmer about whether he was worried that elephants might hear the hostile things he was saying about them, he argued that it wasn’t him giving trouble to the elephants, but “it is the elephants disturbing me!” He continued to describe how when he collects wood in the forest he does not bother elephants, yet they chased him for no reason. And the elephants came down to his village and home and ate his crops. “Different people disturb elephants, but I do not!” The dynamics of the mutual relationship were disrupted and so this man felt no reason to regulate his anger.

In another problematically effected part of Assam, in a district called Sonitpur, a crop raiding elephant was poisoned. Instead of the usual funerary flowers and other items of worship placed on a dead elephant’s body, scrawled on along its stomach were the words “paddy thief elephant Laden,” as in the now deceased Al Qaeda leader, Osama Bin Laden.<sup>97</sup> Maan Barua (2013) interviewed an informant about human-elephant conflict in the region: the person stated that in our current times, both the people and the gods have turned bad. The instability of the human-elephant relationship in the 21<sup>st</sup> century can have transformative effects on the perceived identity of haathi; however, these changes are not necessarily or exclusively a modern symptom. As Barua (2013) astutely notes, haathi have always occupied an unsteady place between gods and demons, and this destabilisation of cultural

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<sup>96</sup> Kaushik Barua used to lend his mahouts and elephants to the Forest Department as support for crop raiding.

<sup>97</sup> Gureja, N., Menon, V. Sarkar, P., & Kyarong, S.S. 2007. Ganesha to Bin Laden: Human-Elephant Conflict in Sonitpur District, Assam. *Wildlife Trust of India*.

relevance is not new. Before Ganesh's incorporation into the Hindu pantheon, he was depicted as a more troublesome and malevolent entity. Paul Courtright (1985) highlights the dual aspect of Ganesh, noting that in South India, Ganesh still retains the name *Vinayaka*, a name also associated with demons that create obstacles and suffering. Sukumar (2003) proposes that Ganesh's earlier demonic manifestation may have made sense from the perspective of an agriculturalist community vulnerable to crop-raiding elephants.

Ganesh's shadow half draws similarities to the destructive form that haathi might take for those people who live close to the forest. While Lord Ganesh is the remover of obstacles, in this case he could be considered as the obstacle himself – the creator of obstacles – and the gift is to help ensure he does not create any further problems. In changing circumstances, where elephants continue raiding, and the gift no longer has the capacity to affect a better relationship with elephants, haathi retain their destructive traits and cunning intelligence, but lose their moral agency to discriminate between people. They disturb even those who do not deserve it, and hence there is a lack of justice to their behaviour. From this perspective, it is possible to understand how for some people haathi might turn from gods into demons in times of conflict at the boundaries of forest and village.<sup>98</sup>

## Conclusion

The previous chapter, Chapter One, looked at the problems of crop raiding, and the construction of boundaries between forest and village. The negative effects of elephants on people's lives – whether that is crop loss, property damage, injury or death – are often referred to in the animal sciences literature as “conflict”. Conflict, as anthropologist John Knight (2006) framed it based on his research in Japan, is founded not on an opposition of kinds but of interest. That is, the threat that forest animals represent can only be grasped by understanding them as ontological equivalents to humans living in an overlapping ecological space, rivals for food and territory.

Relationships with haathi in Assam on most occasions embodied this concept of conflict. On one hand farmers understood that they faced an animal that did not share the same perspective on the environment, including the meaning of property, possession, and other

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<sup>98</sup> At my fieldsite (although not at Chakardo) I only heard one person spit out with some vehemence that elephants were demons. This community had a larger number of problems with elephants, and during my fieldwork period, many gave up farming, possibly to take up work in nearby factories that had been built.

anthropomorphic values. In response, people prevented elephants from entering the village. Yet on the other hand, sometimes when haathi did eat crops they were in fact distinguishing between people's property and specifically targeting the farms or homes of people who committed moral transgressions. In these circumstances, the elephant's behaviour and perception was aligned with human values and not opposed or ignorant of them. Further, offering haathi gifts and other reverent gestures were acts of communication that sought to establish mutual recognition and maintain a civil connection with the hierarchically superior being. Instead of driving elephants away, people sought to draw them closer and gain their favourable attention so that haathi would not disturb them when they inevitably cross paths again. These cases of negatively effecting interactions with wildlife do not conform to the notion of conflict.

Studies on conflict between the Masaai and elephants of Kenya, illustrate elephants as animals who can be destructive towards both crops and livestock, but who are also believed to be powerful beings with a human-like soul, and who on occasion need to be appeased (Kangwana & Browne-Núñez, 2011). Macaques in Sulawesi Indonesia can depredate farmer's subsistence and cash crops, but these effects are generally overlooked because of their sacred status: locals believe that their ancestors are manifest as monkeys and so will avoid disturbing them (Riley & Priston, 2010). People's respect for and ambiguous relations with certain nonhuman animals is argued to enable a tolerance that limits the escalation of conflict (Riley & Priston, 2010; Hockings & McLennan, 2016). While the human-wildlife conflict literature has expanded to think about human-animal ambiguous relationships, the dynamic of competition, which draws on ecological and evolutionary frameworks, has remained the favoured interpretation of behaviour and interspecies interaction. However, reducing all interactions to opposing interests with ontological equivalents, and representing religious perspectives as merely a mediating belief, does not capture how farmers can be engaged in an uncertain social relationship with a divine person whose reason for raiding crops can be other than desire for food. Knight and other anthropologists (e.g., Morris, 1996; Bakel, 2003) have also argued that conflict is not the only possible mode of relation with wildlife. While forest-edge cultivators, can be engaged antagonistically towards animals when defending their crops, these modes can also exist alongside animist relations of reciprocity and kinship with nonhuman familiars (Morris, 1996; Bakels, 2003; Seeland, 2003; Knight, 2006). Across the literature that explores these ambiguous relationships within

the context of crop-raiding, there needs to be more subtle formulation of the shifting mode of relations with animals that better explains local human-nonhuman dynamics.

Finally, I would like to briefly reflect on the similarities of human-nonhuman relations between my informants and animist communities. Some scholars have argued that Hinduism is a kind of animism: where everything that exists has a soul that translates throughout reincarnations (Michaels, 2003; Haberman, 2013). As expressions of the transcendent, all beings in Hindu worldviews have the potential to become more than the current limits of their earthly bodies (Michaels, 2003). Animists, Ingold (2011) argues, are open to being engaged by the world in unpredictable ways and in undetermined forms. At my fieldsite, while people mostly engaged elephants as animals, on occasion they recognised that haathi's behaviour towards and perception of the anthropomorphic and spiritual landscape was aligned with their own. This was taken as evidence of haathi being a divine person. Phillippe Descola (2013) notes that among animists, nonhumans can reveal their deep continuity with humans. Descola, however, would disagree that Hinduism constitutes a form of animism which he defines as an ontology where all beings share the same interiority. Hinduism is a cosmology that is composed of a multiplicity of substances, essences, kinds and castes, and where each being – whether that is within society, nature, or the larger, seemingly infinite pantheon of god-persons – are differentiated by kind and hierarchically ordered. Descola (2013), refers to such an ontology as “analogism”, and that the segmentation of the universe's components and beings means that there cannot be a supposed common and shared interiority, which is the defining characteristic of animism.

Alternatively, Marshall Sahlins (2013) in his critique of Descola's ontological scheme, grouped analogism as one of several animist ontological orders (along with Descola's concept of animism and totemism). These orders all express the general tendency towards understanding the universe's organisation through personification and anthropomorphism; a disposition that is backgrounded within Western naturalism. Sahlins argues that analogism is an “hierarchical animism”, whereas the animism that Descola identifies is a communal form of animism where all beings are equivalent. Other scholars have also called upon the need to broaden Descola's concept of animism, and to integrate accounts of cosmologies that engage with “beings in an asymmetric, hierarchical field of intersubjectivity” (Århem, 2016, p. 16).



I make no strong claim about my informant's ontology, although I am sympathetic to Sahlins' argument for a hierarchical animism, and believe the concept does reflect how elephants in my informant's lifeworld had the potential to be engaged as divine persons.<sup>99</sup> Ethnographic reports on animists from the Americas and circumpolar region do bear similarities to human-elephant interactions at my fieldsite with some important distinctions such as hierarchical relations with ontologically superior beings and the associated lack of obligation in gift-giving (distinctions that reflect Hindu cosmology). Analogism, as Descola (2013) defines it, seems to map best onto the institutionally authorised and densely codified forms of Hindu cosmology, and less so onto my informant's every day interactions and experiences with other beings. Further, and especially in regions such as Assam where Hinduism has been adopted in correspondence with indigenous belief systems, we cannot draw a strict line between a Hindu analogism and indigenous animism in India (as some have claimed, see Landy, 2007). The notion that haathi was an insightful, subjective, and vengeful being was a common belief across a variety of Hindu and non-Hindu communities in Northeast India.<sup>100</sup>

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<sup>99</sup> Even those from Western naturalist ontologies will attribute agency or personhood to animals (Sahlins, 2013).

<sup>100</sup> I heard variations of this belief expressed across Assam in several locations, and not necessarily by self-identified Hindus. Take for instance this account by elephant naturalist, D.K. Lahiri-Choudhury, when he was tracking elephants in the Meghalaya, west of my fieldsite, in a region known as Garo Hills. The Garo are believed to be animist traditionally, but have adopted a Christian identity. "The average Garo from a village believes that elephants can hear distant sounds because of their large ears; so it is dangerous to speak against them even when miles away from the forests.... If the elephant overheard your whispered words far away in the forest, it could come out at night and teach you a lesson—which usually consisted of breaking down houses and destroying crops." (Choudhury 2000, p. 104). That non-Hindus also share similar beliefs about a supranormal vengeful being does indicate that there is a deeper, more complicated tradition of engaging haathi as a god-like creature that extends beyond Hinduism and requires further investigation. Evidence for this was also documented with non-Hindus Karbi Anglong (see, Zaman, 2003). Ganesh, or godhood, does seem to be an ontological state that maps on well to people's experience of elephants.



The animal scrutinises him across a narrow abyss of non-comprehension. That is why the man can surprise the animal. Yet the animal – even if domesticated – can also surprise the man. The man too is looking across a similar, but not identical, abyss of non-comprehension. And this is so wherever he looks. He is always looking across ignorance and fear. And so, when he is being seen by the animal, he is seen as his surroundings are seen by him. His recognition of this is what makes the look of the animal familiar. And yet the animal is distinct, and can never be confused with man. Thus a power is ascribed to the animal, comparable with human power but never coinciding with it. The animal has secrets which, unlike the secrets of caves, mountains, seas, are specifically addressed to man.

John Berger (1980, pp. 3), from the essay, “Why Look at Animals”.





Figure 3.1: Domestic elephant, Xiruxila.



Figure 3.2: Forest-dwelling makhna in Deepor Beel (the same makhna who passed through Nripen Teron's property). A Shiva temple (Ganesh's father), is in the foreground.



## Chapter 3:

# Uncertain encounters

The evening I spoke to Nripen about the *makhna* (tuskless male elephant) who passed through his garden (see Chapter Two), I spent some time discussing elephants in general with his family. Close encounters with elephants were affectively charged interactions, both frightening and exciting. With this elephant encounter, Nripen and his mother were just glad that they were not harmed. His mother told a story of a time before Nripen was born when an elephant had become agitated by their pet dog and accidentally destroyed part of the house. Property damage was common when an elephant entered a family's compound; moving through the relatively tight space often meant the elephant unwittingly broke something. People were surprised when they observed an elephant carefully weave its way around a garden bed, or step around clothes hanging on a line to dry. Haathi in these moments seemed to demonstrate an awareness of and respect towards property.<sup>101</sup>

For that same reason, Nripen was impressed and confused that the *makhna* did not touch any of the bananas that evening. Elephants were known for their voracious appetite, so the fact that it did not eat the fruit was surprising, and made the elephant's reason for using his house as a passage to the wetland all the more unclear. Nripen wondered whether the elephant crossed by his home because his property had more trees than others, and so was more familiar habitat for the animal. Regardless, that the elephant "did not touch one thing" as Nripen kept emphasising, and did not disturb his family's property demonstrated to Nripen that haathi were "something like a god." He told me, "Haathi, Paul, are not just an animal." "More-than-animal," I replied, thinking about the more-than-human geography I had been reading at the time. Nripen smiled, seemingly enjoyed the way the term sounded: "Yes, haathi are more-than-animal," he affirmed.

As expressions of the transcendent, all animate and inanimate forms in Hindu worldviews have the potential to become more than the current limits of their earthly forms (Michaels,

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<sup>101</sup> Please note: an edited version of this chapter will be published in late 2017 in a special issue of the *Journal of Religious and Political Practice*, titled "Uncertain encounters with wild elephants in Assam, Northeast India." I acknowledge and thank the comments of the special issue editors and anonymous reviewers who contributed towards the development of this chapter and the final version to be published.

2003). For many in Chakardo, haathi were beings that were more-than-animal: creatures who on occasion would reveal themselves to be divine persons. Like animism, and unlike from a western scientific perspective, these animals are not limited by a strict categorical boundary between human and non-human that predetermines what qualities they can possess and what capacities they can have. Animists are capable of being astonished by other beings and engaged by the world in unexpected ways and in undetermined forms (Ingold, 2011), and nonhumans in these moments often express traits of personhood (Descola, 2013). However, whilst “persons may appear in animal form, not all animals are persons. One can usually tell if an animal is a person, because its behaviour will be *out of the ordinary*” (Ingold, 2000: p.91, italics added).

This factor – the unusual or the “out of the ordinary” – is a common theme in ethnographic accounts of human-nonhuman relations in animism, and was common in recollections of elephants being more-than-animals at my field site. In this chapter, I unpack these encounters to understand both what is “unusual”, and how through the unusual people grasped the elephant’s divine nature and supranormal powers. These moments are characterised by what Servais (2005) calls an “ontological uncertainty”, where the person is not quite sure who or what the creature they are engaged with really is. Akin to a mode of wonder, a person finds themselves in the fleeting, unsettling presence of something that escapes their conceptual resources and determinate thinking (Rubenstein, 2012; Scott, 2013). I will argue that this uncertainty is influenced by three aspects of human-elephant encounter. First, a failure of regular explanations to make sense of the animal god’s behaviour; second, the perception of a hidden connection between elephant and human that cannot be articulated (see Siegel, 2006), and; third, the awareness that elephants inhabit a perceptual world that cannot be completely grasped.

### **Unusual behaviour**

The Nayaka of Southern India are an adivasi (indigenous) community who live in elephant inhabited forest. Like human-elephant encounters in Chakardo, elephants – referred to as *anna* by the Nayaka – can on occasion reveal themselves to be more-than-animal. For instance, in a story similar to Nripen’s account of an elephant walking through his compound, Bird-David described how an older Nayaka man recalled seeing an elephant “‘walking harmlessly’ between the houses” (Bird-David, 1999, p. S75; Bird-David & Naveh,



2008). This encounter was considered uncommon: the Nayaka feared elephants and expected damage to property. In another example, a Nayaka man walking in the forest crossed paths with an elephant, who “looked straight into his eyes...[and] he surmised from the elephant’s behavior that the elephant knew him, and communicated with him nonverbally” (Bird-David & Naveh, 2008, p. 60). By Bird-David’s reports the elephant was alone, therefore likely a male, and in general more easily agitated and prone to aggression. That the animal did not act defensively, but rather calmly passed by and simply observed the man, was considered unusual and indicative that a different kind of relationship was present. In both cases the behaviour was “read as an expression of the kind of care which one would show towards people one is close to, whom one is concerned not to hurt and live amicably alongside” (Bird-David & Naveh, 2008, p. 60).

Instead of referring to the behaviour as evidence the elephant was a manifestation of Ganesh, the Nayaka in the two situations described above referred to the elephants as *devaru*. *Devaru* is a word shared with nearby Hindu communities living next to the Nayaka, and is used by Hindus to refer to “god”. Bird-David (1999), translating for the Nayaka animists, argued that the meaning for the animist Nayaka is closer to a coeval being, rather than a superior one. *Devaru* are supranormal subjects, “super-persons” that live alongside the Nayaka and occasionally were manifest in a variety of forms, including animals, plants, and stones. Not all elephants are *devaru*; rather, this enhanced social identity is revealed only in certain, intimate, embodied encounters characterised by “mutuality, responsibility, and responsiveness” (Bird-David & Naveh, 2008, p. 61). Bird-David’s analysis draws on a tradition in the animist literature that emphasises the phenomenology and practical experience of animists in their daily engagements with animals (e.g., Ingold, 2000; Willerslev, 2007). Bird-David and Naveh (2008, p. 58) argue that the phenomenological immediacy of intimate, co-affecting, and embodied engagements – a “corporeal being with others” – between humans and their environment, is the necessary condition for the presence of *devaru* to be felt. This condition is necessary, but not sufficient however, and Bird-David & Naveh claim that it is only in certain encounters that nonhumans are revealed as *devaru*.

Amongst the stories of Ganesh that I collected in the field, and unlike Bird-David’s findings, the sense of a more-than-animal being did not necessarily depend on, or emerge exclusively within, a corporeal encounter. Some recollections were drawn from first-hand, mutually engaged experiences with elephants, conditions described as necessary by Bird-David for

devaru to appear. But accounts of more-than-elephants could also include non-interactive observations made from a distance, as well as second-hand or third-hand stories. The common theme shared between Assamese and Nayaka examples, which may be another factor that provokes manifestation of the devaru, is the unusual nature of the interaction. The fact that the elephants in these stories did not behave as expected, reports Bird-David & Naveh (2008), led the Nayaka person and community to later draw the conclusion that they had encountered devaru.

Ethnographic accounts of nonhuman personhood in the animist literature often discuss the unusual behaviour of animals. Hallowell's classic ethnography of the Ojibwa offers two examples of extraordinary behaviour. First, a bear persistently returned to camp, which was "most *unusual* because wild animals do not ordinarily come anywhere near a human habitation" (Hallowell, 2002, p.36, italics added; also, see Scott, 2006, for a similar account amongst the Cree). In the second example, a little bird ventured close to a person on a boat and "alighted on the mast. This was a most *unusual* thing for a bird to do" (p.37, italics added). In both stories, the strange behaviour of the animal was emphasised, and the animal was recognised by the Ojibwa individual to be a person: in the bear's case, a sorcerer; in the bird's, a deceased grandchild paying a visit. Philippe Descola (2013) described a situation where a lancehead snake bit an Achuar woman. While getting bitten by a snake was not uncommon, "apparently, [it was] *unusual* for a lancehead snake to venture so close to a house" (p. 4, italics added). The bite was not chance; instead, the attack was interpreted as an act of vengeance by the "mother of game," a spirit guardian of animals, for the excessive killing of prey by a local hunter. In another example, Smith (1998) illustrated the "extraordinary" and seemingly magical behaviour of a coyote that was caught but then escaped the trap without a hint of injury. The coyote strangely turned and faced the hunters, watching them in a very vulnerable moment before running off. While Smith was ignorant of what was being communicated in this encounter, his fellow hunter and informant could not shoot because he recognised a new relationship had emerged between him and the coyote that went beyond the hunt: "Everything that happens says, 'Don't shoot'. This animal helps me" (Smith, 1998, p. 415). Finally, anthropologist Paul Nadasdy (2007) had his own "extraordinary experience" in which a rabbit that had escaped his trap in the forest returned directly to Nadasdy's house a few days later. Nadasdy reports that he could not help feeling, due to the strange behaviour of the nonhuman, "that the rabbit came looking for me" (ibid.,

p. 36). Nadasdy concluded that the way in which the animal seemingly gave itself over only made sense within an animist ontology.<sup>102</sup>

Unusual, at its simplest understanding here, is an observed behaviour that does not fit with typical expectations of how the nonhuman behaves. The animist examples above include cases where a nonhuman ventured close to humans or human settlements without demonstrating the normal caution or avoidance tendencies: a bear dwelt close to a camp, a bird landed on the mast of a boat, or a snake was found near to a home. Similarly, amongst my informants, an elephant did not behave in ways it was expected to, provoking the witness to interpret the nonhuman's behaviour as out of the ordinary. Take, for instance, the encounter recalled at the beginning of the last chapter, in which haathi reappeared at Kaliya's home after sunrise. Usually elephants would keep to the forests after dawn and most of the time elephants who were driven back by villagers did not persistently return. Only at the point when Kaliya saw the elephant for the final time, standing at the fence of his property after sunrise, did he know that Ganesh was intently communicating with him. Similarly, the makhna at Nripen's house inexplicably refrained from eating the bananas despite the fruit being readily accessible. The unusual behaviour was a breach of expectations based on generalised understanding of how haathi normally conduct themselves, and a reminder that elephants are no mere ordinary animal.

The unusual depends on the context within which an event takes place. In the last chapter, Nripen Teron's mother illustrated her good relationship with elephants by noting that they never targeted her family's crops. This claim would not be unusual if the crops were well-guarded or in a relatively inaccessible location. Instead, she emphasised that the field was at the forest's edge, which made it both difficult to defend and an easily assailable target. Despite her fearful expectations of the property's vulnerability to raiding, elephants continuously passed it by in favour of somebody else's fields.

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<sup>102</sup> I share Nadasdy's example because it captures the unusual experience; however, there are some problems with the case, that do not cohere with my own argument. Firstly, it is from an anthropologist's perspective. Second, Nadasdy himself does write about extraordinary experiences; however, he asserts that these moments are "received as *normal* by people in their host culture" (p. 36, italics added). I have amassed a number of examples in this paper that offer strong evidence that Nadasdy's assertion that people are not impressed by these encounters, is not necessarily the case. However, I also acknowledge that his argument may point towards the possibility of my own bias, being an astonished anthropologist myself, interpreting animals who can also be gods.

Sometimes it is difficult to interpret the meaning of an animal's actions. Living alongside animals always carries with it "an experience of being left out... we can never quite grasp what the world of the animal is" (Das, 2013, p. 18). However, inexplicability is not a sufficient condition for the unusual experience being discussed here. If an elephant behaves strangely when interacting with other elephants or aspects of the environment, such as vegetation in the forest, this behaviour is not highlighted as significant because it is not associated with the human community. Ganesh was only revealed while interacting with farmer's crops, with a temple or sacred spot, or with an individual. Significant out-of-the-ordinary behaviour is always in relation to aspects of an anthropomorphised landscape.

When Kaliya recognized that the elephant was engaging him for reasons other than food or those typical of a wild animal, he began communicating with haathi differently. Instead of employing shouts and torchlight as he had previously done, Kaliya interacted with the elephant as a being who could read his thoughts and understand the meaning of the reverential offerings he claimed to have made. A comparable change is also in Smith (1998), where the coyote is no longer engaged as prey to be killed, but someone who could "help" the hunter. In these moments, ready-to-hand interpretations and expectations of human-nonhuman relationship breaks down, provoking a reflection on the deeper dynamics shaping that specific encounter (see Willerslev, 2010). In Kaliya's account, there is a shift in the "relational modality" and the creature's divine personhood is foregrounded instead of its animal aspect (see Locke, 2016). Behaviour that unexpectedly deviates from normative assumptions demands a reassessment of haathi's intentions, and in turn how the person regards and approaches the creature. Whether first-hand experience, or third-person stories, in these unusual encounters the elephant is perceived to be engaging people with a purpose that is more-than-animal.

### **Uncertain connections**

I visited some shifting cultivation communities within the Rani-Garbhangra reserve forest (RGRF) with a friend from Guwahati who was familiar with area. A young Karbi man from the forest villages called Bhaskar accompanied us. As we sat for lunch with some local men, they narrated an old Karbi myth about the surrounding the valley we were in and the river below. An elephant once toppled a sacred object at the river and his actions instigated a flood of the valley. After listening to the story, I asked Bhaskar why the elephant demolished the

site. Bhaskar answered the question by recalling an encounter with an elephant from his childhood. One day as a young boy, the village community had assembled for *boliya puja*, which involves the ritual sacrifice of a goat. Bhaskar's father instructed him to stay in the village for this important puja, but instead, Bhaskar and some friends walked to Lakhra, a town in the plains 15km away, to watch television and hang out. Returning that afternoon along the main forest road towards Garbhanga village, his two friends had just crossed a bridge up ahead when suddenly a large elephant appeared between them and prevented Bhaskar from crossing. Bhaskar did not go into detail, but he explained that the elephant stood on the road and blocked his path for a very long time (instead of, I assume, feeding briefly and moving on to forage elsewhere as elephants typically do). Bhaskar returned home very late that evening, around 11pm, because of being waylaid by the elephant. When the story ended, my friend from Guwahati turned to me and asked if I understood. He then explained that what Bhaskar meant by telling that story was that no one could say why the elephant destroyed the sacred site, but that elephants always have a reason for what they do. According to Bhaskar, in both the myth and his own encounter, the elephant's unusual behaviour should not be ignored as random. Strange actions and behaviour towards people are not meaningless, but are an indication of an ulterior purpose, even if the purpose was not immediately apparent, or were beyond a person's understanding.

Witchcraft also grapples with the social meaning of the strange and unexpected in people's lives, although these are mostly related to unfortunate incidents. Evans-Pritchard (1937) observed that the Azande, in response to misfortune, often claimed malicious supernatural forces were at work. What would be characterised in the West as moments of bad luck, accidents, or rare deviations from the normal course of events, struck the Azande person as unusual or peculiar (Evans-Pritchard, 1937). The event's peculiarity emerges as a question that asks whether an apparent accident is somehow purposefully and personally linked to the individual who was harmed. For instance, people normally meet elephants (African elephants in this case), but being killed by one is uncommon, argue the Azande, and so the unusual event has some kind of significance.

Whenever men and elephants come across one another in the bush these dreadful things do not happen. They are rare events [being killed by an elephant] ... Why he and not someone else? Why on this occasion and not on other occasions? Why by this elephant and not by other elephants? It is the particular and variable conditions that witchcraft explains. (ibid., p. 69)

Siegel (2006, 77) argues that the questions – why me and why now? – frame the event as having a “singular” quality: the Zande seek to understand what deeper forces possess and connect that specific person to the unfortunate incident. The event’s singular nature cannot be answered definitively through ordinary explanations. There is an uncanny power at work shaping the event, inarticulable and not clearly perceived (Siegel, 2006).

One evening over dinner, I was speaking with a friend’s wife, and I asked whether she thought elephants were incarnations of Lord Ganesh. She replied hesitantly, “No, they are only animals” – but – “they can sense things about people.” She proceeded to tell me how one evening, a lone, bull elephant entered a nearby army base close to her home village and moved amongst the officer’s houses. The elephant broke the wall of one of the homes but damaged no other place. The next night, the bull returned to the base and again went to the same house, but this time he killed the homeowner. This elephant encounter drew the attention of my friend’s wife because it struck her as unusual: despite everyone at the base being equally at risk from a destructive and murderous elephant, only one person was affected. She went on to describe how elephants often moved through a village and harmed no one, and asked why, on this occasion, that this person was specifically targeted. The interaction was not merely coincidence; rather she believed there was a hidden connection between the elephant and the deceased, something the elephant sensed that drove him to kill the person. Similar indeterminate connections were present in other human-elephant encounter examples previously explored: Nripen wondered what it was about his family that led the haathi to avoid touching or damaging his home; Bhaskar questioned what it was about him that caused the elephant to occupy the road for so long and block his passage.

Bhaskar interpreted haathi’s behaviour as a response his disobedience and failure to attend the village puja. As Bhaskar and a friend told me on another occasion: if you talk poorly about elephants or behave immorally, the next day you will meet them on the forest path! Just as the Azande emphasised the “aggressiveness and not the eeriness” (Evans-Pritchard, 1937, p. 65) of the unusual events, likewise, Assamese did not dwell in the uncertainty, but often attempted to explain the elephant’s behaviour by reference to a moral context or motivation, or deity-devotee relation. Speaking to a young man about the problems of elephant crop raiding, he related to me how a herd would sometimes bypass all other crops and target one plot in particular: “They must be bad people!” he exclaimed, then burst out laughing. In strange human-elephant encounters, the nonhuman’s hidden intentions were

apprehended within a culture that recognised the elephant's powerful role as a divine, virtuous agent and occasional harbinger of judgment. The elephant's unexpected response and negative effects led the young man to draw the conclusion that certain farmers probably deserved having their crops eaten. Whether the young man was himself aware that the farmer was of poor character is unclear. Similarly, my friend's wife seemed to have no direct knowledge about the person who was killed by the elephant who revisited the army base on the second night. She implied that haathi, in accordance with his insightful and moral nature must have acquired insight regarding the deceased's character, even though we humans could not perceive the reason.

Unusual interactions with elephants bear a resemblance to reports from human-dolphin interactions documented by Veronique Servais (2005; Halloy & Servais, 2014), in a phenomenon she refers to as "enchanted encounters". The people who experience dolphins as enchanted interpret their interaction embedded within a new-age ontology, where dolphins are beings of remarkable power, intelligence, and insight. Enchanted states are highly emotional and deeply personal, part of an asymmetrical relationship with a being more powerful than a human and who demonstrates intentionality, self-awareness, and complex intercommunicative skills. Dolphin lovers report the experience as having an intersubjective quality that Servais (2005) calls "self-revelatory": individuals through the dolphin's gaze gain insight into themselves, a realisation not apparent to them before their intimate interspecies meeting. The person's retelling often maintains an "ontological uncertainty about who the dolphins *really* are and what *exactly* people have experienced during the dolphin encounter" (ibid, p. 486). Haathi also are engaged within a culture that regards them as powerful, intelligent, and supranormal beings who can sometimes intervene in the lives of people. The reasons that drive unusual encounters are only tentatively grasped and what exactly occurs between human and elephant is ambiguous. For some people, it is even difficult to know whether to regard and respond to haathi's actions as those of an animal or a god. The creature's divine agency is apprehended within an experience of ontological uncertainty.

Nadasdy (2007, p. 36) argues that social exchanges with nonhuman persons, while extraordinary to the anthropologist, are "received as normal by people in their host [animist] culture." We should be careful not to confound the anthropologist's wonder and perplexity with the informant's experience (Scott, 2016). What westerners might perceive as a logical

contradiction – a creature who simultaneously is, or seamlessly shifts between animal and divine person – does not necessarily unsettle the Assamese ontological position. However, while it is accepted that elephant has the potential to express divine agency, the event is neither common place, comprehensible, or insignificant. As Siegel (2006, p. 21) notes, the difficulty of studying witchcraft and the singular encounter, “is that it remains inaccessible, not only to the anthropologist, but, it often seems, to those who believe in it.” For my informants, the unusual moments and accompanying experiences of uncertainty are a fleeting glimpse into the workings an unfathomable power not often apparent in ordinary human-elephant interactions.

### **Unknowable limits of *haathi***

Hinduism’s cosmological order is organised along the principles of Karma (Keyes & Daniel, 1983). Karma is an indifferent universal law used to explain the negative or positive nature of a person’s current life, as caused by good or bad actions in past lives. The basic structure of the explanation of why a person had his or her house damaged by an elephant is like the karmic understanding of cause and effect. Previous immoral behaviour is used to explain the tragic encounter with the elephant. However, the agency that drives the elephant to engage the person is not an indifferent universal law, or an outside force directing the animal. Haathi is not a vehicle for god – Haathi *is* the god himself. He is the being who has gained insight into a certain person’s behaviour and is the agent of punishment.

Willerslev (2010) recounts a story about Yura, a Yukaghir hunter, who had shot an elk several times, but the elk still walked away. The hunters were in “shock” and perceived this behaviour as unusual. This was not because the animal survived being shot, but because the expectations of an exchange between the humans and spirit was denied. The spirit guardian, Khozyain, promised to give the elk in a dream to the hunter the night before. Yura and his friends could not explain why the promise had been reneged, as it had never happened before. Willerslev analysed the shift in Yura’s perspective when the elk behaved unexpectedly:

He [Yura] suddenly departed from his practical attitude and adopted a kind of theoretical standpoint towards the hunting activity... He started to regard spirits not just as an anonymous mass but as separate beings available for reflection, and he began to seek causes for his failure in their distinctive sense and sensibilities. (ibid, p. 405)



Similarities can be drawn between Willerslev's ethnographic account and uncertain elephant encounters. By not conforming to expectations, the elk's behaviour caused a "temporary breakdown" in the hunter's practical and ready-to-hand interpretation of the event. At that moment, the hunter gained a brief insight into the "web of human-spirit relations." Similarly, with haathi, the breakdown caused by the animal god's unexpected behaviour, and sense of a hidden connection led people to reflect upon deity-devotee dimension of the human-elephant relationship. For the Yukaghir hunters, in order to make sense what happened, they began to inquire into what reasons the individual spirit, Khozyain, had for revoking the deal and what had offended the Khozyain's sensibilities. Likewise, informants who interpreted the hidden connection that led to the unusual human-elephant encounter, wondered what kind of action or event would have provoked the animal god to behave in such a way. Specifically, the question revolved around what that elephant knew about the individual human involved.

To support the role of divine judge ascribed to the elephant, and the moral framework used to explain a singular event, informants developed theories of elephant subjectivity and perception. Elephants have large ears and so can hear all, several people advised me. "Haathi understand everything" a friend once exclaimed, "all languages!" Commonly people would respond to my question about how elephants could sense a person's moral character by stating "Because! They are like gods!" invoking the creature's powerful ontological status. The mechanism by which haathi gains insight into human affairs is not necessarily understood – as an animal god their powers are supranormal – but what is evident is that elephants can and do perceive human affairs.

The attempt to grasp what and how an elephant can know is not strictly anthropomorphising, or projecting a subjectivity that is not there. Elephants, regardless of whether you believe them to be gods or not, are actual beings, in the flesh, guided by their own distinct, conscious experience of the world. Interpretations of an elephant's unusual behaviour are embedded within a perspective that they are intelligent beings. Learning to live in proximity to elephants require villagers – and anthropologists – to read an elephant's intentional states through their various bodily postures and sounds. The flare of an elephant's ears and the rapping sound of their trunk against the dirt communicate meaning. We need to make assumptions, to become sensitive to what the animals can perceive: for instance, villagers asserted that I should never wear white at night because I would stand out to an elephant.

What haathi can recognise and understand are also topics of natural curiosity for most informants. People were often surprised at the scope of the animal's intelligence, especially when they outwitted people. *Haathi jane!* – Elephants know! – was a phrase I heard frequently when villagers marvelled at their remarkable capacities, mundane or supranormal. Theorising about what elephants know and are affected by is part of a strategic and pragmatic response to living alongside these charismatic and dangerous beings. Human-elephant relations, whether through animal or divine modes of relation, are understood within an intersubjective framework, an engagement that “anxiously interrogates the knowledge gap between ‘I’ and ‘You’ and... is ultimately a very tricky business” (Madden, 2015, p. 286).

Bharat was a mahout who worked in Chakardo and the general area for close to ten years. His family lived 50km west in a small agricultural village called Boko. They do not have forest-roaming elephants near his hometown, the tree line has long receded. Bharat also believed that haathi were divine and moral agents, who could perceive the good and bad in people. He told me that as long as I loved Ganesh elephants would not hurt me. Mahouts, compared to regular farmers, are far more knowledgeable about elephants, including their individual personalities, communicative gestures, and behaviours. Bharat had worked with elephants for close to thirty years and spent on average half of his waking life with them; he was an expert at understanding haathi. However, despite a mahout's familiarity and ability to read their nonhuman companions, mahouts were not necessarily privy to what elephants perceived and how they responded to the world. For instance, one day I joined Bharat as we took the elephant under his charge at the time, Alaka, to the forest for a drink. As we settled by the stream, Alaka suddenly paused and emitted a deep, cautious rumble. Bharat in turn called out, “hooo!” not to Alaka, but towards the forest, and whatever Alaka might have been rumbling in response to. Bharat thought Alaka might have smelt or heard a local villager up on the trail, but no one replied. There was nothing strange about the occasion, but we left the stream unclear about who or what Alaka had been aware of in the environment.

German ethologist, Jacob von Uexküll (1934/2010), developed the theory of “*umwelt*” to conceptualise how the environment is subjectively experienced by each organism dependent on their biological differences. Between earth's many species, *umwelt* “supposes an infinite variety of perceptual worlds” (Agamben 2000, p. 4). In a well-known example from his book, *A Foray into the World of Animals and Humans*, Uexküll introduces us to a tick – a

“blind and deaf bandit” – who climbs to a high perch, oriented by her light sensitive skin. She waits for her prey, attending to the approaching presence of butyric acid present in the air, an odour given off by all mammals. At a certain level of intensity of butyric acid in the environment, the tick will leap, and, hopefully, land on the animal. The warmth of the skin will assure it that it has been successful. Von Uexküll’s tick is affected by the world through narrow channels: the body does not respond to vibrations but is sensitive to butyric acid and this enables the worlds of the tick and warm-blooded animals to intersect. Humans can smell butyric acid, but we are not as sensitive to its presence, nor does butyric acid have the same significance as it would for a tick (Buchanan, 2006). The tick navigates a world of temperatures and smells that humans are perceptually insensitive to, affected by chemical traces in the environment that can completely evade other organisms.<sup>103</sup>

There are two kinds of “worlds” operating in this account. The first world is the experiential and perceptual lifeworld, *umwelt*. Butyric acid is a phenomenon of the human lifeworld. The tick has senses that allow it to intersect with what we know as butyric acid, although how it is revealed to them within their *umwelt* is so radically different, because of their corporeal difference, that it cannot be determined. The second world is the reality in which both tick and human are immersed amongst other bodies, elements and forces, an environment composed by material or perhaps even immaterial constituents. Reality is differentially and partially revealed, dependent upon the embodied position of the organism. What composes reality is not a given and there is no all-encompassing, objective position on reality, only intersecting viewpoints at any given time.

It follows from *umwelt* that there are dimensions, materials, forms, and movements that only some organisms are sensitive to. For example, Pacinian corpuscles are pressure receptors responsive to vibrations and are found in most mammals. Elephants develop them in their trunk and feet, and coupled with their impressive socio-cognitive faculties, can attend to infrasonic frequencies and communicate between herds across long distances (McComb et al., 2003). These cells are so sensitive in elephants, that they are argued to be capable of

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<sup>103</sup> Many other nonhumans have an impressive array of perceptual capacities that allow them to inhabit worlds that escape human faculties (Sagan, 2010). Humans and other complex organisms can be developmentally trained to attend to the environment so that their experiential worlds become more sensitive to what affects us and also more discriminating towards differences in the environment (Downey, 2007). Still, the world revealed dependent on the limits of the organism’s neurophysiology, which determines the kinds of relationships an organism can enter.

perceiving the random motion of particles suspended in fluid (Rasmussen & Bunker, 1996; O'Connell-Rodwell, 2007).<sup>104</sup> Potentially, elephants are able to be affected by, receive and transmit messages, and navigate their social worlds through material levels that humans remain ignorant of (at least outside of laboratories and microscopes). The horizons of our experience are always limited. What is not apparent to us, may be apparent for other animals.

Animal researchers have become proficient at mapping out the various cells and homologous structures in different organisms and how these bodies correspond to or are affected by different aspects of the environment (Despret, 2013a, 2013b). We know that Pacinian corpuscles are present in all mammals and each have different degrees of sensitivity dependent upon their density and dedicated cognitive architecture (O'Connell-Rodwell, 2007). However, even if it was possible to achieve a complete mapping of the intersections between the organism and the environment, this would not be the sum of the organism's possible affects and the world it is engaged in. *Umwelt* is an interpretative experience, a meaningful processing of an organism's unfolding engagement with the environment. Scientists might know that an elephant can sense seismic vibrations on the particle level. Yet, how these stimuli inform the elephant's *umwelt*, the immense depth of the landscape, and the expansive and multilayered social world it inhabits, evade human comprehension. Simply, humans likely lack the cognitive capacity to process a world so vast (see Sagan, 2010, p.23, for similar comments on whales). Humans can develop technology to perceive, through their eyes, movements on a particle level, but how the forms, difference, patterns, and constellations are meaningfully processed through the experiential worlds of other animals, is an insight that we cannot grasp ourselves.

I am not claiming that there is a radical incommensurability with humans and other animals. Humans and other organisms can have partially overlapping *umwelt*. Our evolutionary history and neurophysiological similarities to some animals, such as mammals, can give us greater insight into their subjective experience, and how they are affected by the environment (Fuentes, 2006). We know we partially share a lifeworld with African elephants, for example, because they can visually coordinate their attention with finger pointing (Smet & Byrne, 2013; interestingly this effect was not replicated with Asian elephants, Plotnik et al.,

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<sup>104</sup> This movement is referred to as "Brownian motion".

2013). Further, despite their physiological dissimilarities and reliance on smell, we recognise how their trunk can manipulate objects in a fashion that reminds people of a hand.<sup>105</sup> We can gain some access and relate to the elephant's experience through their familiar embodied engagement with objects in our umwelt.<sup>106</sup>

However, it still holds that unless we possess the exact “neurophysiological constitution” of the animal we will always be inadequate to the task of completely grasping the its world (Nagel, 1974). As Thomas Nagel argues in his seminal paper “What is it like to be a bat?”, even if humans simulate bat sonar through deeply integrated technological equipment, and experience elements of the world our biologically inherited senses could not grasp, we will still fall short. Nagel's argument is specifically about the qualia of phenomenological experience, and does not go so far to suggest that there may be aspects of reality that humans cannot intersect with. Regardless, biological differences will always point towards “humanly inaccessible facts” about this world that will be “beyond our ability to conceive” (Nagel, 1974, p. 439), and “we must be compelled to recognize the existence of such facts without being able to state or comprehend them” (ibid. p.441). Or, as animal trainer/philosopher Vicki Hearne (2007, p. 85) says, there are moments interacting with animals when, our “knowledge come[s] to an end.” Speaking about working with sniffer dogs, Hearne refers to the uncanniness of the encounter, when the handler points into empty space and commanding the sniffer dog to “find it!” The handler, Hearne argues, can never perceive “scent” – at least the rich sensorial world the dog is engaged in – so cannot possibly know what “it” is referring to; The handler only knows “it” exists by the determined and methodical work of the dog. By following the tracking canine, the handler gets a glimpse of the dog's scent-world, but the reality that is revealed remains ungraspable, and on “the far side of the limits of a handler's knowledge” (ibid, p.100).

In the forest with Bharat and the elephant, Alaka, we were unsure what Alaka sensed. She rumbled a warning, but we found no reference in the environment to fully interpret her response. Bharat and I did not consider Alaka delusional; we took it for granted she behaved

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<sup>105</sup> Elephants have poor eyesight but their sense of smell is keenest of all animals, bar none (Plotnik et al., 2014; Plotnik & de Waal, 2014).

<sup>106</sup> Of course, this observed familiarity does not mean that misidentification, and what is commonly referred to as “anthropomorphism” can occur. That being said, Frans de Waal (1999) has important commentary on the problem of Anthropodenial and the starting premise that humans and nonhumans do not have shared characteristics.

rationally and that there was something perceived, except we were not privy to whatever it was. Bharat does not think about animals through Uexküll's theory of perception, nor do we share the same ontological position regarding elephants or the world. Nevertheless, we are both aware that these creatures, by virtue of their difference, are able to smell and hear things that we do not. When I asked Bharat what Alaka could hear, smell, or sense when we were in the forest, he answered matter of factly, "I don't know."

The radical alterity of animal worlds is not an abstract or philosophical problem. Our intersubjective experiences with other animals are fraught with these limitations and uncertainties. Cross-culturally, the recognition of our perceptual differences is born from practical knowledge gained living alongside nonhuman animals (Milton, 2005). We intuitively understand that other beings are in possession of powers that enable them to affect and be affected by the world in ways that we cannot. Partially fenced off from nonhuman lifeworlds, the horizons of other organisms cannot be apprehended with any certainty: ultimately, the limits of what nonhumans can and cannot do, know and cannot know, is inconceivable (Calarco, 2008). Our engagements with animals reveal the frontiers of determinate thinking, that some phenomena are possible but the causes unthinkable, and at bottom we cannot wholly explain the world.

From this position of radical uncertainty, it is not impossible that elephants do demonstrate discriminating insight into moral character and can intervene in human affairs. That through inconceivable channels, elephants can somehow meaningfully intersect with worlds generally considered exclusive to humans. It is unlikely that an animal scientist would seriously entertain such an unexpected, wondrous possibility, however. The history of modern biology is partially founded on attempts to inhibit erroneous, anthropomorphized accounts of animal behaviour (de Waal, 1999). The rigorous reduction of nonhumans to biological mechanisms, ecological causes, and predictable behavioural laws places strict, interpretational limits on what animals are doing. While currently shifting, the boundaries of animal cognitive capacities have been largely defined in opposition to human cognition. Scientists, argues Ingold (2011), believe the world can be entirely contained and accounted for by frameworks, categories, and concepts; animists, on the other hand, remain open to being astonished by yet unknown horizons of the world's continuous becoming (see also Scott, 2013). People at Chakardo do employ categories and assumptions about who elephants are, their proper place, and normative behaviour. However, by adhering to the

notion that haathi occasionally manifests as god, people are open to the possibility that elephants can engage humans in unexpected ways, a potentiality enabled by their more-than-animal powers.

My informant's participation in the world's open-endedness was evident in theories of perception that made sense of the uncertain human-elephant encounter. Beliefs about supernatural hearing and vague formulations of god-like abilities tacitly acknowledged and imaginatively engaged with the intuition that elephants inhabited perceptual worlds beyond human comprehension. In uncertain moments, people were sensitive to elephants as beings with affective capacities which were unknown and potentially without limit, and this quality was foregrounded in engagements with haathi's divine aspect. Instead of dismissing the wondrous possibility of elephants, perceptual theories embraced them. Intersubjective inquiry into what the animal-god knew sought to make better sense of their unusual behavior, yet simultaneously exposed the interpreter to the nonhuman's radical alterity and sustained the sense of divine mystery surrounding the singular encounter.

### **An alterity that decentres**

One night in Chakardo, a shop owner had her grocery store raided by an elephant, and three bags of rice were taken. The bull elephant had broken the top part of the brick wall close to the ceiling and reached in with his trunk to carefully pull out the sacks. A young girl saw the elephant mid-theft and started yelling, alerting other people, and the bull apparently left without causing any problems. This theft was the first time an elephant had damaged her store. I discussed with the shopkeeper briefly why the elephant took the rice: she mused that elephants nowadays did not have enough food in the forest and so came looking in the village. People believed that if an elephant damages a person's property, then the victim has no need to get angry because they would someday be blessed with riches. Thinking about this, the shop owner pondered for a moment and sighed, and then asked me rhetorically how exactly that windfall would be possible, since she did not have insurance. Hers was one of several shops in Chakardo; I leadingly asked why the elephant targeted her place and whether she believed the choice was related to Ganesh. The shopkeeper admitted that she had a nagging feeling that perhaps she or someone in her family were to blame, a mistake was made that caused the elephant to come raid her shop. But ultimately, she told me, only God could know the reason why her shop was raided and damaged.

The reasons why haathi targeted the store escaped the shopkeeper. However, the elephant's unusual appearance and the divine threat he potentially embodied could not be ignored. Haathi was not only a god, but also manifest as a formidable, physically threatening animal that lived close to the community. The shopkeeper had to take seriously the possibility that the elephant's intervention in her life was coordinated with more than simply his hunger for rice. The shopkeeper gave weight to the actions of the elephant, and she was so convinced of the moral perceptiveness and intentions of these god-like animals, she questioned her own self-knowledge and knowledge of the environment: perhaps she unwittingly committed a wrongdoing, or her family did without her knowing.

Taking seriously the uncanny behaviour of the elephant had revelatory implications. The woman's belief about herself and her family had to be reconsidered in light of the actions of haathi, which she took as unveiling a reality about herself that, until the incident, had remained hidden. The event, if only to a minor degree, disrupted her comprehension of her world, provoking her to consider a new perspective, and possibly a course of action. If the shopkeeper did settle on believing a link existed between haathi's unusual behaviour and a transgression committed either by her or one of her family members, then she might have conducted a puja to please the gods, despite remaining ignorant of what she was guilty of doing.

Whether it is the sniffer dog who follows an invisible trail towards an unseen target in the distance, or the elephant that rumbles in the forest, there is a sense that the nonhuman animal can reveal concealed aspects of the world to their human partner. Not all animals, however, inspire a belief that they can have such penetrating insights into human affairs. They are socially and intellectually familiar, yet ambivalent beings, moving between deep forest and rural village, deity and animal. Haathi are significant and unique creatures in the landscape, charismatic, powerful, and destructive. And, obviously, the animal's form is shared with a popular Hindu deity. These might be some of the reasons they are readily regarded as having divine intentions and personhood. Human-animal studies scholar, Boria Sax (1994) argues that humanity's first gods came in the form of animals, speculating that because animals were physically impressive, or their difference inspired mystery, people first engaged the divine through them. Sax proposes that humans "need some point of orientation outside our species, something which does not look as we do, nor think in the same way" (p. 170). Through other animals we find "religious figures that can hear wavelengths inaccessible to



us, as does the bat, or can navigate by means of magnetic fields, as does the whale” (p. 170). People who live and become familiar with animals learn to understand that animals intersect with a reality that escapes them, yet can have meaningful bearing on their life. Listening to what animals have to say might expose humans up to other points-of-view, unforeseen opportunities, ghosts, the future, hidden treasures or dangers, and in the shopkeeper’s case, aspects of her non-conscious self.

Perhaps, there are potential benefits in placing such an authority in nonhumans. Multispecies ethnography (Kirksey & Helmreich, 2010) calls for an anthropology where humans are no longer the exceptional pivot of the social and ecological world. By de-centring our privileged view, ethnographers can better write and live as one being amongst others, as well as attain new perspectives on being human. Multispecies research is a “mode of wonder”, writes Ogden, Hall & Tanita (2013, p. 17) there is a “a hope that these alternative perspectives of what it means to be human will inform a new ethics of living in the world.” To learn how to take our cues from a being with unknown powers of perception, and assume there is something significant they can direct us toward, theoretically, would decentre a human-centric understanding. This position would leave people open to novel inspiration and direction not available to, or even logical within, our cultural, historical and biologically limited worldviews. The uncertain encounter points towards an idea that might lie at the heart of multispecies ethnography.

## **Conclusion**

Paul Nadasdy (2007) argues that we must take seriously our informant’s claims that animals gift themselves as prey to the hunter. Nadasdy trusts the Kluane people’s perspective on the world, even though he cannot necessarily apprehend the world as such, and believes reports of unusual animal behaviour is possibly valid and not just cultural construction or metaphor. The way animals regularly interact with humans has given cause for the Kluane to believe that this social exchange with animals does actually happen. For Nadasdy, a solution to comprehending the human-nonhuman relationships of our informants is to become similarly attuned to the environment through the culture’s skilled and storied practical engagements (see Ingold, 2000). Potentially, through participant observation, anthropologists also can become receptive to the ways in which animals sometimes communicate and offer themselves to people. Nadasdy’s position echoes David Graeber’s (2015) definition of

“ontological and theoretical realism,” where no one position on the world can ever encompass reality. As anthropologists, we should recognise “that neither party to the conversation will ever completely understand the world around them” (Graeber, 2015, p. 36). This necessitates that radical alterity is a constant aspect of our everyday existence; the horizons of our comprehension, and our informants, will always be limited (Graeber, 2015). It is entirely possible that the Kluane hunters are attuned to something about animals that the Western-trained anthropologist is not.

I argue in this paper that it is from a similar awareness of nonhuman alterity that elephants are revealed to my informants as divine persons. When elephants behave unusually towards humans, people are sensitive to the unknowable aspects of the nonhuman other, their unexpected behavior, ambiguous intentions, and inconceivable capacities. These aspects reveal the existence of divine power and provoke an experience of ontological uncertainty. People take elephants seriously and worth paying attention to, believing there is good reason for the animal-god’s strange behavior, even if the reason is not readily apparent.

The shopkeeper was unsure whether the elephant breaking her store was driven by hunger, or another reason related to herself. Consequently, she could not ascertain what haathi sought to accomplish, and hence whether the creature should be responded to as deity or animal. As a western-trained anthropologist, can I confidently offer an answer to that question? In fact, I have my own uncertainties about elephants’ capabilities and intentions. One evening, Kaliya, who regularly patrolled the village to monitor elephant movement, was killed by a train. The next morning, two male elephants came out of the forest after dawn and spent the day in the wetland. “What elephants are these?” someone muttered as we sat in mourning at Kaliya’s home. Following this, elephants stopped coming to the village for an entire month, even though in the time leading up to his death they were present every day for a fortnight. “The elephants know something” I was assured. Even now, I am still left with the uncanny feeling that the elephants’ behaviour was singularly connected to Kaliya’s death, although I cannot not say how they became aware of the loss, or why it was significant to them.

While my own and my informant’s ontological premises differ, we both inhabit an uncertainty that arises at the limits of what we can understand about animals and the world. A shared awareness that haathi engages a reality that we cannot grasp the limits of, and that potentially intersects with the human world in familiar and meaningful ways. In these moments of wonder, Chakardo villagers reenchant the world and reaffirm that they live

alongside and are engaged with divine power. As an anthropologist, I attempt to preserve this uncanny sensation, acknowledge the limits of my umwelt, and not draw conclusions on what an elephant can and cannot not do. Keeping open to these unknown possibilities helps to unsettle my ontological beliefs and take seriously the accounts of human-nonhuman relations collected at my fieldsite.



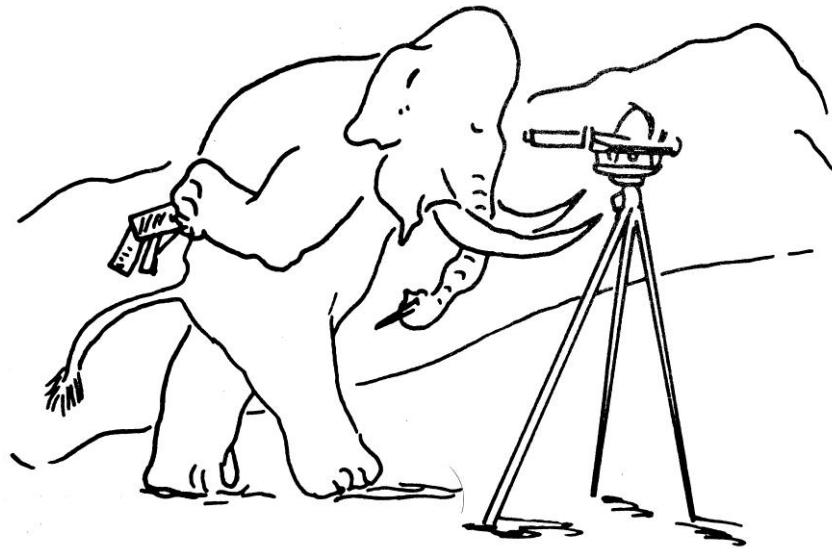


Figure 4.1: “The knowing old engineer”

The paths they make over the ranges of hills they frequent are quite wonderful examples of engineering, and one cannot help being struck with the skill with which they are traced; the gradients are truly wonderful, avoiding every steep and difficult ascent by regular zigzags, and I could not help thinking what a knowing old engineer the first marker of the track must have been.

Figure 4.1 and the above quote are reproduced from the chapter “Elephants” in the book *Records of Sport in Southern India* (Hamilton, 1892, p. 142).





Figure 4.2(a) [left]: Guddu Dhapa walking along a forest path carved out by elephants. Note the width and hard, pounded surface of the trail which runs between clumps of bamboo. Figure 4.2(b) [right]: Lakhindra Teron returning with some bamboo, trimming the edges of the path known to be used by both species.



Figure 4.3: Path detail.





## Chapter 4:

# Shared forest pathways

The rainy season ended two months before, and the forested hills next to Chakardo had become easier to traverse. The leeches that thrived in the moist heat had become few, and the trails muddied by the rains turned firm. The dry season was a good time for work, to begin harvesting the rice and to do other odd household jobs. Lakhindra had set aside this winter to mend the bamboo fence that ran around the perimeter of his home; after several years, the wood had become brittle and dark in colour. I visited Lakhindra to talk about elephants once or twice a week. He was an excellent woodsman, a skill the man attributed to his Karbi identity and their cultural and historical relationship to the hills and forest. Sometimes I would accompany him when he walked into the hills that rose adjacent to his house to collect bamboo. Lakhindra seldom needed to move too deep within the forest to gather wood, perhaps a few kilometres, but one morning we trailed a little deeper, to explore and talk along the way. We took the path that left the paddy fields opposite to his home and wound up through the tall shrub. Elephants also used this path when they emerged from behind forest cover and crossed through the village towards Deepor Beel. There was a large bamboo clump situated thirty metres from the farmland amongst the shrub. Elephants often waited here in the evenings before they descended from the hills under cover of dark. At the base of a bamboo clump, we found some elephant dung, perhaps a week old, with slender mushrooms growing out of it.

Following the track to the top of the hill, the forest grew slowly denser, taller trees remained uncut here and small trees and larger shrubs grew thicker on either side. This place was known to the villagers as *Katalbari* – *katal* being the Assamese word for jackfruit. Many of the trees were now gone, but at least five remained, although it was December, and the fruit was not in season. Jackfruit is often grown at home and can mature to the size of a large watermelon. The fruit is rich, fleshy, and favoured for curries in Assam. Elephants, too, love jackfruit. Alongside the path, we found a *dao* (a machete-like blade used for cutting wood) resting at the base of a tree. Lakhindra paused to wonder who would leave behind such a valuable item, commenting that perhaps someone dropped it in a hurry after fleeing from elephants. Lakhindra then laughed and pointed a little further up the track where the path cut

a narrow gap through tall shrub. He described for me how the day before he and a neighbour were busy talking nearby, when suddenly elephants appeared out of nowhere, their imposing bodies silently obstructing the path. Lakhindra and his friend wasted little time and quickly fled back down the hill along the track they came. I estimate that Lakhindra happened upon elephants in the forest once every several weeks.

At one section along the path, the tall grass to our left had been completely flattened by a passing herd. Lakhindra interpreted the scene, describing how the elephant herd turned around at this point, as indicated by the way the swirling grass broke. Other elephant traces cut across the path: large bodies had recently flattened vegetation on their way up the hill, probably searching for more food. Enjoying ourselves, we moved deeper inside the forest, later taking a break at a slow moving, shallow stream surrounded by huge boulders. Decomposing leaves passed by us in the running water. Dark lines were traced along the boulders a metre above our heads, where in the past, water used to cut a deep channel through the hills and flood few metres high. Lakhindra mused how it never rained enough anymore to fill the space carved by prior storms and rising rivers, and that the change probably had something to do with so many of the trees being cut down. To my left, I could see more recent and familiar marks stumbling down the embankment, the huge footprints of an elephant cut into the clay. Traces of elephants, and the changing environment, were all around us.

The forest is a vibrant place of human and nonhuman activity, emerging from the interaction between many species. There is continuous movement and growth: plants flowering, entwining, and decomposing, other organisms burrowing, chasing and leaping, streams flowing and winds blowing. An array of vital forces operating at different scales and tempos, weaving together and unravelling. Ingold (2011, 2015) asks that we imagine life as lived along lines, entangled and knotted into each other across time and space. The organisms, materials, and other forces that compose the forest and constitute its continuously emergent forms are deeply intertwined with and shape each other's trajectories, in what Ingold refers to as "meshwork". Forests arise through "patterns of unintentional coordination," an open ended and constantly unfolding gathering of beings (Tsing, 2015, p. 23).<sup>107</sup> Humans and

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<sup>107</sup> Tsing was referencing the concept of assemblage to describe the organisation of actors in a forest. Ingold (2015) has argued against the use of "assemblage", claiming that the term implies figures that are too static, although the manner in which Tsing uses the term does not necessarily conflict with Ingold's theory.

elephants are only a few threads of this interwoven and emergent ecology, although as large, numerous, and intelligent, the two species also have a disproportionate effect on the environment, structuring the composition of the ecology in significant ways.

The forest is a zone of human-elephant sympatry, a place where the habitat of two species geographically overlap and the animals regularly encounter each other. Sharing the same place requires some negotiation on the part of both animals. Yet while humans and elephants tend to actively avoid each other, this chapter will explore the various ways the two species are interconnected and their movements coordinated whilst inhabiting the forest. An important interface is the emergent shape of the forest itself, which has been significantly modified by both species across time, participants in what Fuentes (2010, 2012) refers to as a “mutual ecology”. Humans and elephants are drawn to and interact with the same fruit, bamboo, streams, and trails. Pathways in particular are vital to the movement of both species through the landscape. These trails are not exclusive to either species, I will demonstrate, but exploited by both animals to navigate and revisit significant places, their trajectories are coordinated along these mutually constructed features. This chapter is about life lived along paths (see also Ingold, 2011), trails that thread together nature and culture, humans and elephants, as well as the other beings that compose the open-ended, mutual ecology that I will refer to as the forest.

### **The forest as a mutual ecology**

Illegal logging and the pressures of increased settlements on the fringes of the forest have had dramatic effects on the ecology. Lakhindra remembered when large bamboo was far more common, clumps now reduced to younger and thinner populations due to excessive cutting. As we followed a track for several hundred metres over a small pass, Lakhindra directed my attention to the trees on the other side of the valley. He told me how around twelve years ago, he found some turmeric plants growing on the hilltop. Turmeric, a plant often only found growing domestically, was taken as evidence that at some point in the past people must have inhabited that hillside, letting their gardens go feral when they moved on to a new location. Locals believed that the site was somehow related to a previous Karbi settlement.<sup>108</sup> Others mentioned that the aforementioned Katalbari might also have been the

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<sup>108</sup> The place was referred to as *Mikir Pithi*: “Mikir” is another name for the Karbi, now considered derogatory. Pithi refers to a layer or surface boundary.

remnant of an old village. Common domestic plants such as jackfruit and mango grew at various places in the forest, suggesting a pattern of abandoned village sites being overgrown with time.

The broader hilly landscape of Rani-Garbhangha Reserve Forest (RGRF) had long been the site of shifting human settlements. Funerary menhirs were littered throughout the hills in the south; and archaeological findings have uncovered many indicators of an undated, Neolithic economy (Hazarika, 2016). The RGRF had already been significantly shaped by human activity hundreds of years prior to the crisis of recent deforestation, and the large-scale ecological transformations initiated by the British during the colonial period (see Chapter One).

Among the first projects of the colonial administrators of the new Assamese province was to establish trade routes between Sylhet, Bangladesh, and the Assam. Major Briggs, in 1862, proposed a potential route from Guwahati to the British summer capital of Shillong (Briggs, 1866), part of this route passed through what is now the RGRF and the Ri Bhoi and Khasi Hills area. The densely-forested hills within this frontier expanse were sparsely populated by humans; Briggs noted at that time that an isolated village might only be found every five miles. Yet, scattered in between was evidence of older, deserted settlements. Briggs reported that the constant shifting of villages were “former habitations, deserted... [as a] consequence of the ravages of wild elephants” (Briggs, 1866, p. 165).<sup>109</sup> Briggs’ suggestion that interactions with elephants drove settlements to move and occupy other parts of the landscape perhaps provides only half the picture; people’s movement was probably also determined by the nature of shifting cultivation.<sup>110</sup> Shifting cultivation, or *jhum*, is an indigenous farming practice common to the hills of Asia in which a hillside is cleared of trees, burnt, and the land farmed for rice. Once harvested, the land lays fallow for periods of

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<sup>109</sup> “Woodsmen” he identified as Karbi, Rabha, Khasi, and Garo.

<sup>110</sup> Briggs also presented other evidence that patterns of habitation in the area have been deeply affected by the movements of these large animals. Briggs (1862) also mentioned that a valley nearby, possibly Pathakarma in Meghalaya, had to be abandoned because of elephants. In the mid twentieth century, many villages in Khasi Hills were under constant strain from what is now referred to as human elephant conflict (Tracey, 1967). Not even thirty years ago, a forest village on the eastern edge of the Rani reserve forest was deserted because the site was located on an elephant corridor. This site has now been re-settled for cultivation.

seven to even twenty years, and allowed to regrow.<sup>111</sup> The farmers, in the meantime, move to a new area to cultivate. Villages would have shifted across the hilly landscape over time, occupying new hills, rotating throughout the forest.

These agricultural practices significantly affected the forest ecology. Early foresters speculated that the thick growth of sal trees along the Khasi and Garo Hills was partly a result of indigenous farming methods (see also Tripathi & Shankar, 2014).<sup>112</sup> The forests in this region arose “not only from the reproductive biology of the species, but also from its long-term interrelationship with human settlements” (Flint, 1998, p. 435). While dense, government managed sal forests can be characterised as species poor, the forests of Ri Bhoi and by extension RGRF were found to be rich with a variety of vegetative life (Tripathi & Shankar, 2014), and hence the potential to support greater density of animals. Associates of sal trees include species that “produce edible fruits, fodder and compost, fibres, leaves for umbrellas, medicinal plants, thatch grass, brooms and many other products depending on the species composition” of the forest (Gautam & Devoe, 2006, p. 83). Bamboo, another dominant species in these hills, is also linked with the regeneration of forest from shifting cultivation. In the southern hills of the RGRF, old village sites were thick with this giant woody grass. Further, shifting cultivation sites are not monocrop plantations; they were used to grow a variety of different kinds of plants, such as banana and mustard seeds, amongst others, and these plants contributed to the forest composition. The ecology in this area, in other words, is rooted in a long history of human modification, emerging out of cycles of clearance and regrowth in tandem with the lives of shifting cultivators.

Humans are important ecosystem engineers (Jones, Lawton & Sachak, 1994), organisms that directly or indirectly effect significant changes in the biotic and abiotic aspects of the environment. While all organisms leave traces of their existence over the course of their environmental relations (Ingold, 2011), certain species, through their activities, modify the world in dramatic ways that can have broader and longer lasting effects. Changes in the environment alter the niche of both the ecosystem engineers themselves and those species that live alongside them. Human modification of forest through shifting cultivation has had

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<sup>111</sup> These are optimal times, and historically were the case when population was less, and people were freer to move. However, due to increased human population, loss of forest area viable for shifting cultivation, and political boundaries that limit movement, shifting cultivation sites are now rotated every few years.

<sup>112</sup> *Forest Administration in the Province of Assam 1891-92*, p. 10.

certain implications not only for vegetative life, but for the populations of elephants that have ranged through this hilly habitat. Forests that have communities of people living with them are attractive to many animals, especially elephants who thrive on secondary growth (Sukumar, 2003). The fresh bamboo, wild grass and banana trees that grow on fallow jhum are very appealing for elephants (Stracey, 1967). Even the sal trees are palatable to the RGRF elephants who feed on the bark, grinding their molars against the trunk with great vigour.

At the same time, elephants themselves are also important ecological engineers (Haynes, 2006, 2012). The large roaming bodies of herds often destroy vegetation, uprooting trees and trampling undergrowth. Trees that resist being toppled were more likely to compose a forest ecology that featured elephants (Pradhan, Wegge, & Moe, 2007). Elephants are also central to the distribution of various forms of plant-life. They are generalist eaters and consume a wide range of plants (Sukumar, 2003). Elephants' voracious feeding habits and far ranging movements result in the distribution of seeds of favoured trees through defecation. Take for example, the elephant apple – *Dillenia indica* – an organism that has a seeding dispersal strategy that exploits the feeding patterns of elephants (Sekar and Sukumar, 2013). These trees grow not only in the RGRF but also widespread throughout South and South East Asia, a region once the dominion of the Asian elephant. Large herbivores like elephants, in their role as ecosystem engineers, are sometimes referred to as “mega-gardeners” (e.g., Baskaran & Desai, 2013). Just as elephants have benefitted from human ecosystem modification, so do elephants also shape the niches of a variety of different organisms that live alongside them (see, Pringle, 2008; Campos-Arceiz, 2009; Campos-Arceiz & Blake, 2011; Haynes, 2012). An elephant's footprint can become a stagnant pond after recent rain, and home to a range of insect species (Remmers, Gameiro, Schaberl, & Clausnitzer, 2016). Even huge, half-digested, fibrous balls of elephant dung tie together a variety of organisms. For instance, a dung beetle in the RGRF is attracted to the dung, which in turn draws in the boars who rummage through the faeces looking for the insects. Humans too. On one occasion, the family I lived with requested that I gather some fresh elephant dung so it might be included in a puja, an item of power because of its relationship to the animal god,

A forest is a historically emergent process, a product of the interactions between multitude of lifeforms that compose it. Humans and elephants are also inter-active participants of that ecosystem, yet as powerful “engineers” their practices have significant effect on the shape

that the forest takes (Jones, Lawton & Shachak, 1996; Sukumar, 2003; Haynes, 2012). Ecosystem engineering is closely related to the concept of “niche construction”, which also analyses how organisms modify the world they are immersed in (Odling-Smee, Laland & Feldman, 1996; Laland, Odling-Smee & Feldman, 2000). Niche construction, however, pays attention to the feedback loops for species evolution that result from interacting with an environment under modification (Fuentes, 2010). An organism inhabiting a place modified by its own actions, in turn modulates the availability of environmental resources, which it then adapts to on phylogenetic and ontogenetic levels. For instance, elephants that feed on *dillenia indica* and disperse its seeds in a manner favourable to its growth, will be able to exploit the (literal) fruits of their labour in the future and across generations. In turn, the location of these trees can determine the ranging area of elephants. The feedback process in niche construction theory is one of continuous reciprocal causation, the behaviour of adapting organisms cannot be understood separate from the emerging environment.<sup>113</sup> Further, these modified landscapes feedback not only into the course of the ecosystem engineer’s own lives, but also into the movement and growth of other organisms who also have their niches affected by the engineering. The RGRF can be understood through the concept of “mutual ecology,” an “N dimensional space that an organism lives in and creates interactively with multiple species” (Fuentes, 2010, p. 603). Species become “partners” in the construction of overlapping niches, an environmental interface that connects humans, elephants and other organisms at “social, ecological and physiological levels” (Fuentes, 2010, p. 605). Through this integrative niche framework, the divisions between the biological and the social breakdown. These factors are instead interpreted as intertwined processes that must be together accounted for if we are to have a more complete picture of human development and behaviour (Fuentes, 2016).

### **Best to avoid crossing paths**

Humans and elephants have differentiated and overlapping relations with the other beings of the forest. For instance, Lakhindra and elephants were both attracted to bamboo. Their preference for this plant coincided but not for the same purpose. The elephant was drawn to the new shoots growing from its creeping, rhizomatic roots, or the sweet, fresh leaves that

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<sup>113</sup> “Continuous reciprocal causation” is a term appropriated from cognitive philosopher Andy Clark, (1998, p. 163).

sprouted after the monsoon rains. For his fence, Lakhindra was drawn to bamboo wood that was slight, yet not too brittle, stalks that would remain firm. A strong and highly versatile material, bamboo could be used to create all manner of objects. For other housing constructions, the stalks he sought were mature, thick and a deep green. Elephants disregarded these features, breaking the best stalks for construction inadvertently when their trunks wrapped around them and pulled off all the leaves. Lakhindra, in contrast, was not interested in the leaves and trimmed them off with his dao, leaving them littering the ground. Perhaps an elephant plucked them up later.

On the morning Lakhindra and I walked the forest paths searching for bamboo, we had stopped to rest momentarily on some small boulders at a stream. As Lakhindra spoke about the lack of rain nowadays and I focused on a set of heavy elephant footprints cut into the clay on the embankment, we suddenly heard sounds to our right. Five men were crossing downstream, following a different path that ran from a nearby village. We decided to join them. They were only young; I doubt any was older than 25. One of them carried a large hack-saw blade and two handles, which would be used in tandem to cut down a tree. We walked and talked with the young woodcutters for a while, asking where they had come from and where they were going. They seemed to be in a hurry, and we lost them amongst the bush as they marched on ahead. While elephants liked to tear leafy branches from trees and crunch them in their jaws, wood cutters prefer to cut down an entire tree, divide the logs into sections and dry them out in the forest, to be transported out a few weeks later.

Not every person who lived on the fringes of the forest entered it, especially this deep. The economically underprivileged from Chakardo needed to collect firewood for their kitchens, and mainly limited their daily excursions to the fringe hills. In the past, people would also follow the forest pathways to gather leafy vegetables, but these days, villagers were mostly dependent upon local stores for their vegetables. Bamboo remained a popular resource, the hills being littered with these plants. On market days in the early mornings, many people from the forest villages inside the RGRF such as Garbhanga, Chutter, and Amring could be met along the different main paths that led to the towns in the plains. On their backs, they carried bamboo goods, forest vegetables, and betel leaves for sale. These paths were traces of older economic systems that linked the plains and hills communities throughout the Northeast region: the trail leading down to Rani market on the western side of RGRF has



been documented at least 140 years ago.<sup>114</sup> Some of these trails now had deep gutters worn out from large trunks of trees being dragged by buffalo under the cover of night. From illegal timber operations deeper in the forest, people would also haul heavy pieces of wood on their shoulders along these paths down to the plains. They would walk three to four hours keeping shy of any strangers and particularly opportunistic Forest Department officers seeking bribes. They also needed to keep shy of elephants: if they saw any herds or an individual male, they quickly dropped their load and fled, to return to collect the wood later. Locals who engaged in illegal timber logging practices were socially and economically disadvantaged, with few other avenues to earn alternative incomes apart from this underpaid and highly strenuous work.

While we had lost the group of young woodcutters, not too much later we came upon them again, overtaking them on the path. One of the group was crouched up ahead, cautiously looking over the crest of a small mound. “Haathi”, he quietly warned us and then made a reverent gesture touching his chest and forehead. Moving cautiously, we found the others along the trail. One of the boys was walking back from further up the path where he was collecting his sandals. A single elephant apparently had suddenly emerged right in front of the group, cutting across the path as it foraged between the shrubs. The group may have been chatting and not paying attention. The young guy had turned tail in such a frightened hurry that he left his thongs behind.

We regrouped with some of the men on the trail. The path stretched out in front of us through a small valley, casting a line into the bush and turning a corner about fifty metres ahead to disappear behind the trees. The ground was flat, filled with tall trunks casting black shadows against a backdrop of luminescent green leaves. The place was referred to as *Oudali*, and was filled with elephant apple trees. Favoured not only by elephants but also monkey, deer and humans, this fruit with a hard shell was delicious with fish. The path was unusual: it was far too wide, flat, and well-trodden to be the product of humans’ use alone. This trail was frequented by elephants; what locals at Chakardo called a *dandi*. Dandi is an Assamese word that identifies a path that elephants took regularly across time. A number of these repeatedly visited traces of elephant movement threaded throughout the RGRF.

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<sup>114</sup> *Progress Report of Forest Administration in the Province of Assam 1989-90*, p.7.

To the right of the dandi, hidden up on the hill amidst the trees, elephants were descending. One of the older females roared, trembling the valley. By the sounds, we deduced that they were moving as two separate groups. Lakhindra and I, with the more brash of the boys, silently crept forward barefoot wanting a closer look. We could hear the elephants stopping from time to time to eat as they came down the hill, breaking bamboo branches. Lakhindra dared not go any further as we were unable to predict where the animals might come out of the thick bush, or exactly how far they were from our position. We were ready to retreat at the first sign of trouble.

I was taught to maintain a healthy respect and fear of these animals by my guides at Chakardo. Human-elephant interactions in the forest were often only ever fleeting encounters and not desirable. When people become aware of elephants up ahead in the distance, they either turned back towards the village or waited for the animal to move along. Disturbing elephants could result in agitating them and put a person at risk of being killed. Sometimes people would take an alternate route, following a path on high or below, while remaining closely attuned to the elephants, maintaining a distance far enough not to bother the animals. If humans and elephants unexpectedly bumped into each other, often, the person fled the scene with great urgency. I noticed that villagers often claimed that elephants chased them when it was not always the case; likely an angry trumpet or flashing of the ears, basic threat behaviours, were all a person needed to see before bolting. Locals were not keen on maintaining proximity to elephants in an environment where the humans were at a distinct disadvantage, and at a time when elephants were becoming increasingly aggressive and unintimidated by humans. A three-tonne bull can run up to speeds of 6.8 metres per second, or 25km per hour (Hutchinson et al., 2003). In a forest, however, the most frightening aspect of elephant encounters is that while the person fleeing needs to weave around shrubs and trees, an elephant can just charge right through them! (see Lewis, 2003).

For these reason, the lives of individual elephants and herds in the jungle were often concealed from me, like they were from the villagers. Even some of the Karbi who were settled in the shifting cultivation villages of the RGRF and very familiar with the forest, remained ignorant about these unmissable animals. For instance, some young men, local hunters, informed me they were unaware that male elephants went through periods of musth – periods of heightened testosterone and aggression generally signalled by a dark stream of fluid emanating from their temporal glands on each side of their heads. When I let on that I

was surprised by this, one of the hunters replied that the villagers did not go near or stay close enough to elephants to notice those details. The two species communities lived beside each other with only fleeting real knowledge of the others' habits and behaviour.

The individual elephant that crossed the path of the young woodcutters at Oudali was possibly a male that was attached to the group coming from behind. Males mating with a herd tend to move apart from the females and juveniles, but usually range close by (Sukumar, 2003). Herds were composed of closely-knit females with strong genetic and kinship ties, all descended from a common "foundress" and led by the older "matriarch" (Fernando & Lande, 2000; Vidya & Sukumar, 2005).<sup>115</sup> Elephants live in a fission-fusion society: a group can split up or merge into larger ones, and when food is sparse, herds will dissipate into the basic family units of mother and children as a strategy to maximise foraging efficiency (Vidya & Sukumar, 2005). The two groups we heard in the hills might have been a herd split up into sub-groups for foraging purposes. Some evidence suggests that Asian elephants, like their African cousins, organise into "clans", groups that might consist of many related elephant families sharing overlapping ranges (Sukumar, 1989). Their seasonal movements are broadly coordinated across a landscape. This herd was likely not the only elephants in the area.

The elephants that Lakhindra, the woodcutters' leader, and I had been observing had crossed at a distance and stopped to feed again. We could see the trunk of one of them reaching up between the trees. After about twenty minutes, the young man began to get impatient, wanting to move on ahead, although his friends did not share his enthusiasm, hanging back the entire time. The woodcutter alongside us began telling the elephants *Ja! Ja! Ja!* (Go! Go! Go!). Lakhindra in turn banged his dao on a nearby branch – *Dok! Dok! Dok!* Their announcement seemed to work, and the treetops swayed ahead as the elephants crashed their way up the hill to our left. In the meantime, after a good deal of persuading, the young man leading the group had successfully mustered the rest of his fellow woodcutters to move

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<sup>115</sup> The term matriarch refers to a relationship of authority by the older female in the herd. This social status has been commonly observed in African elephants and supposed in Asian elephants. However, a recent study by de Silva, Schmid, and Wittemyer (2016) has found that the dominance hierarchy found in African elephants, do not necessarily map on to herds in Sri Lanka. The authors suppose that lack of clear dominance hierarchy may be related to the relatively more stable environments in Asia, both climatically and due to lack of major predators - and so herds were not necessarily dependent on the experience of older females. Whether these social dynamics extend to Assam is unknown. For the time being, however, I will persist with referring to older females as having a significant leading role in herds, which is also supported by my informants who often referred to the "big female" (*dangor maiki*) as leading the herd.

forward. Lakhindra reassured them, even though he later confessed that moving on so soon after the elephants was a little dangerous. We saw the group wander up ahead of us along the wide, well-trodden elephant path. The last man followed with some trepidation as he scanned the bush around him.

Elephants also, if they perceived that a group of humans were approaching from afar, tended to quietly avoid people, perhaps by ascending or descending the hill, particularly the herds with their young. However, as discussed in Chapter One, this response is less common these days, and elephants were more likely to respond to human presence aggressively. Still, a pattern of avoidance does generally characterise human-elephant interactions. Elephants were less likely to linger on the hills closer to human habitation during the day, keeping deeper within the forest, “away from the sounds of humans.” At dusk, they drew closer and would only appear outside of forest cover at night. Knowing this, people rarely walked through the hills during the evening and even maintained caution in areas of the village close to the treeline and where elephants were known to emerge.

Despite human and elephant sharing habits, tastes, and habitat, both species tend to keep clear of the other. Kohler (2000) notes a similar negotiation of foraging spaces shared by the Baka and African forest elephants in the Congo: Baka gather food during the day, and elephants “gather” at night. The elephants avoid the Baka, possibly due to a history of poaching (Kohler, 2000). Kohler interprets these places where humans and elephants obtain food as sites of potential conflict. While this characterisation may be valid, the coordinated use of shared place might be read differently. The species’ alternative foraging times could be interpreted as strategies of avoidance played out between human and elephant. Sharing of place and overlapping ways of life are made possible by each animal learning how to keep their distance and evade provoking the other. These strategies of avoidance are also enacted in other human-elephant landscapes: for instance, in Amboseli, Kenya, elephants who live near the Masai will also actively avoid contact. This allows them to share and use resources at different times (Kangwana, 2011). The same pattern of strategic and mutual avoidance was also present between human and elephants who inhabited the forests of the RGRF.

Humans and elephants responded to each other by fleeing or giving chase, by proceeding cautiously or actively avoiding; affective relations in close encounters were characterised by anxiety, fear, or anger. Both species dwell together but at a safe distance. Human and elephant inhabiting the fringes of forest and village, have developed this precariously

negotiated relationship with both animals warily attentive to and coordinate with each other's rhythms and activities. Even when keeping their distance, or occupying places at exclusive times, human and elephant lives and activities are mutually inclusive of the other. The closely coupled, intimately attuned, face-to-face encounters which are often the subject of human-animal research does not necessarily capture the relations of avoidance played out at RGRF (e.g., Game, 2001; Despret, 2004; Haraway, 2008). Living alongside each other in the forest, elephants and humans maintain their distance to survive, a respectful and non-disruptive mode of sharing place. Only occasionally do they cross-paths. Although despite actively keeping their distance, this is not a negation of sociality. As Matei Candea (2010) argues, a disconnection from animal lives does not necessarily imply an absence of relationship, rather it is one possible mode of living alongside nonhumans. Being with other animals, often requires the continuous maintenance of a balance between engagement and withdrawal from their lives (Candea, 2010; see also Latimer, 2013).

### **Traces of elephant life**

After our meeting with the elephants, Lakhindra and I decided to head back to Chakardo, returning by the same path we came. As we walked, a monkey leapt over our heads, crashing unseen, whilst small broken branches fell on the pathway in front of us. A thick line was left in the sand where a python had crossed the trail in the morning, winding between two rocks. Lakhindra and I were guided steady by the paths we followed, yet our attention inevitably went with the constant movement and growth of other things and the traces they left behind. Like other organisms, as we walk, we took part "a world-in-formation... rhythmically resonant with the movements of others around us" (Ingold & Vergunst, 2007, p. 2). We stopped by a large bamboo clump along the way, decades old, the branches reaching out across the trail and arched out high above our heads. The wood was thick and strong and suitable for Lakhindra's purposes. He cut a few branches, and we then carried them back on our shoulders. Not far past Katalbari, where Lakhindra had run from elephants the day before, we noticed something unusual along the path. The stem of a small flowering plant was bent across the trail. Lakhindra recalled that this plant was not broken when we passed this area earlier. He realised that an elephant must have been on the path while we were deeper in the hills. Judging by the traces it left, the animal was probably alone cutting his own trails through the shrub, foraging for food. We laughed, nervously, and continued along the path, back towards the village.

Walking in the forest – even only in the wake of elephants – can be a social activity attuned to the traces of elephants’ movements, their social lives, and their relationships with the forest inhabitants.<sup>116</sup> These traces might be obvious and alarming: the sweet pungent smell of a herd who had recently been in the area, or fresh dung and bamboo leaves scattered along the path. Other clues can be amusing: a tree uprooted or the long grass flattened and inexplicably swirling in all directions. Traces might also reveal evidence of the idiosyncrasies of individual elephants. One morning, the mahout Bharat and I found a section of a path collapsed by a precariously placed elephant foot. By placing his own feet on the collapsed section, Bharat enacted what he believed might have happened: on the precipice of a steep slope, the animal had attempted to reach out and grasp with his or her trunk the leaf covered branch of a favourite tree several metres away. By stepping into the elephant’s shoes, the trace allowed Bharat, to a degree, to embody and understand the elephant’s intentions and relationship with the environment. These indexes of elephant life were scattered across the landscape and of various ages — some quite recent, if elephants have been the area, and other indexes months or even years old. Even though both species actively avoid each other, humans were still engaged with and could participate and respond to the lives of elephants at a distance.

Traces can be physical changes in the landscape or the altered course of other living beings. They may be immediate and ephemeral, for instance, when the trees temporarily shuddered in the distance, stimulated by vibrations caused from the friction between elephant bodies and tree trunks. While we couldn’t see the elephants, they were revealed to Lakhindra and myself through indexical signs, part of a chain of connections translated across different things (see Kohn, 2013). Traces may have a temporary existence, such as elephant dung, a broken flower stem, or when a person changes course to avoid crossing paths with an elephant. Other traces give longer lasting shape to the world. The relatively permanent paths made by humans and elephants when they repeatedly walked over the same route, for example. Enduring paths are interesting because they can last across generations and give shape to the trajectories of animals in the future, both of the same and another species.

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<sup>116</sup> Ingold (2007) refers to “traces” in Chapter 2, noting in the animal world they most commonly result from the movement of animals and the tracks they leave behind, and with humans Ingold speaks about the trace of a line. Here I refer to it more broadly as any change that emerges through interaction with the environment.

Through tracks we can become entangled with our own species traces and the traces of others.

### **Shared affordances**

If we imagine elephant movements as simple lines weaving through a landscape, then the patterns and territories they trace out paint a remarkably different picture compared to humans. Chakardo villagers like Lakhindra express a sedentary pattern: they will cast out amongst the trees during the daylight and draw back to their village in the afternoon, tied to the stationary sites of domestic animals, rice and the family home. Elephants are unsettled, nomadic: they thread alongside, against, and sometimes through trees, between distant water sources and ecosystems, continuously moving and feeding. Yet, both human and elephant are habitual beings. Just as Lakhindra would daily take the same path through the forest to find good quality bamboo, so too would the elephant herds revisit the same trails as they foraged for food and migrated between places across seasons. The predictability of elephant movement was observed by British hunter and elephant expert G.P. Sanderson (1882, p. 72) who noted how “elephants keep strictly to beaten tracks when traversing the jungles.”

*Dandi* – elephant path – refers to a place frequently used as a conduit for movement, and not necessarily a visible trail. Elephants, for example, habitually utilise “corridors”: a long, narrow strip of land between two habitats or ecosystems that wildlife follow to move between places (Johnsingh & Williams, 1999). A corridor can be considered one example of a dandi, although there are other types. In this chapter, I employ the term dandi to refer to forest tracks within the environment that elephants were observed to use. Elephants follow these paths to travel between different parts of their range. “This is their [the elephants’] tradition,” I was told, to find one dandi and keep to it year after year.

Tracks emerge over time, feet pressed repeatedly over the same section of forest floor will wear away and stifle the growth of vegetation. As Lakhindra and I walked through the forest, both our bodies rubbed against the shrub, knocking back leaves, breaking twigs, shaping the growth of plants that defined the edges of the trail. Over time, the bare earth and gaps in the vegetation created the distinguishing marker of a track. The creeping rootstalks of grass that reach out across the trail were ground underfoot and had no chance to cast their own lines and thrive under our own. A well-worn path is evidence of its constant use and continued function for travellers; the more they use the track, the less vegetation can use the same

ground. Paths are a route in the environment revisited time and time again until they become relatively permanent features of the landscape. Tracks are not inscribed into the earth; rather they are generated through the interactions between the travellers and other organisms and materials that compose the forest (see Ingold, 2000, p. 193).

Elephants, by virtue of their size and tendency to travel in herds, have dramatic effects on the landscape. Dandi at some places can be clearly carved out, vegetation crushed underneath, and the earth pounded flat by their heavy frames. Sometimes the occasional male, fuelled with hormonal vigour during musth, would throw himself against a bamboo clump situated next to the path, uprooting it and, intentionally or not, further opening the trail. The dandi at Oudali, where Lakhindra and I crossed paths with a herd, was a wide dirt track, and few trees and shrubs grew around the edges. Large bodies moving over the same area through time inhibit the growth of even the hardiest vegetation. Although, dandi can also be surprisingly narrow. Elephant herds when walking long distances may do so in single file, an elder female leading at the front, guiding the herd along paths over narrow hilly ridges or tight tracks that run along steep hills following small streams.

Elephant dirt tracks are a common feature of their range and can be integral parts of the environment for these animals (Haynes, 2006). Anthropologist Paul Richards (1993) wrote about elephants in Sierra Leone as road-builders and tree-planters, opening up tracks that were linked to seasonal dry fruits. Trails follow pathways of least resistance and assist in maximising foraging efficiency (Blake & Inkamba-Nkulu, 2004). Routes seemed to cluster around these mega-gardeners' preferred fruit trees, but it was unclear whether the paths followed the growth of trees, or the trees followed the growth of paths, seeded by generations of travelling herds (Blake & Inkamba-Nkulu, 2004). Ecologists Vanleeuwé and Gautier-Hion (1998) identified three types of elephant trails in the African Congo. "Boulevards" were the longest of paths, taken through routes with minimal gradation and facilitated direct access to locations across distant parts of the landscape. "Foraging paths" are meandering and serpentine, weaving amongst trees. Finally, "Clearing paths" were the confluence of boulevards and foraging paths, compiled into a dense network around a clearing, with some entry and exit trails used more often than others.

In a different part of the RGRF to where Lakhindra and I walked, elephants would often come to feed on *tarapat*, a tall leafy plant that grew out of the marsh in a swamp on a hill called *Bokuli Beel*. Surrounding the site, were a tangled web of criss-crossing trails, Clearing



paths, threaded between the trees. The main dandi were found deeper within the forest. These larger paths often followed a relatively flat route, winding along the low-lying tracts between the undulating hills: main dandi seem to correspond to the model of Boulevards described by Vanleeuwé and Gautier-Hion. During fieldwork, I walked some of these several times. A few had fallen into disuse since the swampland or rice fields that these paths used to lead to no longer existed. The neglected trails were still evident and carved deep into the hill, old and drying leaves now covering their surfaces, undisturbed by activity. Some of these tracks existed when the population was still sparse at Chakardo, I was told.

Along the paths that Lakhindra and I followed that morning, other trails cut across the more permanent ones, and new paths had been forged through the vegetation. Speaking to the mahout Bharat, who early in his mahout career tracked and caught elephants in the forest, he traced out with his finger how elephants might deviate from a main trail. Herds climb up and across hills, moving between different patches of bamboo, before descending to the same or another main path, which they will then use to move to a different area. Locals distinguished these opportunistic Foraging paths (*khua rasta*, literally eating paths):<sup>117</sup> they were smaller, less well-defined, temporary traces that branched off the main dandi. Some of these trails had been freshly carved, long grass and shrub flattened by heavy bodies, or dirt disturbed and vegetation upturned, opening up a new muddy trail left in their wake.<sup>118</sup> While walking, Lakhindra drew my attention to a large muddy path that was not present the last time he had travelled along the same road. Walking along this shifting web of pathways, the forest is always opening in new ways.

I attended a puja with a friend on top of a hill used for shifting cultivation by a small Karbi community in the forest on the border of Meghalaya. After completing my observations, we descended the hill on the opposite side from which we climbed, towards a small stream where our motorbikes awaited. The descent was steep and covered with very tall and healthy rice straw. Consequently, we had difficulty seeing where we were going. There was no real track, and because of our guesswork, we veered off course. To correct our approach, we needed to cut back lengthways across the hill. However, a rocky gully divided the hill, and from our vantage we were unable to ascertain at which point we could cross and even how

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<sup>117</sup> *Rasta* actually means “road”.

<sup>118</sup> Villagers tell stories of elephants sliding down steep grades on their bums, carving up the dirt or skidding over the slippery, dead bamboo leaves.

to reach that crossing. Luckily, we stumbled upon the recent track of an elephant herd that had ascended and crossed its way through the shifting cultivation fields. Their bodies had crushed the farmer's crops. Fortunately for us, the traces of their movement opened a fresh path between the rice stalks that appeared to be going in the direction we desired. Trusting in the elephants' better judgement and the clear passage offered, we followed the track as it negotiated the steep hill, found the appropriate crossing over the gully and a suitable way down to our motorbikes.

I wasn't the first researcher to have been thankful for the presence of an elephant trail. 150 years before in South India, the colonial botanist Mr V. Ball praised the elephants that assisted him to perform his work, calling attention to their permanent traces in the hills:

On most of the hills, the elephants have made paths with a gentle ascent... where these existed I was enabled to do my work, [which] made me frequently bless them [the elephants] and regard them, no matter what they might be to the ryots [peasant cultivators], as at least my benefactors. (Ball. 1868, p. 130)

Dandi were easy to locate and follow, and pleasurable to walk along. Travellers did not have to negotiate with overgrowing shrubs and other obstacles. Elephants are also particularly good at following the gradients of hills, their footsteps would follow the most careful route, sometimes in a zig-zagging manner (Hamilton, 1892). This tendency was especially helpful on steep hills littered with dry but slippery bamboo leaves. Paths not only enabled easier movements, but also, as in my case in the shifting cultivation field, presented opportunities and pointed people in directions that were the best routes to follow. Feasibly, a person could follow main dandi, and they would eventually lead to water. We follow and trust paths often because they embody the promise of a destination, guiding us to a useful end, even if we do not necessarily know what the end is.

Of course, elephant tracks are not the only trails within the forest. The fringe hills were filled with innumerable paths traced by an increasing human population collecting wood. In some parts of the RGRF, dirt roads had been created for Forest Department vehicles and by illegal loggers seeking to bring in trucks to transport timber. The forest villages of Chutter and Garbhanga had public unsealed roads built to provide better access to these remote communities. In 2013, the Forest Department permitted an electric power line to be built straight through the RGRF and carved out a road with an earthmover to transport materials. All these paths facilitated an increased flow of people and resources in and out of the forest.

In some places, human-built roads intersected at right angles across dandi that followed the ridges of hills or damp, fern-filled gullies. Riding my motorcycle to the village of Garbhanga, I was aware of these junctions and would often catch a herd's scent drifting from nearby. At other points, human and elephant paths intertwined, and elephants would exploit roads to access different parts of the forest. Travelling on public roads to Garbhanga or Chutter sometimes I followed the footprints of herds for several hundred meters as they moved between different foraging areas. Villagers would say that particularly in the evening "elephants keep to the road," and people expressed some hesitation when needing to travel these routes at night and early in the morning. During the day, elephants shied away with the increase of human traffic, but occasionally they would occupy these roads for their own use. One day I was stuck at a remote village for over an hour, passing the time with other travellers, waiting for a large tusker seen along the path to move along. Just as humans followed the dandi crafted by elephants, so too did elephants exploit the tracks made by and for human movement in the forest. Paths were not exclusive to either species, but simply clearings that facilitated easier movement for both animals.

I was following a villager through the forest, and as he walked he waved his machete to the side trimming the overhanging scrub that threatened to cover some of the path, growing vigorously after the new rains. To walk along a path was not simply to exploit a pre-existing construction, but also to maintain it. Following a path also gives shape to it. I asked him if this was a haathi dandi or an elephant path: "Elephants, people..." he said, still swinging and continuing, "it's the same." The footsteps of each species and individual subtly add to and determine the course of the path over years. Both species create, maintain, and participate in the same shifting web of trails throughout the forest. We cannot necessarily distinguish elephant trails from human ones.

Paths are what ecological psychologist James Gibson (1972/2015) referred to as an "affordance". An affordance is a quality or feature of the world that emerges from the interaction between an organism and the environment, in which that quality enables the organism to perform a certain action. When we perceive a path, we perceive a surface or an aspect of the world that affords movement. Part of an animal's immediate environment may allow passage or present no significant obstacle, such as a gap between trees or the banks of a stream. However, paths are distinct in that the animals themselves have shaped the path, engineering the affordance. Human or elephant, forest or city, a path opened becomes an

important aspect of that animal's ecological niche. In the case of forest trails, both species shared in each other's affordances, adopting each other's paths to their own purpose.

Paths do not simply enable movement, but also *constrain* it. Leading us one way rather than another, they guide human and nonhuman bodies through the world. As travellers along paths we may know the general direction we are moving or where the path might lead, but keeping attuned to the trail allows it to do some of the navigational work for us. To revisit a path means that a person no longer needs to orient themselves in relation to their destination (Widlöck, 2008).

Understanding the relationship with a path as a constraint also calls attention the fact that human and elephant movements did not simply overlap, but were coordinated through the mechanism of "stigmergy". Stigmergy was a concept developed to explain the behaviour of social insects, whereby activities are coordinated not by direct communication with each other, but indirectly through interaction with a modified environment (Susi & Ziemke, 2001; Hadeli, Valckenaers, Kollingbaum & Van Brussel, 2003).<sup>119</sup> For instance, ants interact by altering the environment with pheromone traces, which will then guide, coordinate, and determine the trajectory of other ants. Like forest trails, these modified environmental features constrain the collective behaviour that emerges between organisms. The collective behaviour of human and elephant are the shared patterns of activity across the landscape, bodies and lives stimulated to movement along these paths. This coordination does not occur on the level of what might typically be called the "social", a correspondence through language or face-to-face encounters; rather, interconnections are indirectly made through traces in the environment. And, to a degree, this form of interaction is also reciprocal since humans and elephants both share in shaping a path that they follow but at different times. How one species shapes the path feeds into the movement of the other later on.

The production, maintenance and continuous shaping of paths are "constructed by interactions among multiple species over long periods of time" (Odling-Smee et al., 2013; p. 12). Trails are traces that feed back into the behaviour of the organisms operating within that environment. An organism's life unfolds within a forest space, enacted along these trails, an aspect of their environment that literally shapes the ontogenetic course of the animal.

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<sup>119</sup> Thank you, John Sutton, for proposing the concept of stigmergy to assist understanding the shared use of pathways.

When humans walk along these paths, they are guided not only by the traces left prior by humans but elephants as well. Elephants also develop and grow along these co-constructed lines in this mutual ecology.

### **The cognitive niche of elephants**

My informants told me that people travelled in the forest much less now than in the past. Chakardo local and forest officer, Guddu Dhapa, once spent several days walking from his home to a logging site in Meghalaya, at times integrating elephant trails into his own route. Oupe, a mahout, described how years ago, he could travel from his home to the hills nearby Chakardo along paths that these days “only elephants know.” “I can’t read a map, or know roads,” he said to me, laughing, while miming the confused rotation of a foreign object, “but I knew the shortcuts through the jungle.” Knowledge of these paths was acquired through repeated practical engagement (see Ingold, 2000). Participating in these paths also enabled villagers to imagine the vast distances that elephants could travel and marvel at the kinds of spatial and seasonal knowledge the animals have. People expected that elephants would utilise and inhabit trails in a similar way to themselves. Speaking to Lakhindra about this symmetry, he commented that elephants use dandi just as humans navigate with roads. I pointed out how, in some parts of Assam, they believed that god guided the elephants, and that was how herds could easily find their way. “*Nai!*” he exclaimed, “Elephants are like gods themselves!” That is how they know which way to go.

Paths reveal a relationship to and perception of the environment that overlaps between species. Compare a dandi to a porcupine’s path, which are small tunnels carved through dry shrubs and burrowed under hills. These do not open the world for humans in the same way: they are too low, narrow, and small for humans to be drawn to them for any pragmatic reason (apart from hunting), so they are not an affordance for movement. On the other hand, elephants and humans can engage with each other’s paths because, despite the clear physiological differences between the species, trails offer affordances that fit their bodies and purposes. Elephants likely use different cognitive skills and environmental cues, such as scent, to navigate the web of paths, instead of the visual cues and spatial recall that dominate human perception (see Plotnik et al., 2013, 2014). But both species habitually follow and participate in the same trails, revealing that elephants and humans, on some embodied level, are coordinated with the environment in similar ways. Thinking about this relationship when

walking along paths partially sculpted by elephants, I was struck with the feeling of the uncanny, the familiar and unfamiliar. We were guided by and participated in tracks made by another species. Shared features of the environment coordinated our bodies, yet the biographies and motives that elephants lived out along these paths were different to humans', and phenomenologically inaccessible.

Paths become an essential aspect of revisiting place. An elephant's engagement with trails is deeply habitual: a juvenile elephant, for instance, will become familiar with paths by repeatedly following them year after year whilst led by the older members of the herd (see Foley, 2008). While I cannot speak for elephants, as a human, my knowledge on how to move between different parts of the landscape was not completely internalised; rather I took my cues from the world, from familiar trails, and an embodied remembering of whether to turn left or right at which junction. When walking to a destination in the forest, I often simply located the same path and then let its winding course guide me without needing to calculate my trajectory. A human "appropriately attuned to the presence of that trail" Ward and Stapleton (2012) argue, "can be the basis of their cognitive competence in getting efficiently from one point to another in the forest" (p. 91). That is, the capacity to remember where to go is partially dependent on the ability to use paths, and the process of remembering itself is enacted while walking along them. Like memory, paths are dynamic and always shifting in subtle ways. They are living aspects of an organism's environment, changing, and feeding back into its behaviour. Dandi are traces left behind by the past activity of elephants, and a trace that continues to guide their activity, and other animals, in the future. Trails could be considered aspects of an elephant's cognitive life extended into the world, and artefacts of the species' intergenerational remembering.

### **Colonising India and a more-than-human history**

One main dandi extends south from Chakardo, approximately four or five kilometres into the forest and links with Chutter village. The path is highly frequented by elephants. The general rule was if someone saw elephants near this path during the day, they were expected to cross to the Deepor Beel wetlands during the evening. The trail was known by everyone, and people said that it had been used by villagers for generations. I suspect it was less travelled these days since those from Chakardo were more dependent on urban lifestyles and economies; although, due to the increased elephant traffic in the area, perhaps elephants were

more likely to maintain it. A section of the Chakardo community still followed the path to visit friends and family in Chutter, to sell some livestock, purchase forest products, or simply to go and pass the time with a drink. The easy-to-traverse gradient of the path that wound between and at the bottom of hills made it an attractive passage. The few times we walked along this path, other people were always on it, even strangers from different villages coming to collect bamboo and firewood. Some of those times, there were elephants as well.

The locals called this dandi the *Britishhar rasta* – the “British road”. The secondary bamboo forests and high density sal tree population of the RGRF attracted not only elephants, but also the colonial administration. Chutter was a planned village established by the Forest Department, a Rabha community shifted some time between the RGRF’s notification in 1882 and 1900. Chutter was settled in a large valley within the RGRF, and inhabitants were likely encouraged to conduct wet rice agriculture, since shifting cultivation was actively discouraged at that time by the colonial Forest Department. Old funerary menhirs were evidence of Garo or Karbi settlements in the valley prior. At the time, there was also a pre-existing network of cart tracks made by loggers and sleeper contractors that connected Chutter to Garbhanga village.<sup>120</sup> By 1909, the Forest Department had carved out an added two main tracks that led out from Chutter to the plains: one to the west and one to the north. Another route was proposed along a trail that emerged at Pamohi in the east.

The Britishhar rasta was the track stretching north and was originally used by Forest Department officers as an alternate route to transport logs to the Chakardo forest office, which would be then loaded onto boats and transported across the Deepor Beel wetland to Guwahati.<sup>121</sup> Walking the trail, how the colonisers modified the road according to their purposes was still evident. At some sections, the trail crossed small gullies, and portions of the path had been reinforced with bricks. The bricks were hidden by leafy creepers and may have supported wooden bridges, now disintegrated. Bullock carts and load-dragging departmental elephants demanded the roads be strengthened, flattened and widened. At some points of the track, the land had been cleared on both sides, although had now become overgrown with grass and shrub.

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<sup>120</sup> *Kamrup division working plan* 1909, p. 26.

<sup>121</sup> The path that headed due west towards Sajanpara is now an unsealed vehicular road. The other two routes are trails that can be only followed on foot. The one toward Pamohi used to be a main dandi but I suspect it has been under less use by elephants since crops are no longer grown in the neighbourhood.

While currently the British road was used as an elephant dandi, what we know about elephant history and relationship with the wetlands raises the question as to whether the dandi pre-existed the colonial occupation of the area. Unfortunately, no local records might enable us to grasp a history of human and elephant production and shared exploitation of pathways throughout RGRF. I suspect, however, that elephants would have long traced out a trail to the wetland prior to the Forest Department, and that the Forest Department exploited a pre-existing trail. If the British utilised elephant paths to colonise the landscape, then we can begin to grasp at a deeper and more complex history of the ways in which humans and nonhumans have become entangled along shared paths, even on the scale of migration and colonisation. Considering the absence of historical evidence at Chakardo, in the final section, this chapter will turn towards another part of the Northeast, the hill state of Mizoram, and illustrate how elephants, Mizo communities, and British soldiers moved along shared trails in the Mizo hills in the late 19<sup>th</sup> Century.

British colonial surveyors, entrepreneurs, scientists and military alike found the Northeast to be a region incredibly difficult to traverse. The dense vegetation that grew vigorously in the hot and humid climate limited mobility: “Footpaths [were] often obliterated by the inseparable jungle,” and dangerous encounters with wildlife, including elephants, were amongst some of the obstacles faced by British colonial expansion (Handique, 2004, p. 25). Early forays into hilly, tribal regions of the Northeast were lines drawn on the blank maps of frontier zones (Cederlof, 2014).

Several authors have already highlighted the essential role of working elephants in the British colonisation of India. Sukumar (2011) argues that the use of captive elephants was important in the colonial project: they were essential as a labour animal for the exploitation of timber or as military transport. Historian Julian Baker (2016) recites examples of elephants enabling and augmenting scientific observation and survey work conducted by the British. Elephants afforded points of view to which a human on foot would never have access. Unrelated to the British but still instructive on elephant augmentation, Shell (2014), in his study of Kachin militants in upland Burma during the late 20<sup>th</sup> Century, refers to the mahout-elephant partnership as enabling movement in zones of political instability and infrastructural breakdown. In a similar fashion, elephants were considered the only practical mode of transport throughout the Northeast in the 19<sup>th</sup> Century (Johnstone, 1896; Sarma, 2011). Due to the poor state of paths, hilly terrain and heavy monsoons, elephants enabled



new spatial possibilities and ways of accessing the region. Captive elephants have been ignored as co-contributors in human society's projects, an anthropocentric bias that has failed to acknowledge the ways elephants have made humans capable (Baker, 2016).

Just as domestic elephants enabled explorers, administrators, scientists, and soldiers alike, elephant pathways were features of the landscape that afforded movement and colonisation. Elephant paths, and their role in assisting movement, are commonly recorded by those conducting surveys and seeking out land for tea plantations (e.g., Griffiths, 1837; Butler, 1855). Elephant trails are also frequently mentioned in the accounts of the troops who were required to advance through the difficult terrain along the Northeastern hilly states now known as Nagaland and Mizoram. The mountainous range on the Indo-Myanmar border was characterized as dominated by "slavers and raiders" and "covered with almost impervious jungle traversed only by paths used principally by wild elephants and as the war-tracks of tribes" (Nolan, 1879, p. 114). Conflict between the British army and upland communities around the Mizo hills were well documented, particularly the Lushai Expedition of 1871-72 (Bourchier, 1872; Campbell, 1872; Woodthorpe, 1873). The colonisers at the time were involved in a protracted war with Mizo groups who disrupted British tea gardens and other colonial outposts that had encroached on indigenous territories. While an incursion of colonial forces in 1850 was halted due to the difficult terrain, a subsequent advance occurred in 1871 in response to increasing "raids" and the kidnapping of a British subject. The army marched deep into the Mizo Hills to exert control and force submission of the offending populations, and thus proving that not even the frontier tribes were beyond the disciplinary hand of the empire.

The Mizo, at the time of the British invasion, were deeply engaged in the lives of elephants, and had inhabited the hilly region sometime since at least the 16<sup>th</sup> Century (Pachau, 2009). Elephants were particularly common in this area, and the Mizo were well known for their skill in hunting them. Elephant body parts formed a significant part of their economic trade with the neighbouring plains (Joshi, 2005). Hide and bones were traded with Mughal princes through Chittagong, and with princely states in neighbouring Burma. Further, the Mizo had intimate knowledge of elephant paths. Capturing elephants required knowing the main dandis to predict the herds' movements. Raiding parties also used elephant paths to access

nearby villages, as well as British properties and tea estates (Mackenzie, 1884),<sup>122</sup> and the British were unable to defend against tactics that exploited local knowledge of the forest. Mizo settlements in the hills were organised in relation to elephant movement patterns, fields were planted carefully to avoid pre-established routes, and some villages were located at the end of “ages old” elephant trails (Meirion Lloyd, 1991). Elephants partly organised the lives of Mizo communities, not only as game to be hunted and traded, but also as the creators of paths that structured their movement and, in some cases, the placement of villages.

British forces, when marching into the Mizo Hills, found them sparsely inhabited, with few established trails, the army dependent on riverbanks or the tracks of elephants (Pachau & Schendel, 2015). The British, although unfamiliar with the networks of human and elephant paths, used them to control the region by enlisting the services of guides from “neutral” communities. In some cases, the elephant paths were of such good quality that they “looked in parts as neatly defined as if it had been done by hand” (Bourchier, 1872, p. 136). However, the trails were not sculpted by elephant foot alone; the British found paths that led to Mizo villages that were “engineered by wild elephants and improved and used by the Looshai [Mizo]” (Campbell, 1872, p. 151). In turn, old Mizo trails were reciprocally maintained and kept open by local elephants and rhinoceros (Pachau & Schendel, 2015). The army themselves further widened tracks during their advances to facilitate the march of soldiers and transport of items into the interior (Bourchier, 1872; Woodthorpe, 1873).

The British army were not the only ones to note how the landscape of Mizoram had been modified by the dense elephant population. Missionaries visiting the region through the twentieth century commented on the existence of elephant paths and their role. J.M Lloyd (1984, 1991) went so far as to label elephants as “discoverers,” implying their original role in surveying the area. Despite the dangers presented by elephants to those living in the forest, Lloyd asserted: “In fairness to elephants, however, it is to be remembered that it was they who, in the west especially, first opened up a number of important paths over mountains and through deep valleys” (Lloyd, 1991, p.119).<sup>123</sup> Indeed, in other parts of the Patkoi range following in the footsteps of elephants enabled human populations to colonise the hilly

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<sup>122</sup> The incursion of British tea estates may have disrupted elephant hunting grounds and incited the Mizo to conduct raids on colonial outposts.

<sup>123</sup> The “west” refers to the Patkoi mountain range that rests on the Indo-Myanmar border.

regions and move over the high passes along the Indo-Myanmar border (see Morse, 1974).<sup>124</sup> “Where these [elephant tracks] can go it is safe for man to tread, is the Lushai [Mizo] maxim” (Lloyd, 1984, p. 13).

Elephant paths channelled the flow of people through the dense jungle. Along these co-produced, interspecies trails, the British could advance into hills, survey the area, subjugate the Mizo population, and colonise the periphery of British India. This exploitative and participatory relationship with another species’ environmental modifications on such a scale is not exceptional. Richards (1993, p. 150) wrote that elephants in Sierra Leone “were pioneers of human settlement” and that their activities opened up the forest and made favourable sites for agriculture and habitation. An alternate example, although with a different species, was the initial occupation and settlement pattern of American colonisers in the Ohio Valley, North America. Settlers followed an “extensive system” of buffalo migratory trails that aided “human intruders to occupy and settle the region” (Jakle, 1968 p.299): “American settlement was firmly rooted in the changing ecological complex of the [American] Indian and the bison” (Jakle, 1968, p.305).<sup>125</sup> Likewise, when the British advanced into Mizo hills, they became intertwined in a niche co-constructed by Mizo and elephant communities for few hundred years. Along these shared pathways the Mizo, British, and elephants became partners in the formation of place and history, the trails an environmental interface that indirectly connected each actor at social and behavioural levels.

Trails are not simply structural features of a shared environment. An organism’s custom of following paths allows the past to structure and scaffold their future movements. Chris Tilley notes that a path is “a paradigmatic cultural act, since it follows the footsteps inscribed by others, whose steps have worn a conduit for movement which becomes the correct or best way to go” (Tilley, 1994, p.31). In this respect elephant paths are historical traces of a “way of life” (van Dooren, 2014a), patterns nurtured within a lifetime and across generations. The best way to go for the Mizo and for the British soldiers had already been traced through the landscape by elephants. By following the routes that elephants would take, the Mizo participated in the inter-generational habits and knowledge of these trail-makers. The Mizos’

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<sup>124</sup> Chowta and Gautier (2001), drawing on second hand reports in Stracey (1991) and her own team’s investigation into elephant migratory patterns along the Chaukan Pass, note that elephants and humans have been following shared migratory routes across these hills for generations.

<sup>125</sup> Whilst ultimately these traces did not define the pattern of modern day human occupation, some important structures such as state highways were built out of the bison tracks.

own trajectories were guided by the elephant trailblazers who came before them. Human movement and distribution emerges out of the lines and paths of other animals and "[v]ery often, humans take over from where non-humans have left off" (Ingold, 2012, p. 24). By following these paths, the Mizo and the British became part of a more-than-human history.

## Conclusion

The RGRF has long been shaped by elephants in the area, and their paths have supported human settlements moving across the landscape: from the generations of men and women gathering wood and vegetables, the management and exploitation of the forest by the British colonists, and more recently, the inquiring steps of an anthropologist. These pathways are produced and maintained by both species, human and elephant trajectories across the landscape coordinated through their mutual participation in these trails. The more-than-human history in the Mizo Hills can be extended to think about the lives of humans and elephants that have dwelled alongside each other in the forests of the RGRF. Forests with a significant population of elephants and humans are co-constructed niches, a mutual ecology with a mutual history.

While it is outside the scope of this chapter, understanding a human-elephant mutual ecology has broader implications for thinking about a more-than-human history of upland Asia. In particular, the interconnected hilly range extending from the border of Myanmar, through to South China and South East Asia, referred to most recently as "Zomia" by James. C. Scott (2009; see also Van Schendel, 2002, Michaud, 2010). Up until the twentieth century herds ranged extensively and in large numbers throughout the mountainous tracts, which is now among the last bastions for surviving Asian elephant populations. It is a geography shaped by the constant migration of diverse, relatively isolated, ethnic groups living amongst difficult terrain and moving between lowland states (Scott, 2009; Michaud, 2010). Upland communities, such as the Mizo, have been to differing degrees in vital exchange and contributing to the formation of the powerful lowland states, and sharing a "deep history of symbolic, economic, and human traffic" (Scott, 2009 p.27). If Zomia can be characterised by the challenges of its terrain and shifting human population, then the history and political dynamics of Asia was, arguably, was facilitated in parts by the ecosystem engineering of free-roaming elephants. An understanding of intertwined human-elephant pathways can open new questions regarding the geographical and political formation of this region.

Like the settlers who moved into the rugged terrain in the Northeast following elephant trails, early human ancestors may have moved into the area by exploiting the paths of megaherbivores. Large mammals such as mammoths and the proboscidean ancestors of modern elephants would have left large tracks in their wake, which they used to migrate between ecosystems, fruit trees, and water sources (Haynes 2006, 2012). Archaeologist Gary Haynes speculates that a megaherbivore path during the Pleistocene era, not only partly re-engineered “Pleistocene ecosystems, but it also contributed information and enhancements to human foraging efficiency, thereby helping to make some rapid explorations, dispersals, and colonization so successful during the late Pleistocene” (Haynes, 2006 p.29). Human ancestors could exploit the paths of megaherbivores, argues Haynes, enabling hominins to migrate out and colonise new ecological niches. In other words, human migration and history are possibly so deeply entwined with the lives and niches of the elephants and their ancestors that their trajectories are impossible to disentangle.

The courses of human and elephant lives at my fieldsite were not shaped by the relations between these two species alone. These two animals were only a few threads in a broader meshwork of life (Ingold, 2011) that composed the RGRF. Paths were tied to the patterned growth and flowering of a copse of trees in one part of the forest. Buffalo from the village, and the occasional deer at night walked these tracks. The edges of a track were defined by the tangle of shrubs on either side whose encroaching, vigorous growth shifted between the wet and dry seasons. Dandi often followed the edge of a hill or remained close to a water source. A path’s winding lines were determined by geological features of the landscape that the trailblazers were forced to accommodate to. Elephants followed rivers not only as a source of sustenance but also because they were relatively flat routes that afforded easier movement. So too does the water line flow along the path of least resistance between hills, and, follow a course set for them by tectonic shifts in the region hundreds, thousands, and millions of years ago. The mutual ecology that humans and elephants contribute to is grown from a larger set of unfolding bodies and forces over time. Kohn (2013) refers to this relationship as the “biosocial efficacy of form” (p. 167), where more complex patterns emerge from lower level material realities, nested within and growing out of these conditions. The form of a pathway and in turn the lives of animals in the forest, harnesses forces that possibly began prior to the existence of modern humans, and maybe even Asian elephant history.



Perceiving that the world was wholly oppressed by the elephants with their vast bodies, spirit, and might, and with their fierce power, at the request of Skanda, Brahma in compassion created a certain Spirit ('man'); he, having eyes red-cornered with wrath, shone with crest rising in the form of a tusk, and with hands marked (ank-ita) with (the image of) kusa-grass; therefore he was called Ankusa ('hook').<sup>126</sup>

From the ancient Indian treatise on elephantology, the *Matanga-Lila*. Translated by Franklin Edgerton (2010, p. 109).

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<sup>126</sup> The Ankusa, or ankush, is a tool used by mahouts to give commands, manage, and discipline the elephant when necessary. Generally, it is a long handle, with a metallic hook at the end, which is used to prod elephants in sensitive areas on the body. Outside of India it is commonly referred to as a bull hook. In this passage, the spirit of the ankush (which is equated with a man by the translator) is necessary to control elephants in musth, an aggressive condition preferred for war elephants (Trautmann, 2015).







Figure 5.1: Mahout with Alaka, tearing a stubborn banana tree out of the ground.



Figure 5.2: Unknown mahout and elephant walking through narrow Guwahati streets, while a child rides his bicycle beside them.



## Chapter 5:

# Scaffolding animals

Kaushik Barua, who introduced me to the Chakardo area (Chapter One), kept four of his elephants in the forest fringes close to my home in Pamohi. Previously, he deployed them as *koonkis* – elephants trained to engage their forest-living cousins. Mahouts would ride and command Kaushik's elephants and drive crop raiders at Chakardo back into the forest. I spent many evenings with the elephant handlers, who recalled stories about tense standoffs with tuskers, coordinated pincer moves on herds, and sometimes a koonki caving under the pressure and fleeing halfway across the village with driver in tow. I never saw the mahout-koonki teams in action. The elephants were in semi-retirement, no longer needed since Kaushik believed that crop depredation by elephants had become less of a problem, and he was not willing to put them unnecessarily in harm's way. Challenging other elephants over rice paddy, especially agitated males, can be dangerous for both the koonki and the mahout.

Kaushik, through his various connections, had permission from the Forest Department to let the koonki elephants stay in the fringes of the Rani-Garbhangra reserve forest (RGRF). Tied up with long, heavy tethering chains during the evening, they were bound to a single tree but had access to bamboo and surrounding vegetation. Living in the forest also provided them with adequate shade and avoided the stresses of being too close to a dense human population. Every day, during mornings and afternoons, the elephants were untied, hobbled, and foraged under mahout supervision, as well as being bathed and other necessary duties. The mahouts lived on a nearby block of land once owned by the famous Guwahati-based elephant catcher, Dipen Ram Phukan.<sup>127</sup> Here, elephants caught from the forests of RGRF had been trained, in the decades before elephant capture had been banned throughout the country.

Occasionally, Kaushik's elephants escaped, breaking the tree or wiggling the chain free, and would draw their own unfettered lines across the hills, sometimes joining with the herds passing through the area. In fact, several elephants that roamed in the RGRF hills were believed to be previously animals who lived with humans, set free by their owners or escaped

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<sup>127</sup> Grandson of Tarun Ram Phukan, introduced in Chapter One.

on their own. Elephants left out of human contact for an extended period would no longer respond to their human handler.<sup>128</sup> The Tharu mahouts of Nepal say that their elephant always wants to return to the forest (Hart, 2005; Locke, 2006). As animals who have not been biologically domesticated, and who can occasionally behave unpredictably and dangerously, even well-trained elephants still retain an element that might be considered behaviourally “wild” (as opposed to tame, Locke, 2014). Wild elephants can become domestic, and domestic elephants can become wild.

The first thing Kaushik advised me when meeting his animals was that I should never turn my back on elephants, especially males, nor interact with them in the absence of their mahout. Mahouts were conscious of their responsibility and they always kept a close watch over their charges. The handlers’ gaze always followed the elephants, even in conversation: it was one of mahouts’ most common and prominent traits. Keeping elephants in a human-dominated environment required that the animals were appropriately behaved, do not accidentally or intentionally harm someone, and do not cause damage to a person’s property. An elephant not properly bound by chains in the evening, and close to people’s homes, may feed on domestic fruit trees or unwittingly break fences. Having an elephant live amongst humans presents a variety of problems. Elephants are intelligent animals – they form intimate, social and working relations and can comprehend an impressive set of command words – but as individuals they are simply not equipped to completely integrate their conduct and align their desires with human social norms

Historically, kingdoms that managed large numbers of war elephants organised a massive labour force, resources, and enclosures to contain and feed them (Trautmann, 2015). One or two elephant handlers have always been assigned to each elephant to take care of and command the individual on a permanent basis. Mahoutship has a deep history, and despite regional variation across South and South East Asia, homologous training regimes, command words and management practices are found across many traditions (Trautmann, 2015). Mahout labour is a highly skilled profession that requires years of practice and involves learning not only how to relate to and manage elephants, but also the construction and utilisation of various tools of the trade. The conditions developed – including labour

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<sup>128</sup> Stracey (1991) recalls one story in which elephant catchers spotted what they believed was a previously domestic elephant amongst a herd. One of the men called out “*beit*” – sit! – and the elephant did exactly that, and the mahouts led him back to camp.

force and infrastructure – to integrate elephants into human society, had to be shaped to meet the specific demands of the animal. Just as animals are trained to service human projects, so too must people be trained into the animals they keep (see Lestel, 1998; Fijn, 2011, on co-domestication).

This chapter traces how the human-elephant relationship can go from “wild” to “domestic”, even if it is an unstable relational state. I analyse how an elephant, with the complementary support of their human handler, can conduct work tasks, and live within a densely populated, anthropogenic environment. The analysis is an extension of the concept of interspecies scaffolding developed in relation to human-sheepdog teams and interspecies work (Keil, 2015). Through the trained coordination with an elephant, humans can integrate knowledge and cognitive skills that the nonhuman does not have access to, but are necessary to the completion of a shared task. I will also draw and extend upon ethnographic studies by Nicholas Lainé and Piers Locke, who have looked at the training and practices of working elephants. Locke’s work on the Tharu mahouts of Nepal illustrates how elephants are socialised into a hybrid human-elephant community (Locke, 2006, 2013, 2017): an elephant’s integration into this “multispecies total institution” requires undergoing ritualised training, and becoming partners in intimate and trusting relationships with both human handlers and other koonki elephants. Lainé (2016) focuses on the timber elephants of the Tai Khamti in Northeast India, and argues for a need to recognise elephant subjectivity and expertise during labour, and to characterise the human-elephant working relationship as one of collaboration.

This chapter begins by outlining the conditions necessary to establish a deeply interconnected and proximal human-elephant relationship, particularly the assemblage of actors that make the domestic elephant possible: the elephant owner, the mahout, and the elephant. Through the process of training, the elephant authorises the mahout to command and mediate her interactions with the environment. Drawing on the human-development literature, I conceptualise this interaction as a kind of “scaffolding”: an interactive, task-focused practice, in which one partner, who has access to certain cognitive capacities or knowledge about a task, can guide and coordinate the actions of the other (Wood et al., 1976). The actions of the two individuals are coordinated and interdependent, and they constitute an integrated, interspecies mahout-elephant team. I will then extend this insight and analyse a mahout-elephant walking down a busy road, unpacking how the mahout serves

to socially scaffold the elephant and augment the elephant individual ability to live as part of a human society. The chapter finishes by returning to a discussion about mahouts, a class of workers without whom the remarkable powers of elephants could not be appropriated.

As in Chapter Four, I find Ingold's (2011, 2015) theory of lines as a useful metaphor to think about the human-elephant relationship. The process of capturing, training, and working is one in which human and elephant bodies become increasingly entwined. To appropriate a quote from Ingold (2011, p. 215), the mahout and elephant, "should not be understood as interacting entities, alternately playing agent to the other as patient, but as trajectories of movement, responding to one another in counterpoint." Lines captures their unfolding mutual coordination, continuously and reciprocally giving shape to each other's actions in subtle ways. Lines also let us imagine how they can become unravelled.

### **The elephant owner, the mahout, and the elephant**

Kaushik Barua remembered growing up with several elephants around his home in Guwahati, when the city still resembled a small town. The wealthy would keep elephants to amuse the family, as signs of status, and as labouring animals (Saikia, 2011). Kaushik's father operated a successful construction business and bankrolled elephant catching operations, leasing out *mahals* (hunting rights to a specific area). These mahals were in various locations such as Sibsagar in Upper Assam, as well as in Rani and Chakardo, leased in partnership with the famous elephant-catching family from Guwahati, the Ram Phukans.<sup>129</sup> Some of the elephant herds currently ranging through the RGRF, at one point, were likely subject to *haathi shikar* (elephant hunting). Kaushik recalled that his father enjoyed overseeing and conducting capturing operations and visiting the jungle to camp with the mahouts, *phandis* (elephant lassoers), and koonkis. In the forest, captured elephants would be trained before being sold to visiting traders. Kaushik's maternal grandfather was the famous elephant catcher "Old Phookan", who at the time was a *haathi-dhani*, a person who profited socially and economically from the elephant catching trade (Stracey 1991, p. 32; Saikia, 2011). Kaushik himself claims the last large-scale elephant capture operation in the Northeast by stockade in the late 1990s in the Garo Hills of Meghalaya. By citing his

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<sup>129</sup> The Ram Phukans were first active in the Chakardo area: Tarun Ram Phukan hunted there in the early 20<sup>th</sup> Century (Ram Phukan, 1983). Biren Ram Phukan, Tarun's son, was most well known in Chakardo and more widely, being a politician as well as an elephant catcher.

family history, as well as his father's and his own passion for elephants and the jungle, Kaushik positions himself as belonging to a particular class of Assamese elite. These people claimed to be from traditional elephant catching families and prided themselves on their expertise, love, care, and knowledge of elephants. These elites include the once powerful Goalpara landlord, Praktish Chandra Barua, and his famous daughter, Parbati Barua, both of whom are considered the some of the foremost behavioural and cultural authorities on elephants (Lahiri-Choudhury, 2006). "Elephants are like family," various members of this elephant elite claimed to me on different occasions, identifying with elephant management beyond the utilitarian purpose of making money.

Keeping elephants in the 21<sup>st</sup> Century is not as popular as it once was. They are expensive to maintain and unprofitable; much of their labour has been banned or superseded by machinery. Kaushik admitted that his drive to own elephants came from his love of the animals and wildlife in general. While Kaushik's main work was co-running the family business, over time he had acquired many domestic elephants stationed across Assam. He also became involved in elephant conservation at Chakardo and throughout the state. Keeping elephants as a private enterprise was a leisure activity and labour of love, as it required considerable resources, especially as Kaushik did not employ the elephants in the tourist or timber trade. Kaushik felt a strong responsibility towards his elephants, reminding me that one "can never own a god."

Distancing himself from those elephant owners who kept the animals for their own status or wealth, Kaushik, in his role as elephant owner said that he concerned himself with the "problem of elephant management": the proper care of elephants and overseeing his mahout staff. By employing the rhetoric of elephant management, Kaushik aligned himself with a class of elephant experts including the Assamese elephant elite, but also famous colonial forest administrators such as A. J. W. Milroy, and a broader global discussion regarding the humane treatment of elephants. He suggested that, as a manager, he was situated between the "old school and the new school," reminding me of his progressive views on training and medical treatment compared to the dogged adherence to traditional methods by other owners. Kaushik's own mahouts are inheritors of the traditional methods, and while he admired their discipline and excellent understanding of elephants, he also prized most highly those who obediently incorporated his instructions on how to better interact with elephants.

Occasionally, Kaushik visited the mahout camp to deliver goods, wages, and instructions, and to inspect the elephants. Despite not seeing the elephants often, Kaushik proudly noted that they recognised him, a bond forged through food and love. He would highlight the differences in their responses towards him compared to his mahouts. When he spoke about elephants, he described them as comprehending, intentional participants in an intersubjective relationship. Elephants were beings who acted with initiative, who “taught” him how to bond, “guided” his attention and “showed” him how to communicate with them. Alaka, a 55-year-old female, was his first and favourite elephant. Alaka had a “calming influence”, Kaushik once told me, referring to her maternal role in relation to the younger 13-year-old female, Xiruxila. Alaka and Xiruxila had developed a strong relationship, forming a small and virtually inseparable family unit. When Kaushik described Alaka as calming, I also suspect he was describing her effect on himself. Kaushik would always give Alaka the most attention, and when they met, he would lean his forehead against her temple and rub gently beneath her eyes and on her trunk, whispering to her, *morom, morom, morom* – love, love, love.

I knew Alaka over the course of my fieldwork and found her to have a stoic personality, carefully assessing situations and newcomers. Her responses were not necessarily forthcoming, unlike the exuberant juvenile, Xiruxila. As a female, Alaka was less prone to agitation or aggression than her male counterparts, which made her easier to approach. She had her idiosyncratic habits, which included favourite fruits, always urinating off to the side of the road, and being an especially delicate and fussy eater. Her mahouts would joke that they could tell which stream of water was clean depending on whether she would deign to drink from it or not. As a worker, she was highly experienced, cooperative, skilled, and fluent in the command systems and trade of the human-elephant working relationship. She was also surprisingly greedy at times, well-versed in the gift-giving relations of visiting humans and the treats of bananas and sugarcane they offered. She would patiently accommodate to unfamiliar people, let them interact with her and rub her trunk, but in the absence of an edible gift, her tolerance waned quickly. Alaka was good natured, but demanding of reciprocity.

Alaka was caught by *melah shikar* as a juvenile in the 1960s on the north bank of Assam, in the forests connected to the state of Bhutan. Alaka and her biological family at the time of her capture were likely assailed by a group of koonki elephants and their riders, as the herd followed a *dandi* through the forest. Two men would perch on each koonki, one of them a



phandi who sat on the koonki's neck, brandishing a thick lasso made of jute. When the koonkis charged in, the calm of Alaka's family would have exploded into panic, scattering the herd. The koonki and its riders would have then isolated the young Alaka from her mother. Once caught, she was dragged back to a camp, and trained into language, labour practices, and new relationships with human and koonki elephants. During this process, she received her individual name "Alaka". Caught and trained elephants became part of a vast network of elephant-trade across South Asia, often sold through *Sonepur Melah*, a renowned cattle fair in Bihar.

Elephants were commonly recruited into projects of resource extraction in both colonial and post-colonial India prior to the timber ban in 1996.<sup>130</sup> The British, in fact, invented the timber elephant (Sukumar, 2011). Anthropocentric bias has overlooked how vital elephants and other animals have been historically as workers: subjective agents who contributed their own cognitive and physical skills to the conduct of labour and the construction of societal projects (Porcher & Schmitt, 2012; Lainé, 2016; Baker 2016). As workers, elephants require years of training and practice before becoming experts and are certainly more valuable than edible and destructible livestock, such as pigs or goats (or cows and sheep in Western context, see Porcher & Schmitt, 2012).<sup>131</sup> The colonial government understood the elephants' distinct value when they spent considerable effort re-capturing koonki or timber elephants who had escaped into the forest. Yet, as animals – even animal-gods – elephants generally were treated with a low regard for their health and safety. Following the ban on elephant capture, many elephants were put to work hauling timber, pushed to their physical limits to maximise profit for their owners. While Kaushik was a responsible owner, many others had reputations for caring only about the return yielded by their animal. Bharat, one of Kaushik's mahouts, remembered working in the forests of Meghalaya with timber elephants in the early nineties and sadly noted how "many good elephants died" during that time, worked to death, not properly cared for, or used in reckless ways.

Alaka never worked in the timber industry. While she had several owners and mahouts during her career, she worked primarily as a koonki. For over twenty years, she captured and

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<sup>130</sup> The Supreme Court in 1996 banned all felling of trees without prior permission from the Union government (Karlsson, 2011).

<sup>131</sup> Due to the significant resources dedicated to training an elephant, their cultural status, intimate relationships required in working relations, and the intelligence they bring to bear on tasks.

drove other elephants across Northeast India under one of India's premier elephant experts, Parbati Barua.<sup>132</sup> Some koonkis became famous amongst mahouts and elephant owners for their intelligence and skill when facing their forest-roaming cousins. The task requires that both koonki elephants and their mahouts possess considerable *xahox* – courage. Kaushik first met Alaka as a teenager and acquired her from Parbati in 2004. Under Kaushik's care she moved away from life as a working elephant and into a new set of relationships, interacting with three other domestic elephants with whom she lived on the forest fringes and the occasional wild elephant. Compared to many elephants, she led a privileged life.

As Kaushik interacted with his elephants, the mahouts would stand aside, subdued and quiet, with hands politely and passively folded behind their backs. All the men had minimal schooling, owned little or no farmland, engaged in sharecropping and indentured labour outside of, or prior to mahout work, and were all from disempowered, tribal backgrounds. Many of the mahouts under Kaushik's employ were *Rabha*, an ethnic identity common to Western Assam and East Bengal (Misra, 2013). Almost all of Kaushik's mahouts had been recruited from a small cluster of villages in Boko, 50km west of Chakardo. Despite keeping their distance and exhibiting a degree of deference that reflected the gap between caste and class, the mahouts still observed diligently while Kaushik greeted his elephants. They gave commands when necessary, prodding the elephants to maintain proper behaviour and respond appropriately, to come when called and to back away when getting too familiar. While Kaushik and Alaka shared a special relationship, elephants were more likely to listen to mahouts with whom they interacted on a regular basis.

The Rabhas from the district of Chaygaon are well known for their connection to elephants (Sarma, 2011). Earlier traditions of mahoutship prior to colonisation in the region were possibly linked to tributary payment of elephants by regional petty chiefs (*raja*), who recruited local peasants in capture and training operations (Martin, 1838; Bhadra, 1983; Gogoi, 2002). The British government monopolised capture and conducted large-scale stockade operations, as well as leasing elephant-catching operations to private catchers, such as Kaushik's grandfather and father (Stracey, 1991; Nongbri, 2003). The mahals, bankrolled and conducted by the Assamese elite in Garo Hills, Rani and Chakardo, used to draw on mahout labour from the Chaygaon area. So successful were the Rabhas of Chaygaon that

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<sup>132</sup> Parbati Barua is heralded as one of the first female mahouts in Assam and India. She a well-known cultural figure and highly respected.

many came to own elephants themselves, forming small “companies” and continuing to cultivate their unique pre-colonial cultures of elephant-keeping (Saikia, 2011; Sarma, 2011). Kaushik’s mahouts remembered when many families in Boko owned elephants. Although none of Kaushik’s mahouts came from elephant-owning families, they were enlisted by other members of the village for work. Over the years, as elephant-related work disappeared following bans on elephant capture and timber loggings, many of these elephants were mistreated, died from neglect, or were set free in the forests (Sarma, 2011).

Babul and Bharat had been working with Alaka for close to eight years. Bharat, in his mid-40s, was an excellent mahout: diligent, highly experienced, and kind. Most elephants responded well to him. His first job at the age of fourteen was as a mahout in capture operations for elephant control. Conversely, Babul was not a career mahout. As a young man Babul had worked with elephants hauling timber in the forests of Meghalaya, earning an excellent wage, but he later returned to work as an indentured labourer and sharecropper in his village. Bharat, who was actually Babul’s neighbour in Boko, organised mahout work for him under Kaushik. Alaka responded well to Babul. He only needed to gently offer commands, and she would cooperate. He was familiar with her favourite foods, personality traits, and idiosyncratic habits. Elephants would usually only respond coherently to mahouts after spending several weeks together, day in and day out. Many mahouts in Assam lived a transient life tied to their elephants, moving where the owner requires the animal to work. Both Babul and Bharat only saw their families for a few weeks each year, but since their elephants were semi-retired they did appreciate living a settled existence.

In order to manage the elephants, to bind them in the forest, ride them through the village, and also to bathe and treat their wounds, mahouts needed various skills and supporting technology. Kaushik provided expensive and strong tethering chains to tie the elephants in the forest, with the mahout binding them to a tree of appropriate thickness, depending on each elephant and his or her current mood. Riding an elephant and placing fodder onto their back required knowledge of the various systems of tying ropes around the elephant’s body. Learning how to entwine separate strands of jute (vegetable fibre) into a rope by rubbing the threads between their palms, and to carve tools from bamboo, were some of the first skills learnt as a *kamala* (apprentice mahout). Traditionally, the elephant workforce was differentiated according to the types of labour undertaken and levels of hierarchy, but these systems I found to be lost with the demise of elephant catching culture, or continued only

within institutionalised government-run elephant camps. Finally, expert mahouts like Bharat demonstrated a remarkable botanical knowledge and could identify many plants within the forest that elephants liked to consume, but also plants that could be used to treat the elephants when they suffered a wound or were sick. However, since mahoutship is a vocation that is increasingly underappreciated and unpopular, the specialist skills and knowledge required to use plants and other materials in the management of elephants are slowly being lost (Vanita, Thiyagesan & Baskaran, 2009)

Captive elephant management and relations have undergone vast changes in the last fifty years, including the sourcing of elephants from the forest (which is now banned), the value of mahout labour and skills (which is in decline), and the desire of the elite classes to continue owning elephants (which is waning). Still, the traditional practices, identities, and structures of power that constitute this set of actors from different species and classes maintains continuities with past practices. As Thomas Trautmann (2015, 2016) noted in his deep history of mahouts and war elephants, without mahouts there were no war elephants. However, no mahouts existed before kingship, since it was the powerful who mobilised elephant capture and had the capacity to support the extended processes of training and maintaining elephants: “The war elephant is a product of the conjuncture of kingship and forest people in the elephant-rich forests of India, and the mahout is the very embodiment of that conjuncture” (2016, p. 52). Variations existed on this model, such as the Rabhas of Chaygaon, who at one time were both elephant owners and handlers, before it became too expensive to keep such resource intensive animals.<sup>133</sup> Even then, Rabha elephant owners procured work for their animals through rich land owners, or through government contract. While this chapter focuses predominantly on the interactions between mahout and elephant, this relationship is supported by and part of a system of actors which also includes elite persons and the tools of the trade. The integration of elephants into Assamese human society is part and product of this assemblage, an assemblage which continues to persist into the twenty-first century.

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<sup>133</sup> Also, the Tai-Khamti in Upper Assam caught and handled their own elephants in a practice separate to the Assamese tradition, brought with them in their migration from Burma during the 17<sup>th</sup> century (Laine, 2016).

## Nonhuman incorporation into the human niche

The method of training elephants varies between regions. P. D. Stracey (1991) provides a longer discussion of what I present here: a brief overview of the training process as it might have been conducted in Assam in the mid-twentieth century. Judging by what I learnt from and saw amongst mahouts and other *haathi-manuh* – elephant-men – during fieldwork, I believe this process is likely similar to what koonkis like Alaka would have experienced when caught in the sixties.<sup>134</sup>

As a freshly caught juvenile, Alaka would have been tied by her fore and hind legs to two trees situated in front and behind her. She would have also been noosed around the neck, and further tethered to the tree in front, in order to restrain any writhing so she could not injure herself or the men present (mahouts are almost always male). During the evening, surrounded by burning torches, men would have gathered around Alaka. With straw or leaves, together they rubbed her body, an exercise she was very sensitive to and attempted to reject. During this overwhelming, multi-sensory experience of fire and touch, the men also chanted about who caught the elephant, and sang songs of encouragement for her to become calm or how great a koonki elephant she would become. On the second or third night, the mahout who would train Alaka climbed on her back; Alaka likely flailed about, her trunk reaching behind her, attempting to pull the human off. The mahout struck her hard in reply to her attempts to dislodge him. They would have gone through this same routine for several nights in a row. Alaka's head, fifty years later, still bore the pale scars from the hits of an overzealous mahout with the *ankush* during training – a tool with a hook and pointed end used to discipline an elephant. During training, she was likely frightened with fire when she resisted the men's attempts to engage her, and if she fell into exhaustion, they poked her to get up.

“The psychological approach is one of force and kindness, command and cajolery, admonishment and praise”, writes Stracey. “Eventually its [the elephant's] spirit is broken and it stands drooping, apparently enjoying, if such can really be the case, the singing and stroking” (Stracey, 1991, p. 125-126). While training can be traumatic, the violence is perceived as regrettable but necessary (Locke, 2006). The human-elephant relationship is

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<sup>134</sup> Pier's Locke's (2006) excellent account of captive elephant training in Nepali *hattisare* captures the complex training and ritual practices involved at a level of detail that is not found elsewhere in the literature, and I rely on some of his observations as well to understand the challenges of training the animals.

transformed during this process: while initially aversive, Alaka soon became exhausted to the point that she could no longer attempt to fight or flee. From then, the young elephant had to accommodate herself to aspects of her new environment— the sounds and songs of humans, the presence of light and fire, and especially the constant human touch and intimacy, which became an everyday aspect of her working life. The first part of training is an important process for the elephant's entrance into a "hybrid community" of koonkis and mahouts (Locke, 2006). From this point, they will be socialised into the broader "human niche" (Fuentes, 2015, 2016), integrated into a new structural and social context. Intimately partnered with a mahout, Alaka's environment will now have significantly more overlap with humans and she will share in a set of "cognitive, social, and ecological bonds" (Fuentes, 2016, p. S18) with her new hybrid family. Alaka will need to adapt her diet to available food sources and feeding regimes, wear and engage with new materials, equipment, and physical structures, and learn new forms of action and perception as part of the work tasks she will share with her mahout partners. Alaka, however, will not be a passive object or component in this new web of relations, moulded to serve a function; she will become an active participant in the human niche, mutually affecting and constructing its trajectory along with others.

Several days later, once the elephant was relatively calm, more complicated forms of training were added to the routine. Four primary commands were initially taught to Alaka: *Aget*, "Forward"; *Beit*, "Stop"; *Pishu*, "Back"; and *Sei*, "Turn", in that order. The trainee elephant was unfastened from trees and tied to one or two koonki elephants, who served to constrain her movements. This constraint by other elephants also had the simultaneous effect of calming the juvenile, as the young formed an attachment with the older animals, a process that assisted in her social integration (see also Locke, 2006). The mahout sat on top of Alaka, and at first, using a stick, prodded her head in different locations to convey commands, whilst simultaneously vocalising the command words. If the mahout said "aget", the supporting koonki elephants moved forward and thus encouraged, or dragged, the trainee elephant to move with them. If the mahout said "pishu", accompanying trainers with sticks pressured the young Alaka to step backwards, while the koonki also moved back. Over time, she learnt how to respond meaningfully to these commands, in line with the guidance of the veteran koonkis to whom she had become physically and emotionally bound. When she no longer offered resistance, and responded coherently to the mahout's instructions, the scaffolding that the fellow koonki provided was no longer needed. At this point, when the mahout

wanted to move forward he said “aget”, the elephant understood and coordinated her behaviour with his intentions and commands, responding in a way considered appropriate by the mahout. Alaka and her mahout were then able to move together through the world as a team.

“Elephants have a noble character,” wrote Milroy, one that “has the effect of so endearing it to its captors” (Milroy, 2002, p. 117). Elephants have remarkable socio-cognitive skills and even though Alaka grew up in the absence of humans, she was able to form a long-standing relationship with mahouts. This availability and willingness on the part of an elephant to attend to her new partners and become open to new relational possibilities, is for Despret (2004) one of the more interesting aspects of domestic practices with animals. Alaka learnt to be receptive to the mahout’s communicative gestures as he straddled her neck. She became proficient at interpreting the tap of the stick on various parts of her head and slowly developed a sensitivity to the meaning of the small movements of his toe pressed against her ear. This process of “attunement” (Game, 2001; Despret, 2004) is a conscious and nonconscious interaction of bodies learning to read their partners, becoming open and allowing themselves to be affected and moved by each other. The attunement is reciprocal, as the mahouts in turn must attend to and learn what the individual elephant responds to best, and adjust their interactions accordingly. Both become bound to the other as working partners: the mahout lives alongside and tends to the elephant every day, and the elephant develops within the conditions of her relationship with the human.

An elephant must learn to respond coherently to the utterance of a command to make it meaningful. Consistency in response acknowledges the presence of a relationship and the authority of the mahout in the dynamics of that interaction. Hearne (2007) refers to commands in a human-dog relationship as the authorisation of rights: the animal is free to do certain things – run around, eat grass – on the condition that she returns when called. In a human-dominated environment, the animal ultimately must coordinate with human desires (Hearne, 2007). This authority, notes Hearne, is not freely obtained; a handler’s right to command the animal must be given to them by the animal (see also Game, 2001, on horses). Likewise, “it is difficult to make an elephant perform a task if he or she does not want to” (Laine, 2016, p. 183). These larger, more powerful animals are “complicit in their own captivity”, and the act of following commands is one example of how their agency persists (Locke, 2016, p. 15). Even an already trained elephant like Alaka would only follow the

commands of a new mahout once she had become familiar with that person and become attuned to them, understand their intentions and to trust, respect, and fear them. “They must know the mahout’s heart,” Bharat explained, noting the important intimacy involved in establishing this domestic relationship. Several weeks or a month might pass before Alaka to deigned to coordinate her activities to the presence and commands of a new mahout.

### **The cognitive integration of mahout and elephant through work**

The mahouts and elephants sometimes collected fodder from nearby homes. Assamese householders customarily offered their fruitless banana trees free of charge to elephants for this purpose. I observed the mahouts on many occasions working together with the elephant to topple a tall banana plant. The mahout-elephant team would then drag it to a clearing, where the other accompanying mahouts would calve the thick, juicy stems in half with their machetes, separate the leaves, and load them onto the elephant’s back. The two female elephants, Alaka and Xiruxila, were used most often for this task. Xiruxila, the young female, could assist by carrying her share of the load back to camp. However, she was inexperienced and did not have the proper understanding of what was required of her to perform the activity of pushing over trees, including the commands and associated skills. Alaka, on the other hand, was an expert, with years of experience.

Babul guided Alaka towards the first tree. He sat atop the elephant, his legs wrapped around her neck and bound to her body by a rope, using only his big toes to give her directions. Bharat was usually on the ground at the time, also providing instruction to Babul, where to drop the tree and what obstacles to avoid. Babul moved Alaka up close to one of the plants; with several thrusts of his toe, he guided her into position in front of it, negotiating small adjustments. For instance, by pressing his ankle backwards, he instructed Alaka to step away from the tree; a jab with his big toe meant “forward” and to approach the tree, and rotating the foot and moving the toe inwards asked Alaka to move to the left or right. The position the mahout-elephant team took in relation to the banana tree indicated which direction it was going to fall.

Commands are given and learnt embedded within a working activity, and more broadly, as part of the elephant’s everyday practical engagement with the environment. Alaka’s responses were not mechanistic behaviours triggered by Babul’s commands (see also Lainé, 2016). When Alaka responded to “forward” or “backward”, she was present to the



environment and what the command meant in relation to the task being conducted; she did not simply move forward in space, but understood that the command was to move in relation to the tree and the task of pushing it over. Similarly, Lainé (2016) argues that mahouts depend on the elephant's own comprehension and expertise, and that "commands words are only effective in relation to the elephant's ability to interpret them according to context and purpose" (p. 198).

When they were ready, Babul twisted his body, tightening his calves against her neck, and jabbed his big toe in the direction he wanted Alaka to tip the banana tree. The mahout and elephant moved together, Alaka leaned forward, raised her trunk and pressed it against the banana tree, joining with it temporarily. The upstanding growth of the plant was diverted, the team exploiting the physics of its narrow stem as a lever against its shallow roots to overbalance and tear it from the ground. The gesture was subtle, but the power was evident from the way the plant was practically ripped straight out. If the team encountered some resistance, perhaps the roots continued to hold firm, Babul would usually help Alaka to reposition herself to apply pressure again, or alternatively walk around the other side so she could wrap her trunk around it and drag it from the ground. Alaka worked well with Babul, and he rarely needed to reinforce his gestural commands with vocal shouts or the whack of a stick. Of course, there were rewards for Alaka's labour: every time she toppled a tree, Babul would allow her to tear off a banana leaf to eat. The team's collaboration was subtle and at first glance could easily go unnoticed. Alaka's confidence and skill made the job appear completely routine.

I once saw Babul and Alaka topple a tree where the margin for error was barely one metre, with the risk of damaging houses and hitting locally strung power lines. The tree fell in the right spot each time. To explain this accuracy, we need to reference more than the commands issued by Babul, which were too basic to directly control or micro-manage Alaka's movements. We must also acknowledge the expertise that the elephant has brought to the task. The manipulation of the falling tree could only be subtly controlled by her dexterous and powerful trunk. Further, the tree's landing was coordinated with her awareness of the environment; the precision of the falling banana tree's trajectory demonstrated Alaka's sensitivity to the housing structures and the need to direct the plant to fall into the empty space.

Human commands served to guide Alaka in aspects of the task she could not cognise or comprehend herself and, therefore, solve independently. Alaka required constraints within which she could express her expertise. The reasons for her incapacity to act independently could be because she did not have the cognitive ability to do so, or because the specifics of the task could not be communicated to her due to the poverty of the command language. The task also included other information that she likely could not understand: for instance, which trees the homeowner gave permission to fell. Babul could not simply say, “Alaka. Go to that second tree on the left and push it towards me”. Forward, back, turn right or left are all positioning commands that allowed Babul to guide Alaka and show her which tree needed to be engaged. Negotiating her position in relation to the banana tree narrowed the possible degrees of freedom within which Alaka needed to conduct her task. Other commands given whilst toppling the tree assisted in steering the direction the plant fell. Importantly, these commands were premised on the mahout’s trust that Alaka not only had the sufficient experience and skills, but also a shared perception of the environment and any obstacles that need to be avoided.<sup>135</sup> The capacity for working human-elephant partnership to occur rests on an interspecies intersubjective relationship (Laine, 2016).

A similar dynamic occurs in human educational and developmental contexts. Adults guide children in aspects of a task they do not yet have the cognitive ability to understand or physical skill to perform (Pol et al., 2010; Belland, 2011). “Scaffolding” decreases the difficulty of the problem for the child, offering guidance tailored and in response to the child’s ability, and based on the unfolding demands of the task (Wood et al., 1976).<sup>136</sup> The

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<sup>135</sup> Here are two more examples of the limitation of commands and the dependence on elephant’s comprehension of problems faced in a shared environment: 1) One morning, one of Kaushik’s tuskers, who had been injured in the leg by an attacking wild elephant, had become increasingly weak and during the evening had lain down on his side, but could not rise. The mahouts decided that he needed assistance to stand up, so the mahout riding Alaka at the time positioned her close behind the tusker, pressing her trunk up against his body. Then with his toes, the mahout pushed forward and up. This command, when done in relation to an object, can indicate the need to push the object forward, or lift it up. Alaka in response placed her trunk and weight beneath the tusker and assisted him to lift his body off the ground, enough so that he was able to stand up. 2) When we were walking into a house one morning, there was a small drainage ditch that surrounded the property. Laying over that ditch was a concrete slab that connected the driveway to the lane. While directing Alaka into the house, the mahout paused the elephant for a moment in front of the slab, aware that it would not support her weight, he then commanded her to raise her legs and step over an object. Alaka then proceeded to walk into the house, carefully avoiding stepping on the concrete slab. This interaction revealed that Alaka, whilst guided to halt at the driveway and asked to step over an object, still needed to identify the object and understand the need to avoid stepping on it: the commands had to be interpreted in relation to the context.

<sup>136</sup> For instance, a parent might offer demonstrations, verbal corrections, redirect attention, intervene to prod reflection, or even organise or manipulate an aspect of the puzzle so to present a perspective on the problem the child could not achieve independently.

parent becomes an external cognitive resource: the higher-level cognitive skill, that the child has not developmentally achieved yet, can thus be integrated into the child's performance through the adult (Perkins, 1993; Bibok, 2009; Belland, 2011). Similarly, Babul through commands mediates Alaka's own expertise and engagement with the task. Babul's scaffolding, such as repositioning Alaka in relation to the tree, enabled her to adjust her behaviour, as if she was taking into account those aspects of the problem that she was actually unable to understand. Commands coordinated the elephant's performance with the cognitive labour of the human, so the mahout too could bring his skills to bear on the task and narrow the range of factors that the elephant had to consider. However, the relationship between human and working animal, unlike that between parent and infant, is a permanent scaffold (Keil, 2015). An elephant over time will not learn how to complete the task independently of the handler, even though she becomes extremely efficient and highly responsive to the handler.

Nicolas Lainé (2016), in his analysis of mahout-elephant interaction during the task of pushing and pulling logs, calls attention to how the narrow parameters of mahout commands foregrounds the creative and intelligent initiative of the elephant. Lainé asserts that to fully capture the elephant's role in timber handling, we need to conceptualise the *collaboration* of the partnership. Lainé quotes Dejours (2013, p. 100), who defines collaboration as capturing the active and reciprocal performance of both partners who collectively “reshuffle, realign, readjust the coordination so that it becomes efficient”.<sup>137</sup> Collaboration as a concept is useful: first, it reminds us that the elephant is not merely working within the constraints of commands but also defining them, and; second, it highlights the fact that Alaka, at a certain level, understood the task and was intentionally and actively deploying her own cognitive and physical labour, contributing her own assessments and abilities to overbalance the tree successfully. The mahout's guidance and the elephant's manipulation are species-specific skills that are coordinated to complement each other. They represent a finely attuned, intelligent, practiced, and powerful collaboration that gives shape to the world in ways neither partner could achieve independently.

Babul and Alaka together toppled the banana tree, although not simply with each other, but *through* each other. While I described their actions independently, no positions or actions

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<sup>137</sup> Lainé's translation.

were taken on the task of toppling the plant that did not emerge out of their engagement within an intersubjectively shared environment. From atop the elephant Babul obtained a certain perspective on the working area and where to push the tree; from Babul's commands, Alaka learnt about where the tree should and should not fall; and in response to Alaka's actions in tipping the tree, Babul knew how Alaka needed to be guided. Both mahout and elephant were pragmatically interdependent (see also Michalko, 1999, on seeing-eye dog collaborations). As a team, together they moved, interacted, affected and were affected by the world.

Alaka was a collaborative partner, and her own perception, action, and expertise on the work task were invaluable to its completion. Elephants can recognise the need for cooperation in tasks which require the presence and actions of other elephants (Plotnik, 2011), indicating that elephants use joint attention to coordinate in shared tasks. However, the more complex aspects of collaborative work, specifically the scaffolding activities conducted by Babul, are unlikely achievable by Alaka. Aside from the mahout having complete access to the goals of the task, it is likely that the sophisticated cognitive skills required to be a scaffolding partner are unique to Babul. Tomasello (2014) argues that the capacity to adopt the perspectives and intentions of collaborative partners, to inference what each partner knows about each other, to understand one's role in the group and further manage one's actions in relation to the perspective of the partner, constitute a radical form of thinking that evolved in early humans. These species-specific skills have produced adaptive forms of collaborative activity amongst humans. Although as we can see, they also have been extended and employed to understand the perspectives of other animals and enter interspecies working relationships (see also Pat Shipman, 2011, on the evolutionary advantage of the "animal connection" and the skills required to recruit animals).

## **Becoming domestic**

When travelling together along forest paths, the mahout, Oupe, would often let his male tusker, Premnath, walk ahead of the him.<sup>138</sup> As he trailed the tusker from behind with a thin bamboo stick, Oupe tapped Premnath on the hind legs gently while rhythmically repeating "aget, aget, aget, aget, chyaallo". Aget (forward) is less of a command here but a meter for

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<sup>138</sup> Not the elephants real name. In fact the elephant was called Babul. I changed the name to avoid any confusion.

the elephant to set his pace; to slacken the cadence could result in the elephant losing momentum and taking his or her time. If Oupe was in a hurry, and Premnath stopped to reach for a branch to feed, the mahout would lower his tone and sense of urgency and give Premnath a harder whack on the back. In this moment “aget!” is given more as a directive, since the elephant failed to move in line with the mahout’s expected course. Yet most of the time the atmosphere was relaxed. Alone in the quiet forest, the mahouts were happy to follow and forage with the elephant, and let the animals set the pace as they walked. The elephants knew the daily routine, which paths to take, where to find the good feeding spots, or whether to go down to the water hole or stream where they would get their well-deserved drink. Premnath was not completely unfettered though; his forelegs were hobbled by a chain constraining his movement so he could not move quickly and thus escape the influence of Oupe.

When in a public space beyond the tree line and amongst people and houses, mahouts would always ride atop their elephants. This position allowed the handlers to maintain immediate and constant contact, better observe the elephant, and more precisely instruct. One exceptionally hot day, we were returning from Chakardo, walking along the main road back to camp. Babul was riding Alaka, and Oupe sat on Xiruxila. Bharat was also present, riding alongside on his bicycle. Alaka and Xiruxila had become weary and thirsty. Their pace had slowed, and they drew saliva from their mouths with their trunks and sprayed it on their overheating bodies. Alaka flapped her ears intermittently, generating gusts of air that cooled herself off. Seated on a hessian bag, Babul straddled Alaka’s neck, and his body rocked back and forth, while his legs and toes massaged and pressed behind Alaka’s ears. He was not simply in rhythm with her undulating strides but actively thrusting forward through his legs and hips. As Oupe had done vocally with Premnath, although with increased discipline and focus, Babul’s body movements offered an encouraging meter for the team to set their pace. In turn Alaka inhabited that rhythm with him. Babul’s encouragement was especially important since the elephants had grown tired, and Alaka needed to keep focused on the task of walking back to camp. The mahout-elephants kept to the edge of the road and walked in single file; they were gently guided with commands to keep to the left when trucks passed. Alaka was always consistent and in time with Babul, her lumbering steps setting a steady pace for her younger charge. Xiruxila would get anxious when separated from Alaka and was sure not to trail too far behind. Being only thirteen years old, Xiruxila was much less

disciplined than her maternal figure: she was apt to complain, trumpet her displeasure, and get easily distracted.

Alaka, with a different mahout than Babul, particularly one less experienced and confident, became a very different worker. On one occasion under the legs of a young mahout, I was surprised at how her demeanour completely changed. She paid no attention to him or gave him any respect, crossing the road on a whim if she spied weeds to eat, ignoring insistent commands to move along as she fed on the roadside. When a large elephant does as she pleases, her presence can be disruptive, blocking the flow of traffic and making pedestrians nervous.

In contrast, Alaka remained with Babul and collaborated as a team, and they worked together on the task of marching home on this hot day. Watching her movements closely though, I could see that she was constantly attending to and assessing the environment, scanning the horizon with her trunk, subtly slowing down on occasion and searching for opportunities. While marching, Alaka kept her head cocked to one side, facing inwards towards the road. I thought that she was scanning for cars, needing to turn her head because her ears limited her peripheral vision. I suggested my observation to Babul who laughed and interpreted her habit as looking out for people who might call her over to give food. Mahouts commonly explained that what elephants most want to do is eat (Hart, 2005). Alaka's trunk wavered back and forth over the tarmac, towards the roadside trees, reaching out toward any approaching person, shop, or even slow-moving car. Babul countered her hungry and wandering mind by rocking his body harder in response, reminding her to keep in line and in time.

Compared to the lax interaction in the forest, taking the elephants onto the streets of a village or town required a shift in the mahout-elephant dynamics. In the jungle, passers-by were rare, and if Alaka guided the team's movement, foraging on various plants, she would not prove disruptive. However, on a public road, Babul needed to guide Alaka to keep her walking forward and in a straight line, making sure that she kept her immediate attention on moving steadily back to camp. The mahouts assured me that the elephants knew they were returning home; however, I suspect, Alaka, if left to her own devices that day, would not have had the desire to maintain the discipline of the march. Of course, Babul also knew that Alaka's mind was elsewhere. The mahout was following and anticipating Alaka, continuously conscious of her intentions, simultaneously scanning the environment and predicting who and what might draw her attention. Babul partially interpreted the world

through Alaka and attempted to discern how she perceived it so that he might mediate her interactions with it. If the team deviated off course, Babul would correct her with commands: he would rock harder, jab her with his foot, or tap her with the stick. Sometimes he would do this even before she had a chance to divert her attention and her body, anticipating an element that Alaka might perceive as a too-good-to-ignore opportunity. Babul maintained the team's focus on walking, scaffolding Alaka, his sophisticated cognitive skills enabling him to serve as an exogenous form of self-control necessary for the task at hand.<sup>139</sup>

As we approached a shop with people standing around, Babul gave a few taps with his bamboo stick on Alaka's head. Alaka might have expected that these people would give her food as an offering. The mahout's tap served as a reminder for her not to get distracted or wander over. Occasionally, Babul let Alaka feed on some of the vegetation we passed. *Tengabor* (large bitter) leaves, a favoured meal of Alaka's, hung from the branches of a tree that grew by the roadside. Babul agreed with Alaka as she followed her trunk and tore away a huge leafy branch. She slowly munched on half while retaining the other half in her trunk for later. The mahout allowed her the opportunity as an affectionate gesture, but was quick to prod again with his toes to continue moving forward.

Not much further, Babul became absent to Alaka, pre-occupied with looking over a neighbour's yard from on high. He was not focused on how Alaka might be engaging with the various people, trees, and other things that they passed along the roadside. Alaka took advantage of Babul's previous concession and his current distraction. Perceiving and desiring a banana tree, her focus narrowed to a single palm leaf overhanging the fence of someone's property. She oriented herself and walked toward the wall, her trunk drawn upwards towards the leaf. Babul came to his senses, shouted immediately "pishu!" He corrected her approach with several hard jabs with his heel, commanded her to back off from the tree, and then redirected the team's attention back toward the road. He then gave Alaka a few punishing thrusts with the pointed end of his stick in the back of the ear.

When Babul commanded the elephant to back away, the instruction severed the relationship between Alaka and the banana leaf that she was intending to bring about. "Pishu" was used

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<sup>139</sup> This dynamic can also be extended to the relationship between Alaka and Xiruxila as they walked. Alaka, who Xiruxila always followed closely behind, set the pace walking, and Xiruxila's desire to maintain connection with Alaka was the necessary constraint that propelled her forward without getting overly distracted.

to limit the kind of relationships with the environment that the team was permitted to form. When Babul became annoyed at Alaka, he was not only displeased with her taking advantage of his inattentiveness. The mahout was also concerned that the elephant might feed on and damage another person's property. Babul could not anticipate whether the landowner would become angry, or what liabilities the mahout or the elephant owner, Kaushik, might incur if she pursued the opportunity too enthusiastically. Alaka simply could not fully comprehend the concept of land-ownership, possession, or more generally the boundaries of what she could and could not eat, touch, or interact with (and in this context, she had no motivation to care about these factors, either). In a familiar context, Alaka did demonstrate awareness of what she can and cannot do, although in the case above the mahouts joked that she "only saw something she could eat." Contexts are always variable and many structured by symbolic aspects of the human social environment with which the elephants will be unfamiliar, or will not be able to cognise, and they will therefore be unable to demonstrate an awareness of individually.<sup>140</sup> Some dimensions of the anthropogenic and anthropomorphic landscape were simply imperceptible to the elephant. Babul, in this human-elephant team, had the most competent understanding of the social norms of the human world (and often I also needed his scaffolding!). Babul needed to be aware of Alaka was perceiving and not perceiving, while Alaka was continuously listening to Babul, through his feet, anticipating his responses to her intentions. Commands integrated his knowledge and concerns about the anthropogenic environment into the team's behaviour and enabled them to successfully navigate the practical and social boundaries of the human-dictated environment without coming into conflict with other people.

Mahouts need to keep consistently on top of and monitor the elephant in a public space. While food was an issue, they must also manage the team's responses to unpredictable factors in busy environments that might startle the animals, and make sure that they did not get aggressive towards passing dogs or pigs. The huge sweep of an elephant's leg is potentially lethal. Making sure Alaka maintained her distance from whatever was disturbing her, massaging her head gently, or supplying a gentle tapping rhythm, were all techniques that Babul employed to help alleviate her agitation or anxiety. A calm elephant is less likely to get out of control and cause damage and the mahout-elephant team remains a non-

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<sup>140</sup> It could also be the case, that due to their size, that they just don't care!



disruptive presence through the emotional and environmental monitoring of the human collaborator.

For the most part, Alaka did not take swipes at trees to eat because she was also invested in the joint task of marching back home. The team maintained a straight line and were good, although slightly irregular, pedestrians. The occasional car slowed down as they passed and passengers made reverent gestures. Some stopped their vehicles completely and ran over to give the team some money. People preferred to give money directly to Alaka, for several reasons. First, the rupees were ultimately intended as a gift for Ganesh. Second, in receiving the money, Alaka would raise her trunk over her head in a gesture of *salaam* – a motion received as a kind of blessing – in order to pass the note to Babul. Alaka seemed to be aware that those who came from their vehicles had nothing edible for her, and made only the slightest probing scan with her trunk. Shopkeepers, on the other hand, always attracted Alaka's close attention. Street vendors frequently wanted to offer the elephant food. At the sign of a shopkeeper invitation, Alaka required no instruction to guide her to the small roadside grocery store. Since many gifts of food had a religious purpose, the mahouts always felt obligated to respond and conceded to Alaka's more than willing answer to the call of devotees.

Babul placed pressure on Alaka with his heel, and helped keep the team at an appropriate distance when reaching the shopfront of a small store. The fragile shop, made of bamboo and tin, looked as if it would be easily crushed if they got too close. On this occasion, Alaka stood patiently in front and did not raise her trunk, instead scanning the ground below the hanging chip packets. When the shopkeeper came out with two loaves of bread for each elephant, she raised her trunk towards him, curling at the end to receive the offering: he passed along the bread and then touched her trunk afterwards. Alaka was polite that day – not too pushy – and I saw little evidence of Babul needing to mediate her engagement with the shopkeeper. In this sense, like educational scaffolding, some of Babul's assistance could be withdrawn during this well-practiced interaction. On other occasions, I have seen her trunk more intrusively hover around the shop window, waiting for her gift, or sometimes force her wide-opened mouth and glistening pink tongue at the nearest person. Further, upon receipt of the gift, Alaka often made a gesture for more food. Animals do not understand the concept of gratitude (see Knight, 2005). That day, once she received the food from the shopkeeper and placed it in her mouth, Babul commanded "pishu". Responding to Babul's

command, Alaka refrained from making any more searching gestures, took a step back, and redirected her attention towards the road back home.

The mahout's management of the team's relations extended to their engagement with people. Babul was aware of Alaka's sometime insistent probes for food, and that her hulking, eager body can press too close and intimidate people. While Alaka was not at all clumsy or insensitive beast, at times she could be ignorant of the finer nuances of interactions. Babul would assist her, for example, in not accidentally bumping the store in her enthusiasm for food, or in responding to the discomfort felt by some people in her presence. Babul moderated her engagement, helped the team to maintain a comfortable proximity as well as proper manners towards others. Not to over-emphasise Babul's role as a social scaffolder, we should also take into account the immense power and size of elephants, and that elephants are already remarkably successful at modulating the amount of force they use when interacting with people. As animals socialised into human relationships, they are attuned to interacting with humans, comprehending and sensitive to how they affect people. That I have never seen Alaka knock over anyone coming to give her an offering I take as evidence of this sensitivity! Babul's instruction served only to subtly augment Alaka's interactions and reinforce her own well-learned restraint.

Compared to the deeply collaborative working relationship I described in the last section, in this ethnographic account I emphasised the moments when Babul was required to closely scaffold Alaka's behaviour. Alaka was a partner who would dynamically shift between aligning herself with Babul's intentions and sometimes becoming more interested in attending to the leafy branches of trees or other people. Babul kept his presence integrated and the team mutually coordinated using various commands. These could be encouraging commands, such as the rocking of the body; guiding commands, such as prods with the feet that merely helped perform subtle adjustments; or occasionally, stricter forms of discipline to tightly constrain the elephant's behaviour. Commands are intended to be mediatory, employed to manage the animal's ongoing relationship with the world (Keil, 2015). Scaffolding assisted Alaka to be a non-disruptive presence (walking in a straight line), respecting social boundaries (not eating another person's food), and engaging people in the right way (respecting personal distance). Alaka, scaffolded by Babul, could function effectively as an acceptable social agent in the human niche.

The mahout-elephant team was a special figure in the village. No other working animal relation inspired people to walk up and present offerings. Devotees also knew they could call out to the team, and they would almost always respond to the invitation. While young children, and some adults, hesitated to be near elephants, many others were equally unconcerned about feeding and touching the animals. This comfort has been fostered over the years in a region and culture where elephants living in the village is common, and people are accustomed to seeing and interacting with the animals. The mahout's relationship to people was also constructed through their association with the elephant: people were more likely to give the men money, gifts of food, or respect as individuals who could command these impressive animals. In turn, the elephant's availability to be engaged as a divine manifestation, to receive offerings and give blessings, depended on the scaffolding role of the mahout, who mediated the interactions, enabling the devotees' expectations and comfort in relation to the animal god.<sup>141</sup>

### **The risks of scaffolding elephants**

Finally, to briefly return to the mahouts, we can resituate what we have learnt about mahout-elephant team within the political and social conditions that make the domestic elephant possible. Working elephants negotiate a niche modified to anthropogenic purpose by coupling closely with mahouts. However, not everybody is willing to integrate his life with an elephant. Sitting with Bharat over tea one afternoon, we talked about the dwindling number of good mahouts and the decrease in their skills these days. Bharat wondered whether, one day, domestic elephants and humans would no longer "understand" each other. At that point of incomprehension, he went on, elephants will do what they want. They will not be afraid of people; they will go to villages, destroy houses, and eat banana trees and rice crops – that is, behaving in a very similar manner to forest-roaming elephants. Because of this risk, Bharat finished, mahouts will continue to be needed. Bharat's observations also extended to the problems that mahouts face when managing male elephants when they enter musth, seasonal hormonal changes that result in increased testosterone levels. Musth often leads to aggression towards unfamiliar humans and animals. "When elephants get angry, we

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<sup>141</sup> Both mahout and elephant can express a remarkable shared patience when engaging people, who can be very insistent with giving gifts of food. Only once, I saw both mahout and elephant frustrated: the mahout saying that the elephant was sick, and the elephant itself grabbing bananas on one side and casting them aside on the other.

need to protect people from them,” Bhupen, another of Kaushik’s mahouts told me. When I first met Bhupen and his elephant, he informed me that the male animal was in musth and was dangerous, so much so that he might kill people.

The mahouts, by these accounts, represented their job – an interspecies relationship – as serving to constrain elephant behaviour on behalf of the whole community. From this perspective, the elephant was framed as an animal that potentially could get out of control and become a threat to the human world. This description captured the extremes of elephant power, the facets of their behaviour that is more akin to their “wild” nature. Of course, mahouts have a more nuanced view of their work, the character of elephants, the complexities of understanding and communicating with these animals, and the cooperative, intimate aspects of the interspecies relationship. Their point highlights how that collaborating with an elephant includes significant risk, both to themselves and the broader community. Negotiating this danger emphasises the mahout’s mastery, bravery, and his perceived mediatory role between the forest and village, the wild and domestic worlds.

Mahouts were romanticised in folk songs of the Goalparia tradition in Assam, popularised by the folk singers Pratima Barua Pandey (elephant expert, Parbati Barua’s sister) and Bhupen Hazarika. Mahouts and phandis were set apart in these songs as a distinguished class of people, unattached to settled life, closer to nature, and transgressing society’s constraints (Misra, 2013).<sup>142</sup> Their physical condition and dexterity, intimate connection with elephants, and immense bravery in the face of danger were, and continue to be, glorified by elephant owners and the general population. The mahouts I knew also enjoyed taking part and sharing stories of their courageous exploits.<sup>143</sup> These praises are true: in what was quite possibly the bravest thing I had ever seen, Bharat (a man just over five-foot-tall) intimidated and chased an unknown, potentially aggressive and huge *makhna* (tuskless male) through the forest with merely a sling shot in hand. Yet an emphasis on these romantic aspects of the profession also risk overlooking the reality of what is a difficult, often mundane, and very dangerous job. Mahouts received a low wage and were expected to live a life of few luxuries, while sleeping on hard floors away from their families.<sup>144</sup> Their toenails were worn away, feet hardened,

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<sup>142</sup> See also Locke (2006) for associated prestige of mahouting, and romanticism by colonials.

<sup>143</sup> Babul, Bharat and Oupe would also engage in this romanticising to a degree, eager to tell stories of their encounters with elephants, and proud of their exceptional skills and the special status offered to them riding a living god.

<sup>144</sup> Kaushik Barua’s mahouts were better provided for than most.

and calves chaffed from riding against the coarse skin of the elephant; their bodies ached at times from physical work. Some mahouts also wore the wounds of being attacked by elephants. Even the simple act of commanding elephants placed the mahouts in harm's way. Commands worked better within physical proximity, and the occasional threat of force, to affect elephant behaviour. Being so close leaves a mahout vulnerable to retaliation by a disgruntled elephant. Mahout work is likely one of the world's most dangerous jobs: around 90% of mahouts in Kerala, South India, have reported being attacked by their elephants, and 45% seriously injured (Radhakrishnan, Rajeev & Radhakrishnan, 2011).

The skills and craft of mahoutship were slowly dwindling. The work has become a short-term job as opposed to the life-long vocation it used to be. Increased turn-over of mahouts and lack of relationship building with elephants have been connected with increased mahout injuries and fatalities (Vanitha, Thiyagesan & Baskaran, 2009). Despite being respected, and sometimes held in fearful suspicion for their capacity to command such a powerful beast, the value of mahouts and their elephant labour is depreciating. The elephant's capacity for work no longer holds the same importance it did during the time of Assamese kings, British colonialism, and or when Assam was rich with forests and elephant catching was still permitted (Vanitha, Thiyagesan & Baskaran, 2009; Misra, 2013).

The human-elephant working relationship, while full of remarkable interspecies intimacy and bonding, is a risky and occasionally violent interaction for both species. The rural poor, disempowered, and subaltern classes have traditionally been recruited for elephant work.<sup>145</sup> Mahouts have always been figures from the margins of society. Historically in South Asia, "forest people" had positions as mahouts or hunters under royal charge (Locke, 2006: Sarma, 2011, Trautmann, 2015). Peasant labourers were recruited for elephant drives (Bhadra, 1983), and mahouts formed a class of workers comprised of persons from the lower classes (Locke, 2006). Currently in India, working with animals was generally considered to be a

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<sup>145</sup> Despite mahouts' disempowered status, they have some negotiating power in their relationships with elephant owners such as Kaushik. Tensions, for the mahouts, often revolve around money. The owners, on the other hand, were often disappointed with the mahouts' failure to perform and take care of the animal to expectations. While owners are able to withhold wages, and exert other forms of coercion, they are also vulnerable to mahouts' subtle forms of protest. Since bonding to an elephant requires time, finding a new mahout with sufficient expertise to replace one is a significant inconvenience. Mahouts have scope to negotiate, for instance, when they might unexpectedly return to their village, leaving the elephant without its regular handler (see Locke, 2006 for other examples). Of course, elephant labourers are also able to resist. They might refuse to follow commands, do so grudgingly with much distraction and complaint, even in some cases feign problems (Lainé, 2016).

low status job, despite the revered status of elephants (Vanitha, Thiyagesan & Baskaran, 2009). The conditions under which the mahout-elephant team is realised, and the exploitation of the augmented power and skill of this interspecies coupling, requires a class of workers to be exposed to an increased risk of injury and death.

## Conclusion

Both animals spend large parts of the day together. The elephant is continuously coordinating her movements with the mahout's, as is the human with the elephant. They are practically bound to each other, a close coupling of bodies, intentions, daily rhythms and environments. This chapter explored how the lives of humans and elephants can become deeply entangled over time, and the new potentialities that can emerge from that relationship as both human and nonhuman "render each other capable" (Haraway, 2016, p. 126). The augmented capacity of mahout and elephant to affect the world in ways that neither animal can do independently resulted from their close coordination, and was an ongoing relational achievement. This capacity was dependent on elephant and human sharing an intersubjective common ground, and the mahout employing his human-specific cognitive skills in order to more deeply integrate each other's intentions and actions.

Drawing on Ingold's (2011) metaphor of life as lived along lines, we can imagine mahout and elephants not as agents taking alternating opportunities to act on the other, but as continuously and mutually affecting "trajectories of movement." Babul's shifting position on the environment was continuously informed by Alaka's. When he anticipated that she had a limited comprehension of the situation, or desires divergent to his own, commands served to better align their unfolding trajectories. The lines they traced through the world, emerged not only from their correspondence with each other, but were coordinated in relation to their shared, task-based environment which included trees to be uprooted, property to be avoided, and devotees to be engaged.

Research that explores how human and animal are coordinated in shared projects, or interacting in such a manner that they express interrelated traits, serves to challenge rigid distinctions between species (e.g., Haraway, 2008). Some researchers have further assigned an emergent, ontological status that integrates the two animals into a single hybrid identity (see Latimer, 2013 for a critique). For instance, Michaels (2000) coined the term "hudogledog" to identify the assemblage of human, dog leash, and dog, and Game (2001)

draws on the centaur metaphor to explore how human and horse bodies are closely coupled and can inhabit each other's rhythms while riding. In this chapter, I resisted identifying mahout and elephant as a unified entity and settled on the concept of "team" which retains the sense of individual partners, positions, and perspectives. A completed task was achieved through a complementary coordination of differentiated, species-specific skills and points of view. Any attempt to completely blur the distinction between the two animals masks the tension that successfully produced their working relationship.

Human-elephant relationships are often the subject of popular scrutiny, characterised as a form of domination operationalised by the threat or deliverance of punishment. While punishment is an important part of the mahout-elephant relationship, the process of entering a working relationship – of becoming a domestic elephant – generally, is also successful because the elephant extends its sophisticated socio-cognitive skills to humans, and learns how to adapt to and collaborate with the conditions of the new interspecies relationship (Laine, 2016). The elephant authorises the commands of the mahout, and thus allows the human's cognitive capacities, perspectives, and social comprehension to be integrated into the elephant's engagement with the environment. Through this integration, a human-elephant team can successfully perform tasks as a worker and engage people and property in line with the constraints and expectations of human society. Providing the mahout-elephant team are properly coordinated and the nonhuman responds coherently to the human's commands then the elephant maintains its social identity as a domestic animal – a *ghoror haathi* (house elephant). Yet when an elephant no longer properly listens to the mahout – such as when a male elephant becomes aggressive and destructive – the animal is considered out of control and expressing its wild aspect. Biologically and behaviourally, the individual elephant is never domesticated. Domestic is a relational achievement reproduced over time through the behavioural coordination between human and nonhuman species. As Natasha Fijn (2011, p. 19) similarly notes in her ethnography of Mongolian herders "it is the degree of social interaction and engagement with humans...that dictates whether an animal is a co-domesticated or not." An elephant's domestic or wild status is only ever a potential.





By the banks of the Deepor Beel

As the train chugs along

Groups of birds fly down

And they fly away

Fly away

By the banks of the Deepor Beel

As the train chugs along

The elephant herd comes down the forest hill

The train hits the elephants

Hits

Which way is the world heading?

What's progress?

Which way is mankind heading?

What's progress?

“Deepor Beel Paare Paare.” English translation of the song lyrics by the artist, Ibson Lal Baruah (2014).





Figure 6.1: Herd of elephants leaving the waters of Deepor Beel in the early morning light, returning to the forest after a night spent bathing, feeding, and socialising.



Figure 6.2: Forest-roaming elephant crossing railway tracks in late afternoon.



## Chapter 6:

# The elephant and the iron horse

Ibson Lal Baruah's Assamese song, "Deepor Beelor Paare Paare" – By the Banks of Deepor Beel – is concerned with the flora and fauna of the wetland, and their gradual disappearance under urban encroachment and pollution.<sup>146</sup> The music video juxtaposes images of aquatic plants, birds, and elephants in the beel against shots of the railway line.<sup>147</sup> "As the train chugs along, the elephant herd comes down the forest hill, the train hits the elephants," Ibson sings, facing the camera. A train speeds towards Ibson from behind, in dramatic opposition to earlier images of two elephants crossing the tracks at Chakardo village. Ibson then launches into the chorus – "Which way is the world heading? What is progress?" – the lyrics prompting a pause, to slow down and reflect upon our current trajectory. The music video invokes the popular trope of modern society at odds with the natural world.

The train began operating through Chakardo in 2001 and since that time, twelve elephants have been killed along that small stretch of railway line. This is a significant proportion of the approximately 220 elephants killed by trains across the entire country since 1987. Despite the frequent passenger and cargo trains, as well as increased motor vehicle traffic passing through the area, elephant herds from the Rani-Garbhangra reserve forest (RGRF) persist in utilising Chakardo village as a passage to Deepor Beel. The regular routes to the wetland taken by elephants were also referred to by locals as *dandi*. The train tracks that cut through Chakardo ran literally at right angles to the *dandi* of elephants. The railway system posed a problem to the pathways, threatening to sever the pachyderm community's long running relationship with the wetland ecosystem.

The elephants used in the video clip for Deepor Beelor Paare Paare were two of Kaushik Barua's females, Alaka and Xiruxila, who we met in Chapter Five. They, along with their mahouts, were loaned to Ibson for the day to recreate an image of a herd crossing the tracks.

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<sup>146</sup> Speaking with Ibson, the singer-songwriter recalled how he was inspired to write the song by his own experience of being a signatory to a successful conservation petition. The petition was a revelation that even small acts could have an effect in solving environmental problems. Ibson hoped that his song would inspire other artists to write about those concerns, and in turn motivate people to become engaged in conservation.

<sup>147</sup> The video for "Deepor Beel Paare Paare", <https://www.youtube.com/watch?v=Lq3wqnKAKp0> (accessed 09/01/17).

Filming at night would be logistically too difficult, as well as disturbing to the free-roaming herds. I was present onsite during the recording session, along with several forest officers, mahouts, and local villagers who had gathered around to watch. I remember being amused as the cameraman's assistant called out for observers to move out of the frame as they filmed the elephants, presumably to capture a more naturalistic scene. In fact, a herd never crossed to the wetland in absence of people: many of the men being moved out of the frame that day were present every evening, employed by the Forest Department to monitor the elephants and escort their safe passage. The dandi at Chakardo was not a permanent feature of the environment like the dirt trails of the forest. Rather, as I will illustrate in this chapter, it was a pathway made possible by the efforts of these men who worked to mediate anthropogenic space so that it became a place that afforded movement for the elephants.

The problem of elephant deaths became the central theme for Ibson's song, which secured exposure through television and newspaper interviews, as well as social media channels. As charismatic beings with considerable affective power, elephants "flourish in contemporary media ecologies," often mobilised as "flagship species" in order attract and leverage support for conservation issues (Lorimer, 2015, p.124). Unfortunately, not long after the release of the song in July 2014, elephant escort, Kaliya Boro was killed while performing his duty. He was a farmer, but also a retired mahout, and was considered Chakardo's resident elephant expert. Kaliya was killed by a train at 3am in the morning as he waited on the elephants foraging in the wetlands. It was an accident. He was alone at the time and nobody saw how he died. Kaliya's role assisting elephants and his tragic death were highlighted by Ibson during the song's promotion. Through Ibson's connections with the World Wildlife Fund for Nature (WWF) India, his song was brought to the attention of Ron Chandler, head of the non-government organisation (NGO), Conservation Initiative for the Asian Elephant, in the United States. Ron in turn presented Ibson's music video at Cinema Verde, a small, environmental film festival in Florida. Speaking to an audience after the film, Ron counterpoised a profit-driven rail system against the selfless deeds of Kaliya, consciously constructing the man as an "environmental hero."<sup>148</sup> Kaliya was portrayed as an inspired villager who had famously protected elephants for years, his death met nobly as he wildly

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<sup>148</sup> Ron Chandler cited a paper by Prof. Janis Dickinson (2009) that proposed the need for heroic leadership in the face of environmental crisis. The video for the Q&A session with Ron Chandler at Cinema Verde, <https://www.youtube.com/watch?v=X1IDNZZVQaE> (accessed 09/01/17).

waved his own self-made lamp, hoisted on a pole, attempting to save the herd from the oncoming train.<sup>149</sup>

Ron Chandler casted Kaliya as a lone, self-made hero saving elephants, but Kaliya was in fact only one of many actors working to mitigate train-elephant accidents. Actors, individualised, might appear powerful and able, but often it is because they have been supported by the activity of others (Mol, 2010). Human-elephant conflict and conservation scenarios draw in various figures and institutions, including NGOs, the state government, musicians, and rural villagers, “each with different ideological standpoints and mediation strategies” (Barua, 2010, p. 56; Münster, 2016a). At Chakardo, a number of actors from both Indian and abroad were mobilised to slow down the speed of oncoming trains and protect the lives of elephants. As agents, elephants “configure landscapes as political subjects” (Hathaway, 2015, p. 227), and in South China, urban and infrastructure development could be altered to accommodate for elephants. However, notes Hathaway, their agency also depended on a powerful network of concerned parties and coordinated resources who mediated elephants and anthropogenic development. When Kaliya died on the train tracks, he was not alone, but at the confluence of actors who all worked to contend with the problem of sharing space with elephants, a challenge made especially difficult when the human use of space was so inflexible as a train.

In the conservation biology literature, habitual elephant routes are often referred to as “traditional” pathways, where anthropogenic presence is framed as an inhibitory force on elephant movement (e.g., Zimmerman et al., 2009). Instead, in this chapter, I focus on how people can be vital in enabling elephant movement and their connection between fragmented parts of their ranging area. While the intersection of human and elephant worlds does often lead to conflict, these junctures, in some cases, have also become opportunities for both animals to negotiate new ways of living together in a shared environment. The chapter will be divided into three main sections. First, I will illustrate the wetlands significant social and ecological importance for elephants, and explain why trains pose such a problem for the herds of the RGRF. Second, I describe and “trace the connections” (Latour, 2005a) between concepts, technologies, conservation NGOs, government departments, villagers and other local and global actors that coordinate to mitigate train accidents. These actors worked to

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<sup>149</sup> Ron Chandler had Ibson’s song brought to his attention by coordinator of World Wildlife Fund (WWF) Asian Rhino and Elephant Action Strategy programme, Christy Williams.

translate the appearance of an elephant at Chakardo dandi into information that prompts train drivers to slow down or stop. Finally, I will describe an evening when elephants crossed to the wetland. Close attention to how humans and elephants negotiate the utilization of this shared space, will illustrate how the pathway is an affordance reproduced each evening for the benefit of elephants.

### **Conflicting ways of life**

An elephant dandi runs through Chakardo village, a passage that links the hills and the wetlands. Herds continue to follow this dandi, despite its affordance for movement becoming increasingly narrowed and fragmented. A favourite time to visit was when a type of water lily, *makhana* (*Euryale ferox*), had reached its full size of two metres in diameter and covered virtually the entire surface of the wetland. While the lilies' underside is rough and spiky, the elephants enjoyed the stem and root where a nutritious nut is found. Tearing out the lilies, elephants would curl the stalk and root around their trunks and slap it hard and repeatedly against the surface of the water, cleaning it of mud, before taking the entire plant in their mouths. When the makhana lilies died with the rising waters during the monsoon, elephants would also feed on the plentiful, although less enticing, invasive water hyacinth.<sup>150</sup>

However, the vegetable relations that bound the elephants to the wetland had come under some strain in the last ten years since several varieties of aquatic plants that once lived in the beel had now disappeared. For instance, *dol*, a tall, reed-thin aquatic grass favoured by the elephants, which was once prominent along the banks of the wetland, no longer grew during my fieldwork. Some villagers speculated that the increasingly polluted waters were to blame for the disappearance of *dol* – an unfortunate situation for elephants as it was believed they were also dependent on the beel as a water source.<sup>151</sup>

Visits to the wetland were social occasions. Under the cover of night, and at a safe distance from humans, elephants were relaxed, interacting, their proboscises feeling each other's mouths and genitals. Herd members would lean heavily against a family member's body, trunks slumped over another's head, enjoying the cool wetland in the summer. From a

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<sup>150</sup> Hyacinth is an invasive, aquatic species native to South America, and introduced to India around 1896, possibly as an ornamental plant. Within twenty years, the exotic species had already invaded Deepor Beel (Phukan 1983).

<sup>151</sup> Deepor Beel was a major run off for polluted water from Guwahati.



distance in the dark, you could hear the thrashing of water as the animals fed, the rumbles of an older female accompanied by the odd squeak of a child. Elephants liked to spend the evening in the middle of the beel, bodies submerged and wading in so that only their heads and trunks were revealed. The local elephants' significant attachment to the wetland was testament to the place's biological and social importance within their home range.

The first three elephants killed by a train was in 2004. The train passing through Chakardo had no speed limits at that time, and would have been hurtling at around 100km per hour. In the dark, the train driver would have had little chance to see the elephants from a distance, nor given the elephants adequate time to respond. The herd had been standing near and around the tracks, some of them plucking leaves from the banana trees of a nearby home. Elephants would occasionally feed along their travels, opportunistically stopping to seize domestic vegetation while walking to the wetlands. According to news reports, one female hit by the freight train was dragged 200 metres along the tracks underneath the front carriage. Two other sub-adults were killed, knocked to the side of the track down the embankment. One female, her leg broken, limped back to the forest while another lay injured, left on the side of the tracks by the banks of the Deepor Beel. Lakhindra remembered the village as being in mourning that day: "at the time, we couldn't have imagined such a thing happening." Some members of Chakardo conducted funerary rites for the elephants, before their bodies were taken by the Forest Department, submitted to a post-mortem, shoved into a hole and unceremoniously sprinkled with lime to assist decomposition. Villagers conducted the ritual both out of sympathy and respect for the fallen god, as well as a concern that other haathi might come to seek revenge. A villager, in a newspaper report on the tragedy, was quoted as saying "If we don't perform the rituals, we know for sure that the herds of wild elephants that roam in and around our village will trouble us."<sup>152</sup>

The elephant-train accident in 2004 would have been devastating on several levels. Individuals were not only killed, but the family structure of the herd was likely dramatically affected. When older females died, with them went knowledge accumulated through experience, which guided the herd on its migration through different parts of the Rani-Garbhangra landscape (see McComb et al., 2001; McComb et al., 2011 on African elephants). This knowledge may have included the most direct routes to a running stream in the dry

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<sup>152</sup>. Agence France Presse, 2004. "Villagers attend funeral service for elephants killed by train in India" *Terra daily*, <http://www.terradaily.com/2004/040704125021.5vvmqr5y.html> (accessed 05/01/17).

months, or how to best negotiate places with dense human settlements. The death of an individual is not simply the loss of a member of a species, nor the termination of biological functions, or, in regard to extinction, the end of a genetic lineage. Van Dooren (2014a) asks that we consider the slow disappearance of an endangered species as the loss of a “way of life.” An organism is an evolutionary and developmental achievement, inheriting behavioural patterns and set of ecological relations that is “shared, produced and nurtured in the world through the work of successive generations of beings” (ibid, p. 22). What is lost during extinction is not only the biological organism and its genetically primed ways of engaging the world, but the loss of cultural patterns and idiosyncratic histories, species and context specific ways of shaping and inhabiting the world. The elephant population in the RGRF and connected range area had only approximately 115 members, and so their unique ways of inhabiting and negotiating that place was threatened, even when only a few members died. Similarly, with Kaliya Boro, the relationships that he tied together at Chakardo and beyond, as well as his knowledge and skill with elephants, were ways of life that were a human, cultural, and individual achievement, and were lost when he was killed by the train.

### **The blinders on the iron horse**

The “iron horse” rode into Assam in the final half of the 19<sup>th</sup> Century, among debates whether the value of resources in the Northeast justified the expense to build a railway network (Hilaly, 2007). In a book published by the Northeast Frontier Railway (NFR) reflecting on the railway department’s 150-year history in Assam, the NFR imagines itself as an “agent of modernism.” Trains and the NFR are framed as pioneers in connecting and transforming Assam, negotiating the difficult terrain and jungle to construct and operate the rail line which tied the region to the states beyond (Dutta, 2002).<sup>153</sup> Historian Sarah Hilaly (2007, p. 93) writes that the railways were constructed for enterprising purposes, an “American model”, that would enable the influx of population, labour, and development. Tea and coal were the two primary exports, capital-driven industries that strongly determined where and how the train lines were constructed. These lines linked valuable resources with sub-continental and global markets, and further enticed colonisation of the region. Large-

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<sup>153</sup> One story illustrates how a male elephant, who adopted the railway line as a path, grew increasingly frustrated with being harassed by a train following closely and sounding its horn. Finally, incensed, the male turned and charged at the train, derailing the vehicle and tearing up 60ft of track, but unfortunately dying of massive head trauma.

scale linear infrastructure fosters connections between distant places and extraction of resources from local to global markets.

Both passenger and freight trains ran through Chakardo along a broad-gauge line. Broad-gauge could carry heavier loads, and at higher speeds, which also increased the frequency of trains travelling on the track (see Dasgupta & Ghosh, 2015). The Kamakhya-Jogighopa line, one of two main lines to Guwahati connecting the Northeast to the rest of India, had a high frequency of trains: every day approximately 38 passed through Chakardo on average, close to one every forty minutes. During the track's planning in the late nineteen eighties, considerable debate focused on the placement of the line and potential ecological effects (Mitra & Bezbaruah, 2014). Foreseeing the expansion of Guwahati and the need for increased infrastructure, the Assamese Chief Secretary and city planners argued that Chakardo would inevitably become entwined within the growing city's outer suburbs. However, the Chief Secretary was ill-informed, believing that the construction of the train line would only add to the broader pattern of pre-existing encroachment and fragmentation of wildlife habitat: "[T]he habitat of the elephant and other animals will not be further affected by this alignment because most of the aforesaid area is already populated by settled villagers, encroachers ...in any case animals avoid the area and live in the interior."<sup>154</sup> Of course, this was not the case. Elephants did and still do utilise Chakardo as a dandi to move between the forests and the wetland.

Developments such as roads and railway lines, as well as gas pipes and power-lines, are "liner infrastructure" (Geneletti, 2003; van der Ree, 2011). Linear infrastructure is one of the main causes of elephant habitat fragmentation (Singh, Satheeson, Singh, 2002). Train accidents account for approximately 10% of elephant deaths due to anthropogenic activity.<sup>155</sup> They are especially problematic because the vehicles are unyielding and unable to respond to the presence of other beings in their proximity. Due to their speed, trains can rapidly appear in places where they were not present moments before, taking animals by surprise. The speed at which a train travels and the weight of the steel body are violently at odds with flesh. The combined weight and speed severely limit the capacity of trains to respond adequately, if at all, to the sudden presence of an elephant on the tracks. Train

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<sup>154</sup> Das, H.N. (1989) Report on Broad Gauge Railway Line in Dipar Beel.

<sup>155</sup> Personal communication, Danjit Das, Wildlife Trust of India.

drivers report that the response time, combined with the breaking distance, is often insufficient to prevent an accident (Dasgupta & Ghosh, 2015). To come to a full halt requires several kilometres of preparation, and a rapid break can threaten to derail the train and put passengers at risk. Further, it is not only the speed at which trains operate that make it unresponsive but also the very design of the railway line itself. The path of the train is highly constrained, limited to the direction of the iron girders, which are often straight, with curves and climbs kept to a minimum to maintain speed. Because of its pre-configured course, the train cannot swerve or re-determine its trajectory in relation to anything in its current path. The train line itself is built in a way to limit interruptions to its course and any reduction in speed.

Railway lines are designed to maintain efficient and predictable arrivals and departures between stations. Drivers are only allowed to adjust their speed and thus alter their schedules if directives are received from the stationmaster. The railway department operates through a strict hierarchical structure, where control flows in one way, and all actions require permission and rigorous documentation. A driver that does stop suddenly, endangering goods and passengers, and without permission or adequate reason, would get suspended.<sup>156</sup> The schedule must be kept: coordinating hundreds of trains on a network requires the timetable be maintained lest delays lead to knock-on effects down the rest of the system. Trains are effective transport because of their dependability and capacity to maintain a consistent rhythm, which allows other actors to keep in time with and coordinate their own activities at specific nodes within the railway system.<sup>157</sup> These actors might be connected to broader capitalist networks of trade, or the individual plans between passengers and their families. The NFR, when challenged in court regarding the shifting of railway lines or adjustments of speeds in problematic elephant conflict zones, often cited the prohibitive

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<sup>156</sup> One evening, elephant escort Guddu Dhapa needed to halt the slow-moving train by waving his torch because elephants lingered close to the tracks but refused to cross. The driver took down all Guddu's details for the inevitable report he would have to fill when he returned to the station. He would have to justify his actions to accommodate the animals given their impact on the whole rail network.

<sup>157</sup> Ingold (2011, Chapter 12) gives an interesting analysis of wayfaring movement compared to lines transport, which can further illuminate what I am discussing regarding the unresponsiveness of trains that only move from point to point, through but not with others in the world.

amount of money required to construct new tracks, or the extensive effects on the Northeast Indian economy if trains were slowed down significantly.<sup>158</sup>

After train-elephant accidents, the Forest Department were quick to place blame on the speed at which the trains were going, and particularly the drivers who, they argue, were not observing speed restrictions in their efforts to keep on schedule. Danjit Das, a project officer for the elephant-train accident mitigation project at Wildlife Trust of India, offered an alternative opinion. He told me that no one specifically was to blame for the accidents, reflecting on the vast set of responsibilities and relationships that constrain a train driver, and the pressures of keeping on time. Drivers themselves, Danjit informed me, can often be traumatised by accidents and their lack of agency in these collisions: “The drivers are practically helpless.” When an elephant steps into the path of the train, it does not simply collide with a single vehicle or driver. Instead, she or he comes into conflict with an entire assemblage of iron and steel, hierarchical structures, bureaucratic rules, and even international trade relations. This set of relationships and responsibilities severely constrain the capacity of a train to slow down in response to other beings that are occupying the train tracks at the same time.

Like elephants, trains are formidable entities in the landscape, and other animals will at least attempt to move out of their way and temporarily cede to the vehicle’s trajectory. However, trains and elephants differ on a particularly obvious and crucial fact: they are beings with central nervous systems, co-evolved to attend, respond and communicate with those other things they cross paths with. Trains in comparison do not coordinate, negotiate with, or respond to anything else bar the stations on its schedule. The construction of the railway tracks, the speed of the train, the rigid flow of information, all align to – ideally – realise a closed system that is resistant to responding to concerns of others outside of its narrow field of operations.

Generally, a train does not subject itself to any interruptions and colonises space solely to its own end when passing through an area. The train line at Chakardo was literally built through the village in some places, and in others cut the rice paddy fields in two. Many domestic

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<sup>158</sup> 4 January 2014. “Railway to court” speed restrictions will hit ops” *The Indian Express*, <http://indianexpress.com/article/india/india-others/railways-to-court-speed-restriction-will-hit-ops/> (accessed 09/01/17).

animals such as cows and goats were killed along the tracks when the train line first began operation. At least four people, included Kaliya, have been killed at Chakardo. And from the forest, twelve elephants, as well as numerous snakes, small mammals, and amphibians have been crushed trying to access the beel. Tim Ingold (2007, p. 81) refers to linear infrastructure, such as train lines, as, “lines of occupation”, that:

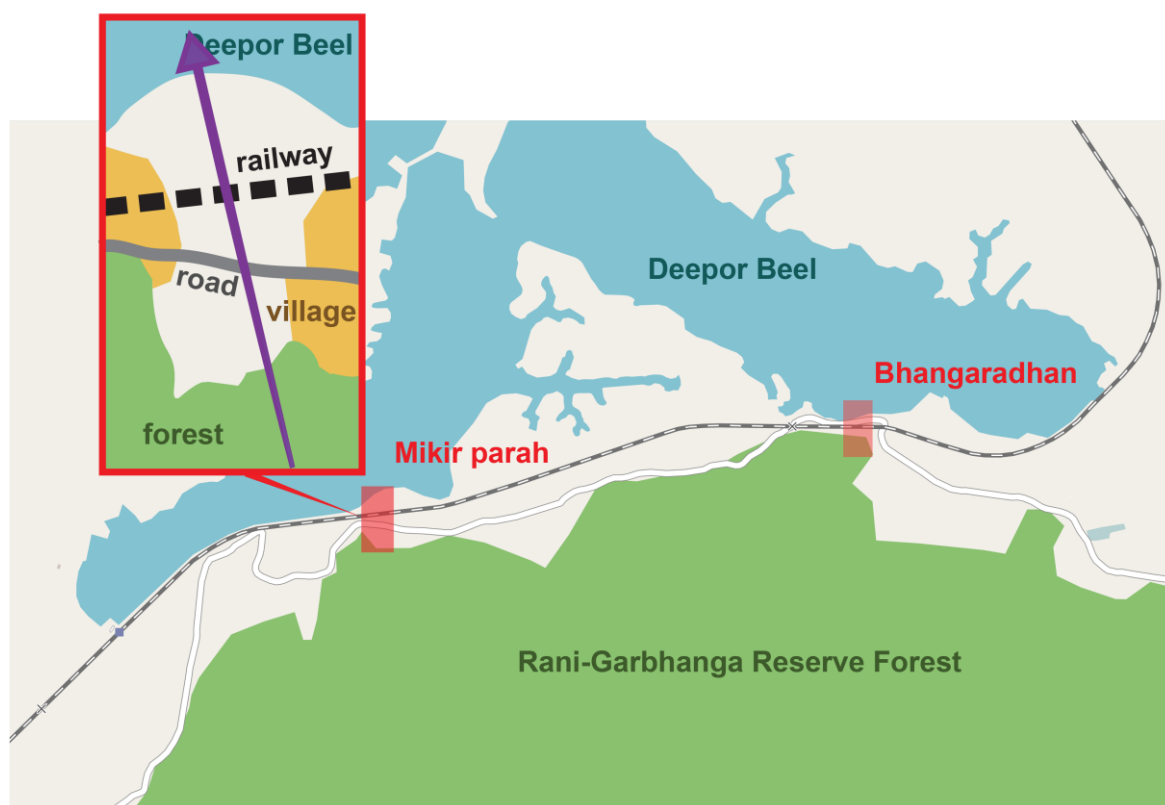
are inclined to ride roughshod over the lines of habitation that are woven into it, cutting them as, for example, a trunk road, railway or pipeline cuts the byways frequented by humans and animals in the vicinity through which it passes.

These lines of occupation ignore and are not shaped by the habitual practices of local lives and how they inhabit place. While trains connect distant places, they also rupture connections as well, dividing and fragmenting the local ways of life through which they pass. Trains disrupt places that before enabled movement and fragment relations that were possible prior to the infrastructure’s construction. On the morning after Kaliya died, a group of informants and I speculated as to how he might have been hit. One of them angrily pointed out that since the railway had been built and was in operation, the tracks had been a “killing zone... this year a man, last year an elephant, every year... before it was all open, and elephants, animals and people could freely travel...”.

Local lives, human and otherwise, are not accounted for as things to be accommodated to or negotiated with by the train, and thus integrated into its movement. Take, for instance, Latour’s (2005b) example which analyses someone hiking through the forest compared to the travelling on a train. When walking off the beaten path, a person needs to negotiate with shrubs and branches which mediate her speed and require her to weave and hack (see Latour, 2005b). On a railway line, the train does not need to negotiate with what lays in its path; all the efforts of a railway system are “aligned in the same direction” to enable its precision and speed (ibid, p. 175). For goats, pigs, or snakes at Chakardo, the vehicles’ speed and size were so great it could merely plough through the animals. In relation to the train, these actors do not register and affect change, and the train has no reason to accommodate to them. Elephants, on the other hand, as much as the railway system would like to resist the fact, must be negotiated with. They are too large and can cause a train to derail, too loved and revered by the public to allow their deaths to go unnoticed, and too well connected to conservation networks to go unsupported. Trains must learn to pay attention to elephants.

## Mobilising around the elephant

Currently, elephants access the beel through two major routes at Chakardo, each route having to cross over a section of the train track (see figure 6.3). The first dandi at Bhangaradhan had been significantly disrupted in the last ten years by a stone quarry, and the erection of eight-foot high walls around a residential property. In fact, this property was built on top of the original dandi, and the walls were constructed specifically to stop elephants' passage through the compound. Elephants forged their own detours from the other side of the hill and down a more precarious slope. The second dandi was on the western edge of the village at Mikir parah, elephants taking advantage of the open space and direct route that paddy fields afforded. While not frequented prior, over the last twenty years, partly due to the increased elephants in the area and the disruptions that have occurred at Bhangaradhan, the second route has become the most trafficked dandi to the wetland.



Map 4: This is a map of Chakardo, highlighting the two dandis that connect the hills and the wetland. The close-up of the Mikir parah dandi illustrates how the elephant passes over the field and between the houses. During the passage, the elephant must cross the road and the railway.

The beel and the forest at one time formed a continuous and easily traversable habitat, which in the last fifty years has been fractured by the expansion of Chakardo village, increase in vehicular traffic, and the railway line. Chakardo village might be considered an “ecological corridor” for the elephants, a space connecting two fragmented habitat zones. An elephant corridor’s proximate function is generally understood in terms of the space’s role in affording movement and connectivity to disparate foraging spaces (Menon, Tiwari, Eason & Sukumar, 2005). The capacity of a corridor to enable movement is often conceptualised as limited by, or in conflict with an encroaching anthropogenic presence.

After the first accident of 2004, Forest Department officers were organised to monitor and prevent any further elephant deaths.<sup>159</sup> A system developed wherein elephant escorts would report the presence of herds to the NFR, who then ordered the train to slow down and make the passage safer. I spent many nights with these escorts waiting to see if elephants would arrive and cross the railway tracks.

Uttam Kalita was a casual forest officer at Chakardo who, along with Guddu Dhapa, would monitor the elephants at the Bhangaradhan dandi. A local to Chakardo, Uttam moved there some forty years ago and opened up agricultural lands on the banks of the wetland. He was casual staff, employed under the wildlife division of the Forest Department in the late 1980s when Deepor Beel was initially recognised as a site of ecological significance due to its migratory bird population. Permanent Forest Department staff were not from the local area, but had passed entrance examinations, received full wages, and were given uniforms. However, none of them shared Uttam’s experience. He often impressed me with his knowledge and love of birds and other animal life, including elephants. Interestingly and uncommonly, Uttam did not believe that elephants were gods, although this did not undermine his sympathies for the problems faced by these nonhumans due to habitat fragmentation. As a farmer, he had spent years learning about elephants while defending rice crops; he now applied those skills to monitor their movement safely across the tracks. Instead of driving herds back, he saw himself as helping to facilitate their access to food and the wetland. Several of the permanent Forest Department employees were inexperienced with

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<sup>159</sup> The Deepor Beel wildlife division is technically attached to the wetlands; however, due to staff shortages in the Rani forest division, under whose jurisdiction the elephants fall, the Deepor Beel wildlife division takes on the responsibility.



elephants and, due to the privileges of hierarchy, most full-time staff rarely joined Uttam and Guddu in the long, tiring evenings waiting for elephants to return from the wetlands.<sup>160</sup>

At the dandi at the Mikir parah end of Chakardo, Lakhindra worked alongside Kaliya before he was killed, and later accompanied Kaliya's son, Ratan. After Kaliya, Lakhindra was the resident elephant expert; however, he was not employed as casual forest staff. He was part of a locally organised "elephant committee" that received a stipend from the Forest Department to assist forest officers to monitor elephant crossings. This position was not full-time and paid a very low wage, but supplemented whatever meagre earnings Lakhindra scraped from selling bamboo products to support his family. Like Uttam and Guddu, Lakhindra had a set of knowledge and skills that he developed living alongside elephants, such as an awareness of the landscape and elephant movement patterns. His capacities also included a local network of connections to gather information about elephant sightings during the day. The governance of reserved forests and elephants in India often depends on the skills of local people who had acquired expertise through their daily interactions with the environment (see Münster, 2016a).<sup>161</sup>

When the elephants left the forests, the officers had limited powers to oversee the safe movement of elephants across the human-dominated habitat.<sup>162</sup> In the early evening, three to four men with torches would wait along the roadside at junctures where the elephants would regularly pass. Their job was to facilitate passage and prevent any harm coming to elephants or people. They were permitted to signal trains or approaching road vehicles with their torchlights and advise them to take a cautious approach, or stop traffic completely if elephants were in the vicinity.

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<sup>160</sup> Significant improvement in forest officer participation in elephant monitoring occurred in 2014 and 2015 as compared with visits prior to this period.

<sup>161</sup> Elephant escorts were familiar with activities of conservation NGOs and the need to protect the elephant, an animal who is symbolically important, whose habitat is slowly diminishing, and whose life is under threat. Yet while speaking to these men, they did not refer to problems of extinction or endangerment within the context of their work, as is common within conservation discourse.

<sup>162</sup> As representatives of a government body, forest officers were responsible for the lives and deaths of these animals. However, Forest Department jurisdiction only fell in relation to the actual elephants themselves, rather than extending to the land they passed through, which was under the Department of Revenue. This division of jurisdiction meant that the Forest Department was unable to control the construction of obstacles that fragmented the elephants' passage between the forests and the wetland, such as the boundary wall erected at the Bhangaradhan dandi.

Following the first train accident, and prior to the mobilization of elephant escorts, the Forest Department employed the services of Assamese conservation NGO Aaranyak to map the movements of elephants through the area utilizing GPS technology. At Chakardo, Aaranyak enlisted the local knowledge of villagers to identify the two main dandi that passed to the wetland, as well as the main elephant paths inside the forest. Aaranyak labelled the elephant paths as ecological “corridors”.<sup>163</sup> Zones of risk for elephants were identified where these paths intersected with train tracks, highlighting areas that required management.<sup>164</sup> Labelling a space as an elephant corridor could be considered the use of a “conservation tool” (Jepson, Barua, & Buckingham, 2011), employed as a mediating concept to discuss human-wildlife conflict amongst conservation groups and government bodies. The concept of corridor neatly highlights an area in the landscape, and reduces it to a certain function for wildlife. A corridor makes legible conservation concerns for governmental authorities, who are required to provide the permission, and occasionally the resources, to protect elephants.<sup>165</sup>

Project Elephant was established by the Ministry of the Environment and Forests in 1992, and was pivotal in enabling the fast-tracking of financial and technical support from the central government directly to regional Forest Departments grappling with human-elephant conflict scenarios. In 2010, the Elephant Task Force (ETF) was established to reassess and attempt to revitalise the powers and purpose of Project Elephant.<sup>166</sup> One of their recommendations was to elevate the status of the elephant to that of “National Heritage Animal”, placing the species at an equivalent level of importance to that of the Royal Bengal tiger. The elevation of elephant status, on top of their pre-existing cultural and spiritual heritage, expanded the legal and symbolic power of the elephant. The elephants’ agency in relation to the trains was increased because of these changes, the NFR now under greater obligation to respond to concerns raised about elephant welfare and conservation.

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<sup>163</sup> The term “corridor” was not known to locals until the NGOs and forest department began surveying the area; although, the routes were considered dandi long before they became a corridor. During fieldwork, elephant escorts did not distinguish between the use or meaning of two words.

<sup>164</sup> See, for example, this map produced for the Forest Department by the NGO Aaranyak here: [http://assamforest.in/NP\\_Sanctuaries/images/imgWLS\\_deeparBeel-L.jpg](http://assamforest.in/NP_Sanctuaries/images/imgWLS_deeparBeel-L.jpg) (accessed 05/01/17). Elephants no longer descend along most of these points on Rani side and near Pamohi, as discussed in Chapter One.

<sup>165</sup> An elephant corridor has no legal power under Indian environmental law.

<sup>166</sup> Rangarajan, M. et al. 2010. Securing the Future for Elephants in India: The report of the Elephant Task Force. New Delhi, Ministry of Environment and Forests.

The task force also addressed the problem of infrastructure and development in fragmenting elephant landscapes: railway lines and roads were highlighted as a major issue. The advisory panel of the ETF was composed of different elephant experts including members of Wildlife Trust of India (WTI), a national conservation organisation. For several years prior to my fieldwork in 2012, WTI had been trialling elephant-train accident mitigation projects across various states in India, including a team at Deepor Beel. Large environmental NGOs in India, like the WTI, often worked closely with the government and undertook donor-funded work that supported or supplemented the resource-scarce Forest Department (Rangarajan, 2001).<sup>167</sup> Train mitigation projects aimed largely at addressing the problem of coordination between the Forest Department, which was responsible for protecting elephants, and the NFR, which resisted any curb on their operations to safeguard the animals. WTI projects involved awareness training with train drivers and gaining the trust and sympathies of regional rail officials and station-masters, so that they were more likely to cooperate and reduce train speeds when necessary. Videos and discussion helped to inspire increased caution when operating trains, translating conservation concerns for individual rail employees. Photographs of dead elephants are always visceral, their once solid bodies slumped and tangled, lying dead on their backs, mouths wide open. Through this training, drivers and their supervisors were made aware of intersecting elephant ranging areas and learnt to be more responsive to the presence of herds, as well as the consequences of not following speed limits.

WTI also employed an additional two local men from Chakardo as escorts. They were equipped with phones and strong halogen lamps, which were needed to occasionally intimidate the elephants to movement. The men worked with the Forest Department staff on the ground, and if an elephant was sighted near the corridor, they were to call the WTI project officers, who would then contact the railway department. Communication channels between the Forest Department and NFR prior to WTI's mediation were non-existent. Over time WTI made some progress in establishing amenable relations between the two government departments, encouraging sympathy, organising meetings and exchanges, and stabilising relationships. They created a link that enabled the coordination of the actions of elephant escorts on the ground with the approaching train drivers.

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<sup>167</sup> Maintaining close alignment and good relations with Indian government facilitated governmental authorisation of NGO conservation initiatives.

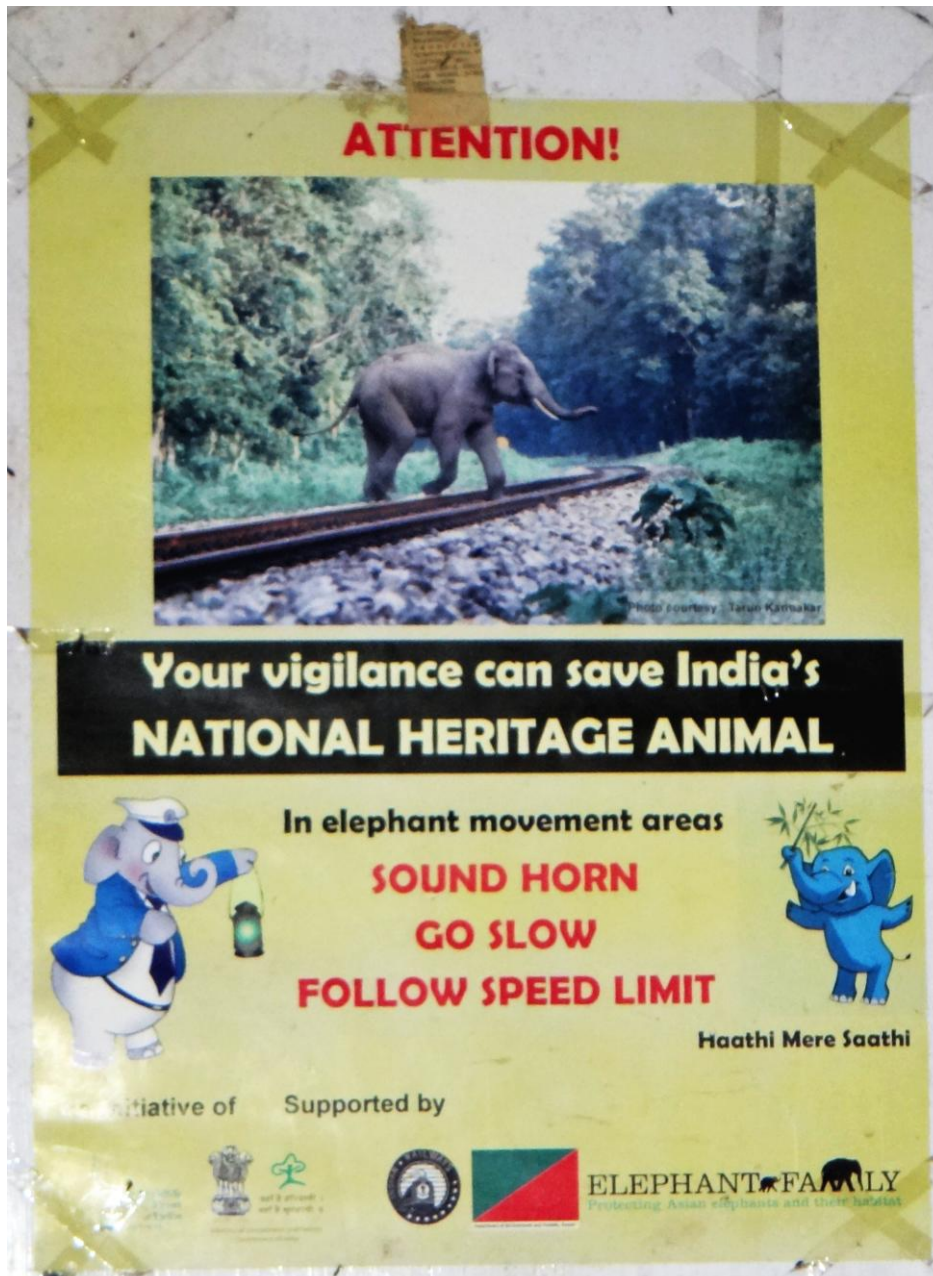


Figure 6.3: Poster on the wall of the Forest Department office at Deepor Beel. The poster appears to have been designed with train drivers in mind to advise them to take elephants into account. Various signatures are from the Indian government, WTI, Project Elephant, NFR, the Forest Department and Elephant Family. “Bholu the guard elephant” is the mascot for Indian Railways. Bholu's presence is unintentionally ironic. I am unsure of the origin of the blue cartoon elephant, but *Haathi Mere Saathi* is the name of one of the most popular films of all time in Indian cinema, the story of a man's close connection with his family of domestic elephants.

Aside from improved relations between government departments (although these were always delicate) and the establishment of response protocols for train drivers, other forces, including public protests, criticism in local newspapers, as well as legal cases, acted on the NFR and made them more sensitive to elephant conservation concerns. For instance, drivers or other railway officers who failed to follow protocol in elephant risk areas were open to lawsuits filed by the Forest Department. The law that enabled legal action was triggered by a Public Interest Litigation (PIL) suit filed in South India. PILs are a mechanism that can be used by members of the public to approach the supreme court on matters of public interest: in this case, the filed PIL asked the court to assess and make a ruling on liability in train-elephant conflict.<sup>168</sup> In 2014, the Supreme Court endorsed the litigation<sup>169</sup> and currently NFR are beholden to respond to concerns about elephant collisions under force of law.<sup>170</sup>

Of course, the train mitigation project required money to mobilise villagers and WTI staff, and to run associated programs. The WTI project was funded by the United Kingdom's largest foundation for Asian elephants, Elephant Family, which was established by the late Mark Shand, brother to Camilla Parker Bowles. Shand developed a passion for Asian elephant conservation after traveling by elephant through Assam and India, as well as writing two books about his adventures. At home, he became an important public face for Asian elephant charity work (Shand, 1992, 1995; see Barua, 2014c for more information). Donations were raised from a variety of sources: from smaller individual contributions, large elite social gatherings drawn together through Shand's upper-class connections, and associations with other charities such as Elephant Parade (Barua, 2014c). A significant proportion of the train mitigation funding in 2011-2012 were provided by the Nando and

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<sup>168</sup> During fieldwork, I met with a lawyer who was compiling a case for a separate PIL linked to human-elephant conflict in Assam. His argument was that the obligation to respond to the problem of elephant deaths was a "constitutional and moral duty".

<sup>169</sup> 2014. *Shakti Parasad Nayak vs Union of India & ORS*. Record of Proceedings. Available online: <http://supremecourtindia.nic.in/outtoday/wc10713.pdf>

<sup>170</sup> The NFR is pressured through other avenues that demand that they be concerned and take responsibility towards elephants. For instance, elephant deaths attract a significant amount of attention; the media provokes responses to elephant-train accidents, drawing together a host of local and international voices all expressing concern about the collateral damage of railways. In regional papers, almost every week finds some mention of human-elephant conflict (see Barua, 2010). In 2010, when People for Animals, a Guwahati-based NGO, staged a protest blocking the railway track within the city near Kamakhya Station. Protests are small interruptions, but these unexpected train stops require the railway department to listen. Likewise, in 2008, Chakardo villagers, already angered by elephant deaths, were further incensed when a female and unborn calf were killed as a result of what villagers perceived to be Forest Department and NFR negligence. Many villagers stood on the railway line and blocked a passing goods train, thus disrupting services in protest.

Elsa Peretti Foundation, a philanthropic organisation established by the daughter of one of the founders of Europe's leading oil companies.<sup>171</sup> The motivations that inspire donations and align the contributions of private capital – whether they be from personal accounts or via large scale philanthropic organisations – may vary, and are influenced by different personal histories, experiences, and sentiments towards elephants (see also Lorimer, 2015 on “affective logics”).

In December 2013, WTI's Assam train mitigation project ceased operating. Elephant Family had discontinued its support in June, and Kaushik Barua, the elephant owner from Guwahati (Chapter Five), funded the project at Deepor Beel for an added five months.<sup>172</sup> While the issue of elephant corridors remains a primary conservation concern for Elephant Family, the charity decided the project was too problematic.<sup>173</sup> Management, both practical and financial, of elephant movement over train tracks was difficult. Elephants continuously shifted their range behaviour in response to changing environmental conditions. And Elephant Family expressed some frustration over the lack of coordination between Forest and Rail Departments who were often at “loggerheads”, including the NFR's push for more and faster trains.<sup>174</sup> Elephant Family believed that more viable solutions lay in technology, an automatic early warning system embedded in the environment for elephants or train drivers, which presumably would bypass the politics of coordinating conservation efforts with government departments. Consequently, the extra men from Chakardo monitoring elephants were no longer supported financially, nor were WTI staff. The network built up over six years fell by the wayside. However, the problems referred to by Elephant Family – inter-departmental disagreements and unpredictability of elephant movement – were not major issues at the Deepor Beel project, which has largely been a success. This success could

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<sup>171</sup> The Peretti Foundation have funded over 480 projects, covering environmental conservation, humanitarian and charity programs, at a cost of over 30 million Euros Nando & Elsa Peretti Foundation website, with details of train mitigation project, funding, and final reports: <http://www.nandoperettifound.org/en/page.php?project=326> (accessed 06/01/17).

<sup>172</sup> Elephant owner and conservationist Kaushik Barua (Chapter Five) has been involved in managing human-elephant conflict at Chakardo for several years, and perceived himself as being outside the politics of NGOs and the Forest Department. This position, he argued, allowed him to have good relations with both actors. Kaushik made some attempt to bring NGOs into the area, and he also personally funded torchlights and other equipment for the elephant escorts, who cannot afford this equipment themselves. Later, in 2015, he re-employed one person so he could maintain contact, receive reports and potentially direct and independently manage monitoring activities on the ground.

<sup>173</sup> The train mitigation projects were part of a broader group of Elephant Family activities, including protecting habitat, promoting “co-existence”, and supporting human communities under threat of conflict.

<sup>174</sup> Personal communication from Elephant Family campaigns team, dated 06/12/15.

be attributed to good relationships developed between district-level departmental officers, the local knowledge of elephant escorts, and the elephants themselves who have established relatively habitual movement patterns along the corridor. Further, speed limits through the risk area have been negotiated to an agreed upon reduction from 100 to 50km/h, a permanent restricted speed zone established on the railway line between sections 163 and 169 at Chakardo.

In the winter of December 2013 (and unrelated to Elephant Family and WTI's withdrawal) an elephant herd passed through the village undetected by ground staff. The night was foggy, and no sightings or sounds in the forest betrayed the presence of the herd to escorts at Mikir Parah. Believing no elephants were approaching, the men retired to the warmth of their homes. After midnight, a herd descended, which was generally late for them to begin their passage. They passed silently through Chakardo and the escorts remained unaware of their presence. Consequently, the NFR was not notified that there were elephants close to the train tracks, and so the train did not adjust its speed and sound the horn on its approach. Lakhindra woke up when he heard the train putting on its brakes.<sup>175</sup> There was an accident and one calf was killed. The improved coordination and coherence of response between the Forest Department and NFR did not always guarantee the safe passage of elephants. Sometimes the elephant escorts were tired or failed at a certain part of their task; communication difficulties still arose between Forest Department and NFR; or the train drivers maintained high speeds under the pressure to keep to schedules. And elephants could also disrupt the process by not announcing their presence. The coordinated system of actors working together to link elephants to the train, was not necessarily stable, and breakdowns resulted in several near misses.

After WTI withdrew from the venture, villagers who were concerned about the risk of elephant deaths – and likely also seeing an economic opportunity – proposed to the Guwahati Wildlife District Forest Officer (DFO) the establishment of a local “elephant committee” funded by an honorarium from the Forest Department. The committee would assist in escorting the elephants safely across the tracks and would report to the local Forest office information to be relayed ultimately to the train drivers. The DFO was open to this option, framing the local elephant committee as “force multipliers” that could assist departmental

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<sup>175</sup> Official reports given to newspapers detail a different account of events, engaging in the blame game often associated between forest and rail department.

work. The DFO also cited the superior skills and experience of village men (“no women and no boys” was a criterion, according to the DFO) who have long histories of engaging elephants.

Finally, of course, the elephants must be included here, because without their persistence in appropriating human places to their own purposes, these connections would fall away. Their presence points towards the important agency that the elephants exercise in the assemblages of actors that rally around them for conservation practices (Barua, 2010, 2014c; Hathaway, 2015; Münster 2016a). While humans were the most active figures in this conservation story, to some degree this charismatic being captivates and enlists humans into its own ways of life and world-making efforts. As a flagship species, elephants demonstrate agency, which as Despret (2013a, p. 40) defines it, is the capacity to not only “make others do things, but to incite, inspire, or ask them.” To extend another ecological concept to understand the important role of elephants, we can also point to their status as a “keystone species”: organisms that have such a dramatic effect on ecosystem that their absence from a landscape results in significant change in the local species composition (see Mills, Soule & Douake, 1993). If the elephant’s safe passage at Chakardo is an achievement that emerges from the contribution of all the interacting actors I have outlined in this section, then the elephant is a keystone actor, without whom the entirety of these relations discussed in this chapter would cease to exist.

In summary, the assemblage of actors described in this section included (but was not limited to): skilled villagers who were equipped with torches and authorised to become elephant escorts; governmental departments who learnt to communicate their concerns to each other; train drivers who became sensitive to elephants on the tracks; NGO workers who strived to organise these actors into more effective relations; and international money which has been instrumental in mobilising these actors. When this system worked together in the right way, an elephant could safely access the wetlands. However, these connections were not stable, and a successful crossing depended on the ongoing coordination and operation of these interacting actors. The route by which the train was connected to and became aware of elephants was a circuitous one, information transferred across a string of sensorial worlds, technologies, locations, and people. These relations were threaded together by local and global, individual and collective agencies, recruiting to their purpose ecological concepts and relevant legislature. Through this assemblage, trains were no longer necessarily “riding



roughshod” over local conditions. Thee NFR’s tight schedules have become susceptible to elephant presence, and trains now recognise how elephant lives and dandi intersect with the railway’s own appropriation of Chakardo. Essentially, the iron horse had learnt to pay attention to and respond to the elephant.

In the final section of this chapter we will take a closer look at the relationships involved in integrating the elephant’s nightly passage across a train track and through a human-dominated landscape. The maintenance of the elephant’s connection to the wetland was enabled by the distributed and coordinated efforts of all the above-mentioned agencies. Yet, the process of opening Chakardo village to a space that affords movement for elephants each evening emerged from negotiation between escorts and elephants on the ground at Chakardo.

### **Integrating human and elephant ways of life**

The rhythms of Chakardo and the nearby villages changed after night fell. In summer, men often congregated along the roadside until late. In winter, the small stores closed by 7:30pm, and almost everyone retired to home where there was a fire. The traffic eased; the loud trucks carrying concrete and stone stopped, and the constant flow of taxis to the airport dwindled. Still, the occasional car or motorcycle hurtled along the winding road that hugged the contours of the hills. I often took this road at night, having received a phone call from Uttam or Guddu about an elephant herd’s imminent arrival and movement towards the wetland. A few times while riding my motorcycle through Chakardo, a torch in the night signalled for me to pull over, to turn off my headlights, and wait for a herd of elephants to cross. Elephants, however, were not the only animals who shared the road. Domestic animals roamed freely during the day before returning to their homes in the evening; goats, cows, and dogs were the most common species that crossed my path. Negotiating the road with other animals was difficult. Goats were the worst, seemingly ignorant of vehicles and prone to fleeing in unpredictable directions. Cows were quite the opposite, making no attempt to move, often lying on the warm bitumen at night, as if aware of their sacred status. Roads at Chakardo were not human dominated, exclusive anthropogenic spaces, restricted to vehicles moving at a single speed. Instead, they were a shared affordance in the environment, employed to different purposes by a variety of animals. Driving was a social process, full of unpredictable encounters and negotiations with other actors moving at their own speeds and rhythms,

sometimes in conflict with each other. To share the road, I was required to slow down, anticipate other animal's response, and take care.

The dandi at Mikir parah was open farmland that stretched between the hills and the wetland. For elephants, the flat space enabled easy walking, was the shortest distance possible to the water's edge, and was at a safe distance from people's homes. During the day, outside of the farming season, cows grazed on the weeds and remains of harvested rice stalks, and young boys sometimes adopted the space as a cricket field. In the harvest season, when rice grew thick, green and tall in the muddy earth, elephants were prevented from crossing, and the farmers would drive the animals back into the forest. One morning, I asked a farmer tending to his fields whether he had seen any elephants recently. He turned to me and with a sweeping motion of his hand across the paddy fields said, "this is an elephant dandi." Acknowledging the elephant's pathway was acknowledging the animal's history with the area and their place-making efforts. The farmer recognised that this stretch of land could be meaningful for both humans and for elephants, even if elephant movement was sometimes in conflict with his livelihood.

Elephants would only move along the dandi at night. Herds cautiously waited behind the tree line at the threshold of field and forest, until the rhythms of the village began to shift and human activity significantly diminished. On full moon nights, they rarely crossed, too visible under the moonlight. Stepping out into the village, elephants became vulnerable to a set of actors and interests that were not present in the forest. These hazards included people trying to chase them off, speeding trucks with blaring horns and glaring lights, and of course lethal trains running at right angles to the family's intended trajectory. Risking the dandi required the herd to enter into unpredictable encounters with people. Like the road I travelled along to reach Chakardo, the elephants' passage to the wetlands was shaped by the presence of beings utilising a shared space with different purposes to themselves. When elephants stepped outside of the forest to cross to the wetland they became enmeshed into the relations that constituted the human-dominated niche.

One evening, at the Mikir parah dandi, I waited along with Lakhindra and others, sitting by the fire alongside the road. We could hear the elephants feeding in the distance behind the

tree line, the sound of bamboo branches cracking broke the night air.<sup>176</sup> The escorts always had to be monitoring the elephants, from when they emerged from the forest, their time spent in the wetland, and until they finally returned to the hills before sunrise. Elephant escorts had become a constant feature of the dandi, and the men's work rhythms had to align with the intermittent and nocturnal appearances of the herds. Sometimes elephants were content to linger in the hills; but when they became silent, the escorts knew that they planned to cross to the wetland. Elephants can communicate via deep rumbles inaudible to the human ear (Bouley, Alarcon, Hildebrandt & Connell- Rodwell, 2007). Herds can remain in constant communication and will call to each other to coordinate their movements. We were often only aware of their impending arrival by the sweet, pungent smell of elephants drifting on the breeze. "They are quietly coming!" Lakhindra whispered as we peered ahead, straining to make out the emergence of their silhouettes against the dark tree line.<sup>177</sup> The silence and cautious mutual awareness of human and elephant were the short moments before the dandi became active.

When the railway line first began operation, the elephants were not aware of the danger that trains presented, but had learned over time to stop or retreat upon hearing the locomotive's approach. While escorts found it difficult to identify herds in the dark, they assumed the elephants present were at least practiced in walking this dandi and were familiar with the risks it presented. Crossing to the wetland had become routine, and while every elephant family reacted to the village space differently, herds had generally learnt to accommodate to the presence of trains, cars and escorts, just as much as humans accommodated to the elephants walking through the village. While I cannot claim to have evidence that the elephants that night recognised the regular escorts such as Guddu, Uttam, or Lakhindra as familiar figures in their evening passage, empirical studies do show that elephants have highly discriminating senses that can differentiate human individuals, cultural groups, and even languages (McComb, Shannon, Saiyalel, & Moss, 2014; Plotnik & de Waal, 2014).

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<sup>176</sup> Herd sizes can vary; often they were not too large, up to ten or twelve members. At other times, I saw herds numbering thirty-five lumbering across the paddy fields and highway. These herds, I assume, might have been combined sub-herds, safety in numbers as they navigate the obstacles towards the beel together.

<sup>177</sup> One evening as we waited, the forest silent yet no herd appearing, a friend and I crept closer to see if we could catch any more signals of their presence. We stood there for 15 minutes, occasionally flashing the torch, listening, but nothing. Once more we illuminated the forest, and only fifty metres away stood a large female, possibly the matriarch of the herd. She was certainly aware of our presence, facing us, ears wide open and at attention, her body a silent grey against the silhouetted forest, standing completely still. We were taken by surprise and fled out of the approaching herd's way.

The elephants may have been aware of the watchful and waiting humans as a permanent feature of the Chakardo dandi, although the escorts could not say if the elephants understood that the men were trying to help the animals.

Emerging from the relative safety of the tree line, the herd members stayed in a tightly bound group, their numbers and individual shapes difficult to discern in the dark. Forging ahead on the field they progressed slowly and with great caution. Each step taken by the elephants seemed to anxiously test the limits of the dandi. This particular family was on edge that evening: any sign of disturbance, whether the horn of a train, the flash of a monitor's torch, or a passing car, would bring them to a halt. After someone shone their torchlight to assess the herd's size, the elephants slowed down and huddled together, bodies touching each other, infants gathered within a ring of larger females. In this protective circle, their trunks searched out family members, and the larger females reassured the others in low, deep rumbles, as elephants do when under stress (Plotnik & de Waal, 2014). Standing completely still, the larger female's ears opened out, a warning to anyone who would dare to come any closer. Her actions assisted in momentarily securing their territory and a feeling of safety when other beings in the environment threatened or inhibited their movement forward. When their anxiety subsided, the family pushed on again, a united, amorphous cluster in the dark.

The herd had help in securing their passage to the wetland. The elephant escorts responded to the elephant's wariness, turned off their torches, and dropped their voices to a hush, aware that they could be heard by the pachyderms. Elephants would only agree to step out of the forest and follow the dandi in the presence of people, if people did not come in too close, or behave erratically. This negotiated compromise was fragile. Bystanders who crept in for a look were told by escorts to keep their distance lest an elephant became agitated. Some of the escorts were further up the street flagging down approaching cars, asking them to pull over and switch off their headlights and engines. One evening a car flashed his headlights at the elephants, and one of the older females charged at the vehicle. Reducing the number of disturbances and mediating the behaviour of people and vehicles mitigated the anxiety felt by the herd, and served to limit any threatening and inhibitory effect on elephant movement. Some elephant herds were very anxious, and occasionally it was necessary to reduce all activity along the road to entice the elephants to step out from the forest. Some male elephants, especially a bold *makhna* (tuskless elephant) familiar with the area, cared little for whether cars or people, were present and crossed whenever he pleased. Although for

most herds with children, they moved more confidently and quickly when it was quiet. This assisted the escorts to coordinate and predict the speed of the herd's passage in relation to oncoming trains. Further, the sooner the escorts shifted the human-dominated space into a dandi, the more quickly the area could return to its common use as infrastructure for cars, pedestrians, and trains.

To maintain the safest and most effective passage along the dandi, the elephant escorts only occasionally acted directly upon the herd. Sometimes, for instance, if a train was approaching, they would intimidate the elephants forward, with flashlights and yells, to drive them into the wetland. For the most part, though, the escorts focused on engaging with and managing human actors.<sup>178</sup> Letting elephants follow their own path demanded that humans kept an appropriate distance away from them; a portion of the anthropogenic space had to be ceded, temporarily, to nonhumans. Uttam, Guddu and Lakhindra did not need to guide or direct the herd, but instead trusted the animal's intentions and allowed them to follow their habitual pathways through the village.

The escorts had already notified the deputy wildlife officer in charge of Deepor Beel about the incoming elephants. He in turn informed his superior, who then contacted the Rangiya division headquarters of NFR. The control then contacted the nearest station, depending on which way the train was traveling, and that station was advised to issue a "caution slip" and contact the train driver. With a caution slip, the oncoming trains were ordered to reduce their speed to 20-25km/h at the outskirts of Chakardo and sound the horn whilst in the danger zone. We could hear the train approaching in the distance, across the other side of the wetland. The horn repetitively blaring as a warning to elephants, and the train moved so slowly that elephants and humans had time to respond to its arrival.

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<sup>178</sup> For example, the road was built raised one to two metres above the paddy fields. Sometimes, when the elephants ascended to cross, the herd thinned out into a single file with the larger female at the front and the slower younger ones trailing behind. While crossing the road and paddy fields, this was not an issue; however, when elephants reached the railway line, if juveniles were slow in keeping up, or the herd was fragmented into two groups while crossing, this scattering could turn into a deadly situation in relation to oncoming trains. If they were caught too close to a train, elephants would often panic. The trailing members of a herd might hurry to catch up to the leading members who had already crossed to the other side of the tracks, and run into the path of the oncoming train. Once the elephants had crossed the road, the escorts suddenly burst into a run from both side and flashed their high-powered torches at the elephant whilst yelling. The elephants responded by drawing together in a close huddle and bolting across the paddy field. We could hear the loud yet muffled patter of the elephant feet dashing across the fields, while they trumpeted in agitation and protest. Giving the elephants chase leads the herd to keep together when they ascend over the loose stone that elevates the track. Plus, it allowed the men to return home earlier for dinner.

Like the shape of forest trails, whilst enabling movement, the presence of the escorts also served as a constraint. The elephants crossing to the wetland were unable to opportunistically make deviations from the dandi, such as detours towards someone's home to feed on domestic trees. The only way was forward. These constraints could be set by flashing torches or shouts, but for the most part, the elephant's path was shaped by their awareness of humans. The dandi was constituted by the escort's watchful gaze and this seemed to maintain an anxiety in the herd that encouraged their trajectory towards the relative escape of the wetlands. In many respects, the dandi at Chakardo matched the ecological concept of an elephant corridor, as the environment's primary function was to support linear travel. Analyses of corridors tend to reduce them to spaces with no other significance apart from their important function of maintaining a link between disparate habitats within which animals live, feed, and socialise (see Menon, Tiwari, Easa, & Sukumar, 2005). However, the dandi at Chakardo was not simply a physical space and transitional link between ecologies, but was a site that emerged through social interaction between human and elephant.

For elephant escorts, keeping an appropriate distance from the elephants was part of an agreed upon dynamic established over the years between the two species. To carefully manage this relationship each evening and with different elephants, the men needed to empathise and coordinate with the herd's anxiety, and be invested in the elephants' intentions to follow the dandi. Chapter Five describes how the mahouts monitored an elephant's intentions and mediated the animal's actions so it conformed to the norms of the human-dominated niche. Similarly, the escorts needed to grasp how elephants were perceiving the environment, but instead, mediated the anthropogenic environment itself so it better conformed to the ways in which elephants were comfortable inhabiting this shared space. The rhythms of the night were already more welcoming to the herds, and escorts further managed that intensity, halting the vibrations, lights, sounds, and violent interruptions of passing vehicles to accommodate to the animals. Common solutions to fragmentation by highways and train lines – such as overhead bridges designed specifically for wildlife – are constructed to enable humans and wildlife to pass over or cross without intersecting or interrupting the other. The interspecies practice at Chakardo demonstrated an alternative solution. The villagers, airport taxis, and trans-state trains, were all notified to temporarily alter their approach or discontinue their activities. The emergence of the dandi was a moment when the village became available to forest-roaming elephants, where people acted in service of the animals and their place-making projects. Elephant ways of life were

momentarily integrated into the life of the human-dominated environment, and the distinctions between the wild and domestic worlds were momentarily blurred.

A herd's successful crossing was dependent upon the work being done by the elephant escorts, the torchlights and mobile phones, a coordinated Forest Department and NFR staff, as well the cooperative public who were willing to stop their cars. The escorts played a crucial role in this assemblage of actors. It was low paid work and at times monotonous labour, but escorts needed to remain engaged and committed to assisting the elephants, and sympathetic to their social and ecological relationship with the wetland. They did express concern when the animal's attempt to cross was frustrated, or worse, when an elephant was injured or killed by a train. The escort's familiarity with the elephant's habits and use of the landscape, helped them to cultivate the right conditions for herds to move through the village and maintain their connection to Deepor Beel. These acts are what Thom van Dooren (2014b) – drawing on Puig de la Bellacasa (2010, 2012) – refers to as interspecies practice of “care”. Embedded in the “specificity of real bodies and worlds in ongoing relationship” (van Dooren, 2014, p. 293), caring is the affective, attentive, and nurturing involvement in the life of the other (Puig de la Bellacasa, 2010, 2012). It necessitates becoming attuned to habits and desires of nonhuman animals and finding the appropriate response for the situation at hand. And like the work conducted by escorts, care is practiced as a form of labour: an ethical obligation and ongoing maintenance of a relationship (Puig de la Bellacasa, 2012; van Dooren, 2014b). Acts of care were necessary in an environment in which elephants were marginalised, their movement and development within their home ranges inhibited, and where trains and cars move at speeds that can be in violent opposition to their passage. The escort's empathetic and affective engagement with elephants protected individual animals each evening from oncoming trains, and, for 12 years running, helped foster and sustain the elephant community's way of life.

## **Conclusion**

For elephants living in the 21<sup>st</sup> century, interactions with humans is an unavoidable condition of existence. Forest tracts are fragmented and dwindling due to expanding anthropogenic landscapes. Elephants increasingly need to bind disparate foraging areas by crossing through human spaces, and this results in both species increasingly encountering the other (see Chapter One). How an elephant could cross between the forest and the wetland without being

killed by trains at Chakardo was a political, ecological, social, and pragmatic issue that required novel solutions and relationships with elephants.

Before the railway line, people at Chakardo, outside of harvest season, did not need to attend to elephants. Elephants, then, had been “free”, Lakhindra explained to me. Villagers had not worried about their coming and going; but now, because of the dangers of the oncoming trains, there needed to be “duty”. Duty involved the long nights waiting for elephants, the reports made to superiors at the Forest Department, and the task of safely escorting herds across the dandi. Duty was an interspecies practice of care.

Thom van Dooren (2016) proposes that during the current times of ecological crisis people need to cultivate sensibilities that enable us to better co-inhabit the planet with other animals. He argues that we need to look beyond the notion that the world is ours to claim, manage, or give. Learning to co-inhabit with nonhumans requires finding a position in relation to other organisms in which there is “a willingness to support, or at least tolerate, other species’ own experiments in emergent forms of life in difficult times” (van Dooren, 2016, p. 205). The junctures at Chakardo where human and elephant worlds intersect can contribute towards thinking through potential sensibilities for living with more-than-human animals.

Conservation biologist Anne Zimmerman and colleagues (2009, p. 39) refer to sites like Chakardo village as “corridors of tolerance”: a “multi-use passage along the elephant’s traditional migration routes that allows co-existence.” We can draw an analogy between corridor of tolerance and a pedestrian crossing. When a driver witnesses a pedestrian about to step onto a crossing, he or she must stop the car and let the person pass. Ghassan Hage (2000) argues that observing a crossing is an ethical practice structured into the environment. By slowing down, the driver recognises the pedestrian, their own ways of life enacted on foot, and “society affirms itself as a civilised (ie., ethical) society where dominant modes of inhabitation are invited to yield to marginal modes of inhabitation” (ibid, p. 31). Hage (2000) frames this response to the other as a gift of recognition and an offering that entices relations of mutual obligation: a relationship that is at the foundation of sociality. At Chakardo, the dandi also was structured into the village, the permanent presence of escorts in the evening modulated the pace of cars and trains in relation to elephants. People slowed down, stopped, and temporarily disengaged from their own schedules for a short moment of time. Slowing down was the act of recognising that the village could be a dandi for the elephant. Slowing down also meant that people learnt to take better notice of, and respect nonhuman existence,



“to pay attention, to have courteous regard for, to esteem: all of that is tied to polite greeting, to constituting the polis” (Haraway, 2008, p. 19). By responding to this charismatic and endangered animal, people were learning to honour its increasingly marginalised way of life in a shared environment, even if it was a small inconvenience to their own.

Recognising the dandi, was only a momentary gesture, however. Elephant passage was possible only because herds wanted to utilise the place for their own purposes for a short time each night. Allowing a herd access exposed the human-dominated place to world-making practices and whims of elephants – animals generally considered out of place in the village. Their access was only on the condition they headed straight to the wetland. Like a pedestrian crossing, the dandi had its unspoken rules. If elephants permanently occupied these lands, then their presence would not be supported, let alone tolerated.

Yet to frame the maintenance of the dandi as an offering or a gift implies that the space was peoples to give over and make available in the first place. The elephants followed the dandi regularly and had been doing so for decades. In the absence of facilitation, escorts believed that these formidable beings would continue to try to visit Deepor Beel. Herds decided the times they would leave the forest and which route they would take. They were the one who persisted in maintaining the connection despite the escalating disruptions. The land at Chakardo was just as much for elephants as it was for humans. Escorts merely helped to smooth the mutual integration of the two worlds into a human-elephant space.

The Chakardo dandi is a unique interspecies experiment and hopeful possibility for negotiating a shared existence with elephants. However, it is not a perfect answer, and nor is there an ultimate solution whereby elephants will be “free” again. An alternative railway line is unlikely to be built, and elephants, locals believe, will continue coming unless the passage is completely blocked or the animals have gone extinct in the area. The work being done by Guddu, Uttam, Lakhindra and others, a human-elephant space negotiated every evening between the two species, sometimes at 4am in the morning, in the cold and the rain, year after year, is a long-term commitment and an ongoing form of interspecies labour, that is unlikely to end in the foreseeable future.





Figure 7.1: Herd feeding in Deepor Beel.



Figure 7.2: Mahouts riding their elephants, with RGRF in background.



Figure 7.3: Tusk of a dead, electrocuted elephant adorned with flowers and incense.



## Conclusion

Raman Sukumar's (2011) *The Story of Asia's Elephants* ends with an overview of their current situation in postcolonial Asia. Population counts are dwindling – except in South Asia where they remain stable – males are still poached for their tusks, and herds are forced to live in smaller, fragmented pockets of jungle due to deforestation. Elephants are illegally caught, trained and put to work in less than ideal conditions, which impact their health and general welfare. At the broader scale of history, elephants are framed as a marginalised species, their current range is only 6% of what it was 4000 years ago, the species over time retreating from the pressures of anthropogenically modified environments (Elvin, 2004, Sukumar, 2011). Much of the worst impact on elephant lives and habitat has been in the last century (Sukumar, 2011). Human-elephant conflict – the set of violent, destructive and fatal encounters between the two species – is believed to be a result of this sharp loss of habitat, and is a term that has come to define our relationship with these animals (Williams & Johnsingh, 1999).

At the fringe of forest and village in Assam, conflict did not completely define the dynamic between the two species. Herds could be engaged antagonistically when raiding crops: they were opposed in interest to humans (see Knight, 2006) and did not recognise the meaning of property and possession. Occasionally they might kill people. However, as animal gods and moral beings, sometimes their destructive actions were reasonably aligned with anthropomorphic values. Rather than being confronted, they could be engaged in a relationship characterised by mutual recognition, their favour received through the offering of gifts. Human-animal relations have always been one of ambivalence (Berger, 1980) and attitudes towards wildlife are not necessarily determined by a single perspective or possibility. Even when in conflict, humans also empathise with them, recognising similar habits, desires, and strategies for survival (Edelman, 2002; Knight, 2000, 2006). The same wildlife who raid crops can also on occasion be regarded as kin, bound to humans through relations of reciprocity, or are respected as a source of power that sustains village life (Morris, 1996; Bakels, 2003; Seeland, 2003; Knight, 2006). This thesis supports anthropological research on forest edge cultivators that critique the notion that antagonism is the primary mode of interaction with wildlife. The concept of agriculturalists as being against wildlife is essentialist (Bakels, 2003),

Chapter One explored the strongest examples of human and elephants living in exclusive environments: villagers stood with torchlights, forming a boundary between forest and village, actively expelling elephants who attempted to cross into human space. Outside of these encounters, I found it difficult to make clear demarcations between species' worlds and practices. At the corridor between the forest and the wetland, elephant ways of life were accommodated to and incorporated into the anthropogenic space. In the Rani-Garbhangra reserve forest (RGRF) both animals navigated the landscape through shared pathways, their niches overlapped and co-constructed. An underlying theme across this thesis was how the worlds and practices of both animals were enmeshed to varying degrees at different sites across a shared environment. The mahout-elephant relationship was a paramount example of how deeply integrated their lives could become. The respective socio-ecological niches of both species continuously coincided and were co-constituted through their interaction. Their perspectives on the environment were subtly shaped and mediated by the other. The closely coupled coordination enabled human and elephant to walk and work in parallel so successfully that they could solve shared projects.

The process of integration was always partial and continuously negotiated. The augmentative possibilities of a working elephant relationship were founded on the complementary but differentiated cognition and behaviour of both animals. Pathways were shared, but their use could not coincide. And ironically, when an elephants' behaviour was most familiar – as in Chapter Three when elephants expressed insight into people's personal affairs – they were simultaneously the most incomprehensible, and produced a feeling of uncanniness. Highlighting cross-species continuities is an important strategy for incorporating nonhuman animals into our ethnographies, to find shared dimensions from which to write about them as interacting social agents. Although, as Joanna Latimer (2013) argues, there needs to be a mutually affecting, entangled concept of interspecies sociality that does not subsume difference. We need to acknowledge how our social and ecological interconnections with nonhumans can sometimes be limited, that togetherness can be only momentary and not always a necessity of being with animals, and that nonhuman otherness, whether it be their desires, perspectives or otherwise, should remain a possibility (see also Candea, 2010, on how engagement and detachment both constitute human-animal relations). If similar traits and integrated lives and habitats were common themes across the chapters in this thesis, then disconnection and alterity was that theme's counterpoint.

Through the relationship with a mahout, an elephant could survive within a human-dominated environment, a possibility unavailable to their forest-roaming cousins. Partnered with humans, the “wild” elephant becomes “domestic”, integrated into the human niche, although this state is not stable. The fact that elephants can shift between states does suggest that our understanding of human-elephant relationships needs to move beyond limited binaries. Living and interacting in a mutual ecology, humans and elephants affect each other’s behaviour and development over time (Ingold, 2000; Fuentes, 2010). The proximal, domestic relationship is the most pervasively co-shaped example: the mahout and elephant’s continuously and reciprocally coordinated interactions tightly determine their closely coupled ontogenetic trajectories. For the distal relationships with forest-roaming elephants, the variable factors that shape the animal’s behaviour are far broader. The lives of elephants in the RGRF, for example, were tied to different villages along their ranging area, yet they also coordinated with broader set of more-than-human relations: This includes not only their intra-species social engagements, but interactions with other animals of the forest, and the growth of vegetative relations that sustain them and determine their seasonal migrations (see also Hathaway, 2015). What differentiates human-elephant entanglements is partly a matter of the intensity and degree of enmeshment into the course of each other’s lives. The distinctions can be made along a continuum according to the familiar and unfamiliar, proximal or distal, deeply or partially interconnected relationships human and elephant have with each other. These entanglements have histories and are constantly changing and being negotiated.

Further, two terms for elephants are insufficient to broadly define the diverse set of relational kinds. Within captive contexts – whether that be with mahouts in Assam, or living in a zoo in Sydney, Australia – there is a wide variation in the environment and the depth of the social relationship between human and elephant (see Locke, 2014). Similarly, with wild human-elephant relations, their modes of engagement can vary dependent on history and socio-ecological context. In Chapter Six, humans worked to accommodate the elephant’s movement through the village, and herds also learnt to develop a greater tolerance towards the escorts and other humans who had become a permanent, guiding feature of the pathway. The mutual adaptation to each other’s presence was a unique interspecies practice in the area. It was also a form of sociality that the concept of the wild – with its notions of natural

or uncontrolled behaviour – cannot adequately capture.<sup>179</sup> Fuentes (2007, pp. 127-128) proposes an added category, the “in-between”, to encapsulate the “variations on the themes of wild and captive” that can occur within a mutual ecology. Regarding human-nonhuman primate encounters, the “in-between” groups relationships along a spectrum of kinds, such as free-roaming monkeys who live and interact with people in temples, nonhuman primates hunted as prey, or primates kept as pets (Fuentes, 2007). The indeterminate concept of the “in-between” has useful application for elephants, animals who participate in a vast spectrum of different kinds of relationships, and for who the terms wild and captive are inadequate.

Piers Locke argues that perhaps it is best to “bypass the nomenclature...[and] recognize the complex interconnections between humans and elephants in relation to their faculties, their histories, and their modes of life” (Locke, 2014, p., 18). Human-elephant relationships could be organised according to various interacting dimensions, including: socio-ecological context (e.g., forest-field interface, wildlife parks, or timber elephant); the forms of behavioural adaptation and their process of emergence (e.g., programmatic training, captive born elephants, or improvised sociality between forest-dwelling elephants and local humans), and; the depth of interconnection and degrees of influence each species has in co-shaping the other’s life. Or perhaps, instead of speaking of a spectrum of relational kinds, we can we speak about cultures. An ethnoelephantology of human-elephant cultures would acknowledge the plasticity and individual agency of both human and elephant in forming and sustaining relationships, that these behaviours can be inter-generationally transmitted, that variation can be found between geographical areas, and that human-elephant social configurations are both historically situated and open to transformation.

Considering the variance of human-elephant relations and socio-ecological conditions across not only Asia, but Africa also, there is a fascinating set of human-elephant configurations to examine. African bush elephants for instance, are a biologically different species and have adapted to very different bio-social ecologies. They too can be powerful and significant beings in the lifeworlds of fellow human inhabitants, although these perspectives emerge from distinct cultural and symbolic systems (Marks, 1976/2005, Richards, 1993; Kohler, 2000). The patterns of human land occupancy and elephant migration, including their

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<sup>179</sup> It is worth nothing that the relational process does bear some similarities to Natasha Fijn’s (2011, p. 18, author’s italics) definition of “co-domestication” the phylogenetic “adaptation of animals in association with human beings by means of *mutual* cross species interaction and social engagement”.



overlapping habitats, differ to the ones explored in this thesis. Further, there has been no history of captivity and working relationships, or science of elephants as there has been in Asia (Sukumar, 2003). These last two points suggest a less intense – although not less interesting – intersection of cognitive, behavioural, and ecological worlds.<sup>180</sup>

Elephants are often portrayed as victims of human-modification to the environment, or slaves to human projects – a characterisation that ignores their active agency (Hathaway, 2015). Public dirt roads in the RGRF facilitated the movement of people and resources in and out of the forest, but these paths also afforded easy passage for herds. Tea plantations have historically depleted much elephant habitat, but in some parts of Assam elephants have appropriated tea plantations as corridors to seek out and access fragmented forests. The relative calm of the plantation is also used as a refuge in between crop raids on nearby farmlands in the evening. Domestic elephants, through commands that constrain and mediate their behaviour, are able to coordinate with mahouts to achieve tasks that would not be possible individually. Framing the interspecies relationship through the limitations it exacts on the nonhuman fails to consider how changing environmental conditions can both constrain but also create opportunities that affords access to resources and enables new kinds of activity. Ethnoelephantology recognises that elephants are behaviourally adaptable and active participants with humans in a mutual ecology, continuously exploiting and modifying both the environment and their relationships with humans (Locke, 2013; see also Fuentes, 2010; Lorimer, 2015). Attending to the dual aspects of constraint and affordance can assist in better grasping the agency of elephants when the context enables it – even in contexts where the conditions of the relationship are skewed towards human desires and benefit.

An ethnoelephantology that situates humans and elephants within a mutual ecology can augment our interpretation of their interspecies relationship across history (for prominent works see Sukumar, 2011, 2016; Trautmann, 2015, 2016). Humans along with elephants (and other organisms) co-constructed environmental history, engineering ecosystems, while mutually shaping and exploiting each other's niche. This notion extends not only to elephant pathways, but also the ecologies that humans became increasingly efficacious in radically transforming and manipulating. Expanding agriculture significantly depleted forest habitat and was detrimental to elephant survival. It also created a new opportunity for elephants to

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<sup>180</sup> I also am grateful to an anonymous reviewer for reminding me of this point.

exploit, with herds and individuals taking advantage of the nutritious crops by adopting the flowering rice paddy into their foraging ranges. While conflict did occur and intensify over these new resources (Sukumar, 2003), the forest-field interface also likely resulted in more frequent contact between the two species, and bound them together in new ways.<sup>181</sup> Much like my informants in Assam, a lifetime of defending crops would lead the farmer to develop an improved awareness of elephant behaviours and the necessary skills to approach them. Further, agriculture might also have played an important role in the origin of elephant capture, taming and their integration into human society, augmenting kingship, class structure, and war between societies (Sukumar, 2011; Trautmann, 2015). It is no stretch to imagine that an infant may have been accidentally left behind when herds were chased off by farmers, or as Sukumar (2011) suggest, a lost calf could have independently wandered into a pastoral settlement. Alternatively, and providing ancient Indian elephant lore has some historical validity, the desire to capture and train elephants by local kings originated partly in response to elephant herds feeding and devastating local paddy fields (Edgerton, 2010). From this working relationship, both elephant and human could perform activities and engage the world in ways that were not possible prior. The fringes of field and forest was not an interspecies contact zone that necessarily provoked only conflict between humans and elephants. There were other relational possibilities that emerged from this space.

As we saw in Chapter One, managing the human-elephant relationship in the 21<sup>st</sup> century has become increasingly difficult at the fringes of forest and village: elephant encounters have become more frequent, aggressive and unpredictable. Conservation approaches have generally relied upon a model of protected areas that seeks to separate natural and cultural domains. Elephants are unfortunately not bound by symbolic boundaries and easily overcome material ones, and their strategy for surviving in the shifting landscapes of the Anthropocene increasingly involves raiding farmer's crops and passing through human habitat to reach disparate forests. Ecologists and biologists are shifting their approach and responding to the fact that the habitats of humans and elephants persistently overlap,

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<sup>181</sup> Hunting would have been the alternative mode of relation which would have developed familiarity with elephants, and a practice that was potentially present prior to agriculture. Although pre-historical hunting of elephants Sukumar (2011) concludes, based on limited archaeological findings, may have been quite rare since it would have been more dangerous and difficult to hunt elephants in the forest, unlike in open savannah type environments, like in the African continent. Although there are more recent instances, such as the Mizo in the 17<sup>th</sup> and 18<sup>th</sup> century who were successful and prolific hunters. However, this relationship may have been encouraged by the networks of trade that made elephant hunting profitable, networks that did not exist several millennia ago.

developing new strategies for managing interspecies relations that are based on more complex models of integrated human-elephant landscape mosaics (e.g., Zimmerman et al., 2009; Goswami et al. 2014).

Ethnoelephantology and the animal sciences are both occupied with the question of “how to best inhabit a world shaped and shared with elephants” (Locke, 2016a, p. 2), and anthropology can make significant contributions towards understanding how we might better inhabit a multispecies world (Milton, 1993; Kirksey & Helmreich, 2010). Thinking from the level of declining elephant population statistics, and satellite maps of disappearing forests, is a top down point-of-view insensitive to the nuances of human-elephant relationships on the ground. Dividing the world into natural and cultural spaces to manage human-elephant relations are solutions that have proven to have some success. However, it is an approach that also needs to be complemented by an answer to the persistent problem of overlapping human and elephant worlds. This answer that could be partially informed by ethnographic observations at an interactional level. In this thesis, there were examples of villagers accommodating to the presence of elephants and an attitude that fostered mutual non-disturbance. Chakardo was an interesting case study due to the long history it had with the elephant community who, for generations, had passed through the area. Escorts also negotiated with elephants to incorporate their ways of life into the activity of the village. Studies of human and elephant communities learning to live together in a shared and rapidly changing environment, may point towards hopeful possibilities of continued existence, and the development of strategies and models that can be extended to other human-elephant landscapes. In the Anthropocene, where the distinctions between nature and society are becoming blurred and humans and wildlife are increasingly encountering each other, there needs to be a better understanding of multispecies co-existence (Peterson et al., 2013; Frank, 2016). We need stories of collaborative survival in the environmental ruins of the contemporary world, where life persists, adapts, and seeks out new connections, where new worlds of promise are made and precariously sustained (Tsing, 2015; see also Kirksey, 2015; Haraway, 2016).

### **Living in elephant worlds**

In Chapter Six, herds used the village as a corridor to the wetland. The people of Chakardo recognised that the farmland was a space that also had purpose for the elephants, a purpose

that did not always conform to the farmer's own use of it. The pachyderm's persistent use of Chakardo as a dandi prevented people from interpreting the place solely from anthropomorphic point-of-view. More-than-human anthropology seeks to decentre an anthropocentric analytical focus by foregrounding the perspectives and agency of other organisms in ethnography (Kirksey & Helmreich, 2010). This theoretical movement is a postmodern critique of the western scientific "anthropological machine" that functions to construct humans as exceptional beings (Agamben, 2000), and expresses an obligation to respond to nonhuman sentience by taking them seriously as social actors (Noske, 1993; Haraway, 2008). Most importantly, decentring the human in anthropological research is a grounded re-engagement with the worlds that many of anthropology's informants inhabit daily. Interspecies "intersubjectivity is self-evidently generated" through interactions with nonhumans within a shared environment (Milton, 2005, p. 263). People whose lives intersect with other animals understand that the world can be one thing for humans and another for nonhumans.<sup>182</sup> The perception of the environment is not singularly defined or informed solely by human interests and practices; it is grasped in interaction with nonhuman points-of-view.

Being the powerful and unintimidated animals that they were, a farmer had little choice but to recognise that his land also had meaning for the elephant. When in their vicinity, a wise person knew it was best to step back, not to disturb or challenge the animal (unless, of course, the elephant threatened to damage property or home), and accommodate to its use of space. The elephant's potentially dangerous presence disrupted people's capacity to inhabit the village in a regular manner. They became subject to the elephant, forced to adopt a position in relation to the elephant's perspective on, and practical engagement with, the environment. Large animals have the capacity to arrest humans in this manner, whether through their charisma or the threat they embody. After being attacked by a crocodile while kayaking in the rivers of northern Australia, environmental philosopher Val Plumwood (1995; Fijn, 2013) recalled the revelatory experience of the near-death encounter. At the moment of the attack, she became vulnerable to the desires of that individual animal, and "forced to give greater agency to the crocodile." (Fijn, 2013, p. 19). The Western worldview that casts

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<sup>182</sup> This also extends to animists, at least a perspectivist account of animism. Even though nonhumans will inhabit a similar lifeworld to humans, animists understand that human and animal perspectives do not coincide: what looks like maggots or blood to humans, looks like grilled fish to vultures and manioc beer to jaguars (Viveiros de Castro, 1998).

humans as above and outside of nature, or more powerful than other animals, fails to recognise that humans can be merely prey and food for others (Plumwood, 1995). Formidable nonhuman beings have the power to violently disrupt human-centred frames of thinking. They remind us that there are “other-than-human worlds in which we participate, but in which we don’t make the rules” (Tsing, 2014, p. 33).

As someone unfamiliar to living in environments with elephants or other large nonhuman animals, during fieldwork I was most impressed by the *dandi* (elephant paths) traced through the forest. First, *dandi* – especially because they corresponded so closely with how roads organise human society – called attention to the nonhuman social worlds that existed alongside my own. Second, the scale of elephant modifications was striking because they were relatively comparable to human efforts, which challenged the notion that humans are exceptional in their world-making practices. Finally, that people’s paths were both used and structured by the tracks of herds, undermined assumptions that human-modified environments are distinct from nonhuman ones by design. As Tim Ingold (2000, 2011) has argued extensively, humans do not pre-conceive and then impose cultural forms upon the landscape; rather, intentions, artefacts, and built environments emerge through people’s interaction with the growth and movement of other organisms, materials, and forces. Human paths within the forest grew out from the worlds of elephants. Further a forest trail was defined not only by the footsteps of elephants, but also other aspects of the environment such as the tangled growth of vegetative life that brings the path into relief. “The path and not the place, is the primary condition of being, or rather becoming,” Ingold (2011, p.12) argues “where inhabitants meet, trails are entwined, as the life of each becomes bound up with the other” (Ingold, 2011, p. 148). Inextricably entangled with the world, human practices are always exposed to being shaped by the agency of beings’ other than ourselves. As embodied selves, we are continuously susceptible “to the unchosen and the unforeseen” (Harrisson, 2008, p. 427). On a path, we do not follow a planned trajectory, but open ourselves to being constrained and guided by the form and direction the path takes, as shaped by the lives of other beings, human, animal, plant or otherwise. To be human along a path is always to be more-than-human.

The colonising footsteps of our hominin ancestors were likely guided by the environmental modifications of the megaherbivores they lived alongside (Haynes, 2006, 2012).<sup>183</sup> Over time, human societies, to varying degrees, became very successful at transplanting, reconfiguring, and exploiting ecological relations, significantly shaping the conditions along which life develops, grows, or dies. The ecologies of the 21<sup>st</sup> century have grown out of environments co-created by people, elephants, and a multitude of other organisms. The term Anthropocene is an attempt to define the pervasive effects of humans and how their practices have radically altered the bio-geo-chemical composition of the planet (Crutzen, 2002). Humans are cast as the ultimate world-makers, the scale of anthropogenic effects on the global environment has been likened to an awe-inspiring and “overwhelming, great, force of nature” (Steffen, Crutzen & McNeill, 2007; Steffen Grinevald, Crutzen & McNeill, 2011). Human agency is elevated to a power beyond that of other individual animals and species. Plastics, the bones of domestic animals, and radioactive isotopes, have all become the signature of our species’ name, now written forever into the geological stratum of the earth itself (Steffen, Crutzen & McNeill, 2007; Waters et al., 2016). Haraway argues that terminology employed to comprehend and define the environmental crisis has reproduced an anthropocentrism that frames the current age as a “human species act” (Haraway, et al., 2016, p. 539). The trajectory of the earth’s many interrelated ecologies have been reduced to and singularly defined by human causes.

Analysis at the global scale and thinking through deep, geological time enables us to comprehend the radical ecological changes being produced. Yet, the Anthropocene narrative obscures the agency of other organisms and overlooks the continued role that nonhumans play.<sup>184</sup> At the level of the individual, the dynamics are less clearly tilted towards human power. Walking in the elephant’s footsteps or meeting them in the flesh, it is difficult to ignore or underemphasise their perspectives and worlds, as well as their capacity to animate people and other organisms. Despite the megaherbivore’s marginalisation in human-

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<sup>183</sup> Anthropologist Paul Richards’ (1993) interpretation of Mende beliefs about the African elephants of Sierra Leone, seems relevant:

[Elephants are not] ... contemporaneous rivals to humans, but ancestral voices. These great animals were quietly in control of the forest long before any ‘creatures that go on two legs’ began their drive for dominance ... since it was the elephants that put in much of the hard work that has gone into opening up the forest to habitation, they deserve respect as well as fear.

<sup>184</sup> There are other important critiques of the Anthropocene, not addressed here, that argue that the name obscures more than it reveals. Moore (2014) for instance, argues for an alternate term, the Capitalocene, to grasp the unequal effects of different human societies and systems on the ecology.

dominated landscapes, elephant ways of life continue to give shape to emerging ecologies. More-than-human ethnography returns us to the ground, amidst the interactions and unfolding negotiations between different animals and other organisms. We must cultivate the “arts of noticing” (Tsing, 2011) and train ourselves to be sensitive to the ways in which the world is lively, and how we affect and are affected by those we live alongside (van Dooren & Bird-Rose, 2016). When conducting research in the shadow of the Anthropocene concept, it is important to decentre our analytical focus from the human subject to better attend to the multispecies relations of which we are a part of, that give shape to who we are, and through which the world is continuously coming into formation.





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# Appendix

## Human Research Ethics

8/4/2015

Macquarie University Mail - Approved- Ethics application- Downey (Ref: 5201200282)



**MACQUARIE**  
University

Paul Keil <paul.keil@mq.edu.au>

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### Approved- Ethics application- Downey (Ref: 5201200282)

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**Ethics Secretariat** <ethics.secretariat@mq.edu.au>  
To: Dr Greg Downey <greg.downey@mq.edu.au>  
Cc: Mr Paul Gregory Keil <paul.keil@students.mq.edu.au>

Fri, Jun 15, 2012 at 11:30 AM

Dear Dr Downey

Re: "Human-Elephant Entanglements: An ethnographic inquiry into mahout-elephant working units mediating human elephant conflict in Assam" (Ethics Ref: 5201200282)

Thank you for your recent correspondence. Your response has addressed the issues raised by the Human Research Ethics Committee and you may now commence your research.

This research meets the requirements of the National Statement on Ethical Conduct in Human Research (2007). The National Statement is available at the following web site:

[http://www.nhmrc.gov.au/\\_files\\_nhmrc/publications/attachments/e72.pdf](http://www.nhmrc.gov.au/_files_nhmrc/publications/attachments/e72.pdf).

The following personnel are authorised to conduct this research:

Dr Greg Downey  
Mr Paul Gregory Keil

**NB. STUDENTS: IT IS YOUR RESPONSIBILITY TO KEEP A COPY OF THIS APPROVAL EMAIL TO SUBMIT WITH YOUR THESIS.**

Please note the following standard requirements of approval:

1. The approval of this project is conditional upon your continuing compliance with the National Statement on Ethical Conduct in Human Research (2007).
2. Approval will be for a period of five (5) years subject to the provision of annual reports.

Progress Report 1 Due: 15 June 2013  
Progress Report 2 Due: 15 June 2014  
Progress Report 3 Due: 15 June 2015  
Progress Report 4 Due: 15 June 2016  
Final Report Due: 15 June 2017

**NB.** If you complete the work earlier than you had planned you must submit a Final Report as soon as the work is completed. If the project has been discontinued or not commenced for any reason, you are also required to submit a Final Report for the project.

Progress reports and Final Reports are available at the following website:

[http://www.research.mq.edu.au/for/researchers/how\\_to\\_obtain\\_ethics\\_approval/human\\_research\\_ethics/forms](http://www.research.mq.edu.au/for/researchers/how_to_obtain_ethics_approval/human_research_ethics/forms)

3. If the project has run for more than five (5) years you cannot renew approval for the project. You will need to complete and submit a Final Report and submit a new application for the project. (The five year limit on renewal of approvals allows the Committee to fully re-review research in

## Animal Ethics



## ANIMAL RESEARCH AUTHORITY (ARA)

AEC Reference No.: 2012/032

Date of Expiry: 1 August 2013**Full Approval Duration:** 1 August 2012 to 31 July 2015 (36 Months)**Principal Investigator:**

Dr. Greg Downey  
Department of Anthropology  
Macquarie University NSW 2109  
0428 331 695  
Greg.Downey@mq.edu.au

**Associate Investigators:**

Paul Keil 0432 810 033

**In case of emergency, please contact:**

*the Principal Investigator / Associate Investigator named above  
or Animal Welfare Officer 9850 7758 / 0439 497 383*

The above-named are authorised by MACQUARIE UNIVERSITY ANIMAL ETHICS COMMITTEE to conduct the following research:

**Title of the project:** Human-Elephant Entanglements: An ethnographic inquiry into mahout-elephant working units mediating human elephant conflict in Assam

**Purpose:** 6. Research: Animal management or production

**Aims:** 1. Documentation of skills developed in order to engage with elephants  
2. An analysis of the shifting dynamics of human-elephant relationships in Assam

**Surgical Procedures category:** 1 – Observation involving minor interference

**All procedures must be performed as per the AEC-approved protocol, unless stated otherwise by the AEC and/or AWO.**

Maximum numbers approved (for the Full Approval Duration):

Species	Strain	Age/Sex/Weight	Total	Supplier/Source
33. Elephant	Asian Elephant	Male & Female, various	15	Asian Elephant Foundation / Kaushik Barua (private owner)
		<b>TOTAL</b>	<b>15</b>	

**Location of research:**

Location	Full street address
Assam Elephant Foundation (AEF)	Deepor Beel, Guwahati, Assam, India.

Amendments approved by the AEC since initial approval: **N/A**

Conditions of Approval: **N/A**

Being animal research carried out in accordance with the Code of Practice for a recognised research purpose and in connection with animals (other than exempt animals) that have been obtained from the holder of an animal suppliers licence.

*This ARA remains in force until the Date of Expiry (unless suspended, cancelled or surrendered) and will only be renewed upon receipt of a satisfactory Progress Report before expiry / is contingent upon receipt of a Final Report at the end of this period (see Approval email for submission details).*

Prof Michael Gillings (Chair, Animal Ethics Committee)

Approval Date: 14 June 2012



