



Beasts in the Garden: Human-Wildlife Coexistence in India's Past and Present

Meera Anna Oommen*

Dakshin Foundation, Bangalore, India

OPEN ACCESS

Edited by:

Simon Pooley,
Birkbeck, University of London,
United Kingdom

Reviewed by:

Ambika Aiyadurai,
Indian Institute of Technology
Gandhinagar, India
Erica Von Essen,
Norwegian Institute for Nature
Research (NINA), Norway

*Correspondence:

Meera Anna Oommen
meera.anna@gmail.com

Specialty section:

This article was submitted to
Human-Wildlife Dynamics,
a section of the journal
Frontiers in Conservation Science

Received: 30 April 2021

Accepted: 23 June 2021

Published: 21 July 2021

Citation:

Oommen MA (2021) Beasts in the
Garden: Human-Wildlife Coexistence
in India's Past and Present.
Front. Conserv. Sci. 2:703432.
doi: 10.3389/fcosc.2021.703432

Human-wildlife encounters are characterized by a diverse array of engagements located on the continuum between the negative and the positive. In India, protracted conflict with wildlife is reflected in violence across a range of rural and urban ecologies, but is only one aspect of the multiple facets of ongoing human-non-human encounter. Within these shared spaces, there are often equally significant elements of acceptance, tolerance and reverence. Together, these are dependent on context, and can be explored via lived experiences and worldviews, and a moral economy of human-wildlife and human-human relationships. Historically, though hardly static, such relationships have been mediated by the ontological positioning of traditional societies and their embedded rules and practises. In recent years, these tenuous equilibria have been disrupted by top-down catalysts, including universalist conservation agendas percolating from the state and the global arena. This study aims to explore the changing nature of coexistence by using several historical and contemporary vignettes in relation to key species that routinely “transgress” from their primary natural habitats into the “garden” spaces of human cultivation and habitation. The study will argue that insights at the intersection of environmental history, political ecology and anthropology can improve our understanding of human-wildlife coexistence in India as well as across the world.

Keywords: coexistence, conflict, India, human-animal relationships, conservation

INTRODUCTION

Violent conflicts are an increasingly common feature of the developing tropics where attempts to conserve charismatic, yet dangerous flagship species, face resistance from people whose lives, livelihoods and worldviews are impacted. Conflict typically takes on two overlapping forms. The first pertains to fine-grained, negative interactions between local communities and wildlife, and the second, to differences between groups of people with divergent aspirations for land and nature (Redpath, 2013). In India, both forms of conflict are prevalent and their significance is reflected in the numbers of human and animal casualties: ~500 people lose their lives each year to elephants (Panda et al., 2020), and annually over 1.2 m snake bites result in 30,000 to 40,000 human fatalities (Suraweera et al., 2020). Human casualties to other species such as large carnivores are also considerable as are those of their animal counterparts.

Across the country, there is mounting evidence of increasing conflict in zones of overlap between formally protected wild spaces and human habitation (Anand and Radhakrishna, 2017). As is the case elsewhere in the developing world, an overwhelming majority of human victims of these

encounters belong to poor and marginalized communities living around protected areas (West et al., 2006; Barua et al., 2013). In most situations, the understanding of conflict is restricted to highly visible impacts such as loss of life and crop-raiding, and inputs towards reconciliation are similarly restricted towards the provision of compensation or more effective separation of people and wildlife. Conservation scholars have only recently begun to explore seriously, the hidden dimensions of conflict such as a range of opportunity and transaction costs as well as significant disruptions to psycho-social well-being (Barua et al., 2013).

However, a narrative of conflict, despite its significance, is not the only storey. In India as well as across the world, a singular focus on violent encounters often neglects the multi-faceted nature of entanglements in geographies where people and wildlife have interacted and coexisted over the span of several millennia (Sukumar, 1994; Morris, 1998; Knight, 2004). The engagements between the rich variety of Indian megafauna as well as equally diverse historical and contemporary human societies offer an axis of exploration for contrasting engagements in conjunction with parallel shifts in their social, economic and cultural situations. Across many rural communities and traditional societies, we find that wildlife, including dangerous species involved in conflict, are an integral part of networks of reciprocity, reverence and kinship (Athreya et al., 2013; Aiyadurai, 2016; Oommen, 2019; Thekaekara, 2019; Nijhawan and Mihu, 2020). While communities sometimes retaliate with violence towards animals, local conceptualisations may also align simultaneously with accommodation, worship, and propitiation, frequently considering wildlife attacks as punishment or retribution by animals for human misdemeanours. As pointed out in the scholarship of Norton (1991), Morris (1998, 2000), Franklin (1999), and Ingold (2000), a community's relationship with animals is neither monolithic nor homogenous, but a complex one that is contingent on circumstance, social relations and history. Therefore leaving out any set of engagements, positive, negative, or ambivalent, provides a misleading picture of human-animal relationships.

In understanding the nature of coexistence, of particular significance are India's diverse ethno-sociological traditions that range from mainstream religious affiliations to traditional animistic cosmologies, folklore, and worldviews incorporating animals into relational frameworks of giving and reciprocity, and management outcomes evolved as a consequence of ritual and taboo. While a large number of these have been of a local or regional nature, a few religious traditions have garnered widespread acceptance. Further, upheavals caused by major watersheds such as colonialism and recent discontinuities that came in the form of post-Independence legislation have nationwide significance with strong connexions to perceptions about distributive justice and the moral economy. These are in turn translated to retaliation to animals and other forms of negative human-animal encounter, and conflicts between different groups of people. While colonial laws and policies set the stage for exclusionary conservation throughout most of the Indian subcontinent, of key significance for the post-Independence era is the impact of the Indian Wildlife (Protection) Act, 1972, the country's flagship conservation legislation which cemented the

separation of people and wildlife; as well as recent laws such as the Forest Rights Act, 2006 which attempt the redressal of "historical injustices" (including loss of land and rights for conservation) to forest-dwelling communities. Modern conservation sensitivities driven by urban communities and mediated by a range of domestic and outside influences too play a significant role and often faces resistance from local communities.

APPROACH

This manuscript attempts to provide snapshots of coexistence in India via an exploration of engagements between people and wildlife that are typically categorized as "problem species." In other words, these are species that are traditionally regarded as boundary crossers (as defined by humans) that frequent human-dominated spaces and interact with people, often causing different forms of conflict. In attempting to understand coexistence, the aim has been to review and synthesise using an interpretive approach, numerous empirical sources ranging from historical and anthropological accounts to recent work from conservation science that addresses the issue of coexistence (without delving much into anthropological theory). An effort was made to select widely distributed species on which adequate empirical scholarship on long-term interactions was available and accessible. The latter condition was instrumental in framing an adequate historical narrative as informed by historical and contemporary scholarship. The author's own long-term research has focused human interactions with two of the species (elephants and pigs). It has to be noted that the accounts of individual species presented in this manuscript are not exhaustive with respect to their historical or contemporary relationships with people and vice versa, rather, the intent has been to highlight a selection of accounts that encapsulate or highlight specific aspects of coexistence between people and animals.

While the definitions of coexistence vary according to different conservation researchers (e.g., Madden, 2004; Frank, 2015; Konig, 2020 and references there in), this manuscript follows the definition provided by Carter and Linnell (2016, p. 575) who define coexistence as "a dynamic but sustainable state in which humans and wildlife co-adapt to living in shared landscapes, where human interactions with wildlife are governed by effective institutions that ensure long-term wildlife population persistence, social legitimacy, and tolerable levels of risk." In the opinion of the author, coexistence does not entirely preclude elements of conflict, rather, it refers to a multidimensional and multifaceted situation in which engagements are often simultaneously located at different points on the continuum between accommodative strategies and negative interactions, but nevertheless ensures the continued existence of wildlife populations.

BEASTS IN THE GARDEN

In India, free-ranging, wild species that attack people or livestock, raid crops or cause other forms of damage to human lives and livelihoods are very much part of the dynamic of zones

of overlap between formally protected wild spaces and human habitation. Many are widely distributed generalists that can adapt to multiple habitats, and especially human use landscapes with their abundance of agriculture, livestock and other benefits compatible with the “merits of margins” (Peterson, 1977). Most, if not all of these species, have a long history of interaction with human communities. Human-animal relationships in such zones evolved with context and are highly contingent on local lived experiences over an extended period of time. These can be examined through a series of explorations of several widely distributed species that routinely “transgress” from the forest and other natural habitats into the “garden” spaces of human habitation—big cats (tigers and leopards), elephants, wild pigs and other ungulates—which have not only figured significantly in conflict in India but are also accommodated within positive, ambivalent and contradictory relationships.

Tigers

In his seminal article on “the war against ‘dangerous’ beasts in colonial India,” Rangarajan (1998) points to the subcontinent’s diverse heritage of entanglements with large carnivores such as tigers, that simultaneously symbolise power and danger. In some quarters, tigers were considered the inveterate problem species, to be eliminated on account of their attacks on livestock and their occasional propensity to kill and devour people. In others, especially during the late colonial era, they assumed a new reputation as the saviours of agriculture and even as embodiments of “gentlemanly virtue” (Rangarajan, 1998, p. 299, see also MacKenzie, 1988). While the latter sentiments were attributed to colonial officers as well as the Indian elite who questioned the wisdom of removing this top predator which brought down the numbers of crop-raiding ungulates, tigers were also extensively hunted for sport by the very same constituencies.

On the whole, neither conflict nor peaceful cohabitation were a given, prompting Rangarajan (1998, p. 299) to point out as misleading, a universal romanticised notion of harmonious coexistence or that of all-out conflict. Cohen (2012) too points to the dynamic and anthropocentric nature of human-tiger interactions ranging from the extermination and subjugation under colonial hunting and vermin control to their representation as charismatic conservation icons and playthings in contemporary tourism. Tracing engagements with tigers in diverse contexts before, during and after the colonial watershed provide further support to this.

Local historical conceptualizations of man-eating tigers and leopards, especially beliefs in human to animal transformation, and vice versa, are useful avenues for exploration in this regard, and find parallels with other situations such as the werewolf in European folklore (MacKenzie, 1988). Shapeshifting and therianthropy are informative with regard to coping strategies that benefit coexistence, as well as community cohesion and related social dynamics. Liminal areas of the fringes of human occupation were particularly conducive to the development of such beliefs (Brighenti, 2017). An example is the historical (and even contemporary) belief among the Kondh communities of Odisha that a man-eating tiger or cattle lifter was a were tiger (practitioner of *krāḍi mliva*) or person whose soul or life force

entered a tiger by divine facilitation and carried out malicious acts (Brighenti, 2011). Related accounts equated the man-eater with the earth goddess (*Darṇi Pēnu*) herself, who, enraged at the lack of human sacrifices (traditionally known as *Meriā*) devoured her victims (Macpherson, 1852). The belief in human to animal transformations not only cut across class and caste boundaries but was geographically widespread encompassing the central and eastern parts of the subcontinent. For instance, the colonial official William Sleeman was informed by the Raja of the princely state of Maihar (in the Bagelkhand region of Central India) that the tigers who killed large numbers of people were in fact men who had mastered the “science” of converting themselves into tigers. In the latter’s opinion, Gonds and other “wild people from the jungles” were to be paid sums of money for propitiating marauding tigers by prayers and sacrificial offerings (Sleeman, 1844, p. 165).

Tigers were venerated as part of the Saiva cult in many places; tiger worship in Central (by the Santals of Chota Nagpur, the Kurku and Bhomkas of Hoshangabad) and Northwestern India (by the Baghel Rajputs and the Bhils in Rajputana) was common and the species figures prominently in totemic representations (Bhattacharya, 1947). While killing of tigers under the colonial bounty system for exterminating vermin was commonplace in these regions (bounties were paid for an estimated 56,000 tigers between 1875 and 1925, excluding about 13 years for which data is unavailable), vermin killing itself was viewed differently by different communities: the Baghel Rajputs who claimed descent from tigers, refused to provide baits for white hunters, as did the Khonds in Ganjam who believed tigers to be their ancestors (Rangarajan, 1998). In many instances, forest-dwelling communities such as the Gonds responded with physical resistance, refused to divulge information about the whereabouts of tigers or admonished white hunters when tigers and other carnivores were killed (Rashkow, 2014a,b). Others killed tigers when there was a necessity, or avoided them on the whole.

Individual animals were sometimes identified as just cattle-lifters or as individuals that did not harm humans, with some constituencies viewing these individuals as somewhat affable predators that also needed to eat to survive (Interesting parallels can be drawn here between modern conservation contexts such as those in parts of Scandinavia where hunters support the rights of large carnivores such as wolves to exist—including reinstating populations by reintroduction—but favor the extermination of individual animals that are perceived to be behaving unnaturally, i.e., deviating from normalcy in behaviour, genetics or spatial boundaries, Von Essen and Allen, 2020). For many local communities, the relationship depended on the amount of the reward offered or the nature of local exigencies. The whole scenario was tied up heavily with agrarian practises, arming of the population (the iniquities of the Arms Act which prevented local populations from keeping firearms was particularly problematic), and the politics of sport hunting (Rangarajan, 1998).

Similarly, in northeastern India, the Garos, Rabhas, Bodos, Mikirs, Karbis, Tiwas and Khasis and the Naga communities have folklore about tigers and leopards, and several clans also claim kinship with tigers (Aiyadurai, 2016; Lyngdoh, 2016; Brighenti,

2017). Different forms of human-animal transformations that were conceptualized by the communities as either malevolent entities or special individuals selected by deities to execute certain roles, or ancestral spirits embodying the essence of clans (Lyngdoh, 2016). While some of these relate to warriorhood and headhunting, and even the use of “animal doubles” to attack their enemies, others consider it a curse or disease, and yet others such as the Mishmis claim strong kinship with tigers (Aiyadurai, 2016; Lyngdoh, 2016; Brighenti, 2017). Some, such as the Khasi attribute attacks on livestock to the needs of a local tiger deity (Lyngdoh, 2016).

Despite a heavy influence of modern Western education and Christianity, there is evidence of a continuing presence of traditional animistic beliefs in were tigers and different forms of human-animal transformations in which the misdemeanours committed by these individuals are somewhat condoned (Brighenti, 2017). A significant aspect is that the presence of these traditions do not preclude the hunting of tigers by some groups. However hunting and lethal control itself in many traditional societies was historically guided by different forms of rules, ritual and taboo though in the contemporary period there has been an erosion of strong community rules and control in many places.

For groups such as the Mishmi of Arunachal Pradesh who continue to acknowledge strong kinship links with tigers (they consider tigers as their brothers born of the same mother) and typically refrain from their killing, modern conservation has been problematic. In situations of last resort, i.e., when individual tigers become dangerous, they follow a pragmatic approach and occasionally kill or trap their “problematic brother” bringing them into direct conflict with India’s conservation laws (Aiyadurai, 2016, p. 312). In recent years, these communities have opposed a unilateral, top-down decision by the government to declare parts of their richly forested landscapes under the Dibang Wildlife Sanctuary and further plans by conservationists and the state to elevate its status to that of a Tiger Reserve. These designations entail restrictions on the community on access and use of the forest. The Mishmi who consider themselves to be conservationists and guardians of the forest, managing their resources through ritual and taboo, view such acts as detrimental to their livelihoods as well as infringing on their cultural rights (Aiyadurai, 2016). This signifies that even in spaces with high levels of organic “cultural capital” (Bourdieu, 1986) and close kinship ties with key species such as tigers, the imposition of conservation can not only disrupt a largely peaceful set of relationships but also result in conflict with a community’s own cultural icon which received some amount of protection. Modern conservation with its exclusionary ethic (evidenced by continued efforts to maintain pristine spaces for tigers) is seen by most local communities as immensely problematic.

In certain persistent regional epicentres of man-eating such as the Sunderbans of Bengal, though tigers themselves were not venerated, Dakshin Ray or Dakshinraj, and other presiding deities of tigers such as Badgazikhan, Kalgazikhan and Bonbibi (Banabibi) were worshipped by local groups such as woodcutters, hunters and boatmen belonging to both Hindu and Muslim communities (Bhattacharya, 1947). This syncretic tradition involved a number of prayers and propitiation exercises.

However, in recent years, as pointed out by Jalais (2008), nationalistic passions and universalist notions (both Western and upper middle class) engendered the “cosmopolitan” tiger (see also Cederlof and Sivaramakrishnan, 2007 for cosmopolitan/metropolitan and native/ indigenous conceptions of nature) far removed from its local counterparts in places such as the Sunderbans. Such a disjunct is detrimental to coexistence. A recent set of incidents in Yavatmal in Central India involving a tigress that had killed several people is also a case in point. Officially known as “T1” the tigress was rechristened by activists and the media as “Avni” (Earth), the killing of this tigress witnessed protests from large sections of urban animal lovers who objected to this decision.

Further, the oft quoted, yet contested (e.g., Carter et al., 2012; Rai, 2012; Goswami et al., 2013) conservation mantra that tigers and humans cannot coexist has been used as a justification to create exclusionary spaces for tiger conservation in India (Bejoy, 2011). Relocation of local forest-dwelling communities has been one of the hallmarks of protected area establishment in India (Rangarajan and Shahabuddin, 2006). In the case of tiger conservation, a significant criticism of the government’s displacement and relocation of forest-dwellers contrasts with its accommodative stance on tourists and other urban visitors into protected areas (Bejoy, 2011). Some tiger conservationists consider bringing “a tiger in the drawing room” via tourism a pragmatic conservation tool through a protectionist conservation and by the outward expansion of tiger habitats through incentivizing private land holders, agro-corporates and tourism entrepreneurs (Karanth and Karanth, 2012). Others point out that this amounts to colonial style “green grabbing” (Vidal, 2008) of rural land with its already known undesirable outcomes: agrarian distress, migration, exclusion, and alienation and loss of ties with land, and rights of local communities (Rai, 2012). However, on the question of coexistence, at least some carnivore ecologists have been known to support a pragmatic, context specific strategy. For instance Karanth and Gopal (2005) suggest that “tactics ranging from lethal control of tigers at one end of the spectrum to relocation of human settlements at the other would have to be part of the mix...” in establishing “sustainable landscapes.”

Leopards

The leopard, unlike its more charismatic cousin, the tiger, is mostly unseen, yet emphatic in its presence in many human-modified landscapes. While historically, problems such as man-eating had a very regional dimension, in contemporary times, this adaptable species not only continues to exploit the farmland niche, but has on occasion successfully crossed over into urban spaces, living off livestock, domestic dogs and occasionally attacking humans (e.g., Athreya et al., 2013; Ghosal and Kjosavik, 2015). The most notable regional geography with regard to conflict with leopards is the Himalayan state of Uttarakhand (particularly the districts of the Garhwal Himalaya) where attacks on people have been a chronic phenomenon at least since the colonial period and continue to report an average

of about 60 incidents each year (Sondhi et al., 2016). The presence of a “man-eater” is a significant daily stressor for local communities, which combined with ineffective mitigation measures (typically limited to payment of compensation and translocation) continues to generate negative perceptions and occasional retaliation against leopards. In other parts of India, leopards figure much less prominently in conflict. This is exemplified by the situation in the Valparai Plateau, a plantation landscape in southern India, where largely neutral perceptions of leopards and associated accommodative human behavioral responses are the norm with occasional shifts towards negative reactions (coinciding with attacks on humans) (Sidhu et al., 2017). At the positive end of the spectrum, in other sites such as Rajasthan, in northwestern India, leopards have received some amount of active protection by local Jain and Gujar communities and community-based organizations (Kumbhojkar et al., 2019).

As is the case of tigers, leopards too have been incorporated into networks of social relations both historically and in the contemporary sphere. Like tigers, individual leopards involved in conflict (especially predation on humans) have long been considered to be possessed by malevolent spirits. The Rudraprayag leopard (which killed over a hundred people) which was shot by Jim Corbett in 1926 was emphatically regarded an evil spirit that could not be vanquished. (An interesting parallel can be found in Patterson’s 1907 account that the Indian coolie labourers on the Kenya-Uganda Railway—many of whom fell victim to the lions—considered the Tsavo lions to be evil spirits). In many parts of the country, the wearing of claws and teeth of leopards and tigers as amulets and pendants is supposed to ward off misfortune and provide the wearer with courage, health and wealth. There is a widespread perception of leopards as protectors in parts of Himachal Pradesh, where they are strongly embedded in local myth and folklore and considered the *vahana* (vehicle/mount) of the local goddess (like the tiger is to the Goddess Durga) (Dhee et al., 2019). Ethnographic characterised research in these systems reveal that local communities view leopards as complex, thinking individuals and with whom the sharing of space is negotiated (Dhee et al., 2019). In the central Indian state of Maharashtra, which is by relatively lower levels of conflict in agrarian habitats with a high density of leopards, Athreya et al. (2013) report a high level of social tolerance to leopards and other predators and suggest an exploration of “social carrying capacity” that promotes coexistence with carnivores in such spaces.

A closer examination of this situation by Ghosal and Kjosavik (2015) arrives at two sets of relations borne out of distinct ontologies that operate together in the same spatial setting by mutual accommodation and co-opting. The first, revolving around the village deity Waghoba (represented by tiger or leopard iconography, *wagh* denotes tiger or leopard) is prominent among tribal communities and involves a network of reflexive and reciprocal relations with leopards that inhabit the landscape. Livestock depredation within this framework is viewed either as retribution for disrespect or as an act of benevolence or necessity by Waghoba (Ghosal et al., 2015). The annual festival of Waghbaras celebrating the benevolence of the deity (in livestock protection) is characterized by ritual sacrifices and feasting, which are also considered to promote

social stability and cohesion as well as contribute critical animal protein. The second, the “legal-scientific leopard” of state-sponsored conservation has a heritage of dualism of people and nature. Local forest managers, however, negotiate both spheres and enable both sets of practises. This integration of traditional and the modern ontologies engenders a hybrid coexistence perspective that appears to be somewhat beneficial for the continued survival of the species in this landscape without too much conflict.

Modern conservation and tourism have combined to provide another axis of interaction between big cats and the Indian public. While tiger-viewing safaris in national parks are more popular in terms of scale, leopards too are increasingly considered part of the attraction. Sightings of known individuals leopards are particularly sought after. This is exemplified by the case of a melanistic leopard inhabiting the environs of the Kabini forest in southern India. Known variously as *Karia* (lit. translation Blackie), *Saaya* (shadow) and Blackie, this black leopard and his encounters with other local resident leopards (Cleopatra, Scarface) are widely anthropomorphised in the media, and spark frequent interest among urban wildlife enthusiasts (e.g., Bangalore Literature Festival, 2020; The Indian Express, 2020). However, in stark contrast to these positive sentiments, individual leopards involved in conflict cause fear and apprehension among local communities, and typically suffer a different fate in relocation or lethal control.

Elephants

For sentient species with high behavioural plasticity and adaptability, the immediate local context and embedded interactions with local communities are of paramount significance. The types of entanglements in such interactive contexts reveal as much about the elephants as the human societies that live within their range. Although highly visible negative incidents and interactions receive inordinate focus, recent nuanced explorations shows that elephant landscapes can be broadly placed along a continuum of more or less peaceful coexistence (e.g., Thekaekara and Thornton, 2016), episodic conflict (e.g., Oommen, 2019), or more continuous and protracted conflict (e.g Münster and Münster, 2012a). Generalising interactions as peaceful coexistence or conflict, however, beyond an immediate regional or even local geographical unit is problematic as elephants are capable of a wide range of behavioural repertoires. Similarly the diverse human communities living within elephant landscapes tend to display an equally varied set of responses between and within social groups.

As pointed out by Sukumar (1994), elephant incursions into human habitation and vice versa have been an ongoing feature throughout the range of this species. Early references to agriculture-centric interactions as well as a range of multi-faceted engagements with elephants can be found in numerous Indian historical and literary sources (Sukumar, 2011). The bardic poetry of the Sangam literary tradition of Early Historical (300 BCE to 300 CE) Tamilakam (the ancient Tamil microregion comprising most of southern India) exemplifies this. Crop-raiding and everyday conflicts, ivory extraction and elephant

capture figure extensively in these representations, along with an equal diversity of allusions to the sentience and sociability of elephants (Oommen, 2019). Coexistence with this species, therefore has had many dynamic and contradictory facets over millennia.

As a more general pattern, human-elephant relationships are known to have a strong temporal dynamic that is often directly linked to the length of time local communities have spent with elephants. Migrant communities, especially recent agriculturalist settlers who have poor familiarity with elephant movements and behaviour are often located on the negative end of the spectrum (Thekaekara and Thornton, 2016; Oommen, 2019). This is exemplified by the case of early- and mid-twentieth Century Syrian Christian migrants to the frontier forests of the Western Ghats who either continue to be in conflict with elephants in many places or have begun to develop accommodative relationships after decades of occupation (Münster and Münster, 2012a,b; Thekaekara and Thornton, 2016; Oommen, 2019). This is often in stark contrast with indigenous forest-dwelling groups whose engagements with elephants are traditionally less confrontational and reflective of ways of life that have evolved from constant interaction and accommodation between both parties. For these communities, elephants are not only part of the landscape but are important deities and community members embedded within relational networks. To cite an example, Bird-David (1990, 1999) studies report how the Nayaka (Kattunayaka/n) of southern India often relate to elephants that pass by without reacting to them or harming people as “*devaru*” (superpersons/ divine persons) or “*anadevaru*,” whereas elephants that they encounter in some form of conflict are simply referred to as elephants (*ana/e*). Such forms of justification and discrimination of elephants as persons or individuals, or as objects, are highly contingent on situation.

As intelligent and interactive social beings, elephants provide fascinating opportunities for exploring issues related to nonhuman personhood and its role in coexistence outcomes. While traditional societies typically attribute personhood to many species, elephants on account of their high levels of sentience and consciousness have often been accommodated within a wider network of intimacy and trust than most other species. The behavioural peculiarities of individual wild elephants that frequent human habitation are sometimes known to village communities resulting in both positive and negative views. For example, a mostly harmless *makhna*, Nadodi Ganesan (*nadodi* can be roughly translated as “village loafer”) was fondly regarded by local communities in the Gudalur landscape in southern India (Thekaekara, 2019) (Here, parallels can be drawn with the Finnish “yard-wolf,” a designation given to a wolf that is habituated to and frequents human-dominated spaces, resulting in legal and ethical dilemmas for its removal, Ojalammi and Blomley, 2015). A long history of capture and training, and heritage of working elephants have also contributed to the public understanding of elephants as individuals and nonhuman persons.

In India, the elephant figures extensively in religion and mythology both on account of its links with mainstream, non-sectarian gods such as Ganesha/Ganapati in Hindu, Buddhist

and Jain traditions. Elephants as totems of autochthonous clans and the havoc caused by wild elephants figure among the various origins suggested for this non-sectarian deity worshipped widely under various appellations across the Indian subcontinent and beyond as the remover of obstacles (e.g., Michael, 1983; Ayuttacorn and Ferguson, 2018). Even Judaeo-Christian traditions within India such as those of the Kerala Christians established strong connexions with this charismatic species. For instance, construction rules of most early Syrian Christian churches in the erstwhile kingdoms of Travancore and Cochin (part of present day Kerala) mandated prominent iconographic representation of a working elephant and a wild elephant, as well as a number of elephant related features (Menachery, 2014).

As in the case of large carnivores such as the tiger, in the colonial era, elephants represented a paradox. In many places, the government had to walk the tight rope balancing elephant populations by keeping agriculturalists safe and sportsmen happy, while at the same time ensuring revenues from ivory extraction and elephant labour. In many regions of the subcontinent, elephants, due to their economic and symbolic importance, received a greater degree of formal protection before mainstream conservation laws were enacted. In some regions, post-Independence conservation with its blanket laws for preservation created zones of anomaly where conflict with forest fringe farmers escalated; in others especially those occupied by traditional forest-dwellers, their status as a highly sentient species positively entangled in religion and folklore continued.

To understand and enable a dynamic perspective on human-elephant encounters within temporal and regional (e.g., the Wayanad District) frames, Münster and Münster, 2012b use “the notions of ‘frontier,’ ‘fortress,’ and (precarious) ‘conviviality.’” Planning on-the-ground coexistence strategies in elephant landscapes is likely to be a complex process given the history of interactions with the species in a particular area, the nature of land use as well as that of the wide diversity of local communities that interact with it. However, it has to be kept in mind that positive relationships with elephants unless organically evolved are difficult to engender or sustain.

Pigs

One of the most iconic images of prehistoric representations from the Bhimbetka rock shelters in central India is that of a mutant boar chasing a tiny fleeing human. While it is not known what the primaevial artist exactly intended to communicate, legends, myths and iconography of ferocious giant boars appears at frequent intervals throughout India’s recorded history. The legend of Kombar, the wild boar that destroyed crops in the Tamil province of Kongu Nadu and the “*veeragallu*” (hero stones) scattered across Karnataka—many of them commemorating deeds of valour against ferocious boars—are examples (Oommen, forthcoming a). Enigmatic and intelligent, pigs are known to challenge farmers, trappers and hunters in as many ways that have been devised to outwit them. But the “heavy” meat of wild pigs was equally sought after in ancient Indian zoology that was a “catalogue of meats” and Vedic pharmacopoeia that treated the “universe as a kitchen” (Zimmermann, 1982). Local communities

as early as the Sangam period benefited not only from the meat of pigs, but planted their grain in the soft soil of hillslopes rooted around by wild boar (Oommen, 2019).

When viewed through the lens of history, the Indian wild pig shared a diverse set of relationships with local communities across the subcontinent. However, in the contemporary conservation scenario dominated by influences from the Global North, wild pigs, despite their cultural significance and impacts on fringe cultivators, remain a forgotten species due to their supposed lack of charisma and sentience [e.g., (Oommen, forthcoming a)]. This contrast is particularly stark when compared with conservation icons such as elephants, dolphins, etc. which are frequently highlighted in conservation discourses as being imbued with sentience and sapience. The long-term engagement between people and pigs on the subcontinent has resulted not only in widespread conflict with agriculturalists, but also a range of complex socio-economic and cultural arrangements ranging from religious proscriptions among mainstream societies to ritual and taboo among hunting communities (e.g., Oommen, forthcoming a; Oommen, forthcoming b).

Worship of the boar-headed god Varaha (an avatar of the god Vishnu represented iconographically as half man-half boar, or in completely zoomorphic forms) who lifted the Earth from the primordial flood (by bodily rescuing the earth goddess, Bhū), and the reputation of Varaha and his offspring as creators of mayhem, likely alluded to the crop-raiding tendencies of wild swine. Similarly, the wrathful Vajravahini (the female form of Varaha) in Tantric traditions was believed to transform the novice nuns of her monastery into sows and unleash them on her enemies. Despite, or because of their destructive nature, propitiation rituals and sacrifices towards enhanced human and livestock fertility, improved agricultural yields and soil fertility, the foretelling of rain, and protection from epidemics were common, and sacrifices involving pigs were particularly significant for many Dravidian rituals (Oommen, forthcoming a).

In parts of Northeast India as well as the Andaman and Nicobar islands, pigs are not only considered to be critical elements for nutrition, but also considered to be of great significance for a range of cultural engagements of local tribal communities. Andamanese communities such as the Jarawa and the Ongee, for whom wild pigs provide critical sustenance, regulate their hunting through different forms of resource habitat taboos (RHTs) as well as rituals and myths (Pandya, 1993, 2009). In northeastern India, the etymologies of several Naga clans originate from pigs, as do several storeys of village establishment which involve farrowing sows, runaway pigs and hunted boars (e.g., Hutton, 1921; Mills, 1922). Such diverse multifaceted engagements including origin storeys, folklore, and hunting rituals from both the islands as well as India's northeastern region are beneficial for conservation in these regions (Oommen, forthcoming a; Oommen, forthcoming b).

Most historical societies (as well as contemporary traditional ones) managed at least an uneasy level of coexistence with wild pigs. Numbers were kept under control as part of management of populations, utilisation for nutritional sustenance and a range of cultural practises that also promoted tolerance and reverence.

On the other hand, coercive top-down control that prohibited people from hunting or culling of this species has been hugely problematic as it neglects the enormous impact wild pigs have on agriculture. During the colonial period, local prohibitions on the removal of wild pigs were effected in order to manage adequate number of boars for pig-sticking, a form of hunting favoured by colonial officers and members of the Indian royal families. While a number of other lesser problematic species were declared as vermin, pigs were spared despite their daily depredations on village agriculture, leading to extensive rule breaking and illegal killing of pigs (Hughes, 2014; Oommen, 2020). Gold and Gujar (2002) analysing peasants' memories from the erstwhile kingdom of Sawar in Rajputana report that prohibitions on killing pigs by local rulers led to impoverishment and revolts by villagers.

The recent dynamics of forest fringe villages across the country tell a similar storey of wild boar depredations as a consequence of wildlife preservation laws. In addition to being a persistent and highly effective crop raider that often results in farmers abandoning agriculture (wild boar pestilence has occasionally led to local famines among farming communities—e.g., Sunseri, 1997; Walker, 2001), wild pigs are highly fecund animals whose numbers tend to explode when provided adequate protection. Moreover, a lack of understanding by urban people and conservationists about how dangerous pigs are also figure prominently in discussions with local communities. Studies from both Kerala and Uttarakhand show that local people frequently blame government apathy and mismanagement in dealing with wild pigs, leading to a disruption of already tenuous coexistence scenarios with the species (e.g., Govindrajana, 2018; Oommen, 2019). In the Uttarakhand region, local people believed that that pig numbers increased after a pregnant sow escaped from the Indian Veterinary Research Institute. Continuing protection to pigs accorded by the Forest Department led to claims that the government was needlessly sympathetic to the descendants of an errant domestic pig instead of being concerned about the welfare of local people who suffered from their depredations (Govindrajana, 2018). Such claims have strong links with concerns about distributive justice and have been highlighted in other studies as well.

Other Ungulates

In 2015, "*Bishnois: Environmentalists since the fifteenth Century*" authored by Franck Vogel, a photojournalist specialising in environmental issues was one of several catalysts garnering worldwide public attention to the Bishnois, a small, yet significant community primarily comprised of agriculturalists, residing in northwestern India. The community observes strict prohibitions against killing animals and cutting trees, Bishnoi women are known to even occasionally breastfeed orphaned offspring of blackbuck (*Antelope cervicapra*) and chinkara (*Gazella bennettii*) fawns. The community are believed to have derived their name from the 29 (*bish noi*) divinely-ordained rules (handed down in the fifteenth century by Guru Jambheshwar/ Jambhoji) that are integral to their central goal of purity. The history of the Bishnoi is steeped in the legend of the Khejarli massacre in which more than 300 community members, led by a local woman, Amrita Devi, sacrificed their lives protecting a *khejiri* (*Prosopis cineraria*)

grove from the king's army. As part of their rules, each Bishnoi village also maintains an *oran*, or common land reserved for planting trees and for grazing land for wildlife. Ungulates such as blackbuck and chinkara are also allowed to feed on crops to a large extent.

Although syncretic in origin (a mixed transitory origin including Islamic antecedents for the now Hindu Bishnoi has been suggested—see Jain, 2011; Reichert, 2015), Bishnoi “environmentalism” provides an interesting backdrop to explore coexistence in relation to several mainstream aspects of morality, duty and virtue embodied in Hindu *dharma* (which can be translated, albeit simplistically, as moral code). While the scholarship on this is extensive and complex, an examination of early (c. 1500—c. 1000 BCE) and later Vedic (c. 1000—c. 600 BCE) philosophies that give rise to fundamental religious texts of ancient India provides basic insights. As opposed to the *dvaita* (duality) early Vedic conceptualisation in which the ultimate reality (*Brahman*) and the individual soul (*atman*) existed in distinct realities, the later Vedic *advaita* (non-duality) conceptualisation viewed duality only as illusory (*maya*) in nature. The central, recurring themes of the latter include the interconnectedness of the elements as well as that between human and non-human beings, and the omnipresence of the divine in everything including non-human animals (Chapple, 1993; Dwivedi, 2003). The ideas of rebirth and cyclical change (*samsara*) and the transmigration of the soul through various animal bodies, especially the concept of “*Vasudhaiva Kutumbakam*” (the world is one family) as outlined in the Upanishads encourages kinship with animals.

The central ideas of *advaita* philosophies align with respect for animals and concomitant duties towards them. This is reflected in traditional beliefs such as those of the Bishnois as well as modern movements in the region such as Swadhaya (Jain, 2011). However, as pointed out by Sivaramakrishnan (2015), the presence of sacred elements alone does not reflect a deliberate environmental ethic. Many traditions both historical and contemporary, do not label their own work as environmental in nature, rather along with a number of religious and social outcomes, sustainability and kindness to animals are nevertheless, beneficial collaterals (Jain, 2011). The debate as to whether some of these Indic theologies are genuinely environmental in nature is still unresolved despite an extensive body of scholarship (e.g., Doniger, 1976; Patton, 2000; Nanda, 2005; Nelson, 2006), however, they provide an interesting set of insights to understand human-nature relations.

Harking back to the Bishnois, a closer analysis of the community's worldviews and day-to-day engagements with animals reveal complexity and contradiction. While on the one hand several aspects of the teachings of Jambhoji is definitely in place (e.g., the community's traditional opposition to hunting and prosecution of hunters, protection of trees), there are also other characteristics which seem to be in opposition with the stereotype as a peaceful community and their idealised representation as a group with an entirely harmonious relationship with nature. For instance, in contrast with articulated ethical mandate to protect animals, pigs are an exception and are often viewed by community members with revulsion. From time to time, the

community also appears to be in violent opposition with other caste groups. Further, Reichert's 2015 interviews with Bishnois themselves point to an acknowledgement of different forms of romanticisation as well as a recent “greening” of the community by both insiders and outsiders,” occasionally for the benefit of Western audiences.

DISCUSSION

Key Learnings From the Indian Context

In India, as well as among traditional societies elsewhere, longer range histories of human-animal interactions can be characterised by a lack of dualism between people and nature. Communities with longer-term engagements with predators and other problem wildlife typically evolved a range strategies that appear to be on the whole beneficial to coexistence in shared spaces. In his wide-ranging, yet controversial commentaries on mythology and religion, Frazier (1922, p. 413) points to numerous examples of worship and propitiation of “obnoxious” species ranging from locusts and birds that decimate crops, rats and mice that destroy grain, and crocodiles that attack humans. As pointed out in the preceding sections, there are close parallels here with Indian traditions where nearly every species characterised as causing harm or conflict appear to have links with propitiation. Anthropological scholarship from across the world supports this, and shows that many species involved in predation on people and livestock, crop-raiding and other forms of harm have been long accommodated by local communities and assume sometimes contradictory spiritual and material roles (e.g., Lopez, 1978; Knight, 2004; McGregor, 2005; Pooley, 2016).

Coexistence between humans and wildlife was typically facilitated by what can be understood as different forms of balanced reciprocity and affordances by interacting parties. Human relationships with animals are often guided by informal institutions consisting rules, norms and prohibitions that are derived from autonomous decision-making by traditional communities. A long history of anthropological explorations have affirmed the effectiveness of adaptive responses that not only ensure the long-term sustainability of species and natural resources (though rules may not be explicitly directed at conservation) but also promote social identity and cohesion of communities themselves (Rappaport, 1968; Harris, 1971; Reichel-Dolmatoff, 1976; Johannes, 1981). Among these, different types of resource and habitat taboos (RHT) (e.g., food, hunting and seasonal and habitat-related taboos), which are the result long-term adaptive engagements of a society in a landscape often serve overlapping social, ecological and psychological ends (Gadgil and Guha, 1993; Colding and Folke, 2001).

Measures that promote coexistence, especially in relation to hunting and utilisation species that figure predominantly within such systems of rules can still be gleaned from examinations of traditional societies in parts of central (e.g., Ramnath, 2015) and northeast India (e.g., Aiyadurai, 2016; Nijhawan and Mihu, 2020) and the Andaman islands (e.g., Radcliffe-Brown, 1922; Pandya, 1993, 2009). Hunting rituals and taboos that require a strict adherence to various rules such as refraining from overhunting, asking for permission and forgiveness to take life,

and entreatments to ensure the future availability of animals are a large part of these local coexistence frameworks. The perception and treatment of individual animals is also significant and context driven. In some contexts, local communities may favour the elimination of individual animals on account of their idiosyncrasies including ecological and behavioural features that deviate from a commonly accepted species norm (for close parallels with other contexts, see Von Essen and Allen, 2020). In others, the behaviour of individual animals (e.g., man eating tigers), despite being involved in catastrophic attacks of people, is justified in some contexts through explanations such as therianthropy, where the blame is in effect shifted from the animal to that of misbehaving or malevolent humans.

In contrast with a lack of separation between people and nature as embedded within indigenous and traditional ontologies, colonial and post-colonial policies which enabled the creation of exclusionary protected areas and strengthening hands-off approaches to most species appear to have created a strong rift in the once-operational organic relations between the two. This strict separation between people and wildlife has been detrimental to long-term coexistence as, in most of the country, local communities began to view wildlife as government property, contest the presence of wild species outside protected areas, and question the impact of top-down conservation on local livelihoods and rights.

When viewed through the lens of moral economy (Thompson, 1971; Scott, 1977, 1990), the nature of conflict and coexistence underwent a distinct shift towards the articulation of resistance and inequality and in ensuing power struggles with the state and outsider stakeholders including conservationists. As pointed out by Pooley et al. (2017) in the context of human-predator relations, working out what conflicts are really about is critically important. As these authors point out, what may superficially look like human-wildlife conflicts may have more to deal with underlying differences between human actors with incompatible goals related to land and wildlife. Their embedment in wider societal conflicts and power equations, and the social constructions of landscapes has also been pointed out by several others (e.g., Ghosal et al., 2015). Conflicts between people as well as the historical contexts of these differences are therefore critical to understanding the dynamics of coexistence. As exemplified by the case of the Mishmis opposition to the establishment of a tiger reserve in northeast India (Aiyadurai, 2016) or that of Chenchu hunter-gatherers asked to make way for a tiger reserve acerbically suggesting to conservationists for the same to be instead established in the urban centre of Hyderabad (Guha, 1997), conservation entails resistance and discontent. Hegemonies imposed by the state and powerful outside groups go a long way in disrupting local equilibria, and bring to the surface concerns about the loss of rights and autonomy, and a lack of distributive justice.

In this context, a recurring phenomenon relates to conjectures circulating among local inhabitants that allude to secret introductions of wildlife by the government. Both Ghosal et al. (2015) and Oommen (2017) point to instances where local communities believe that tigers from zoos (local inhabitants claim that these individuals are easily identifiable on account

of their preference for livestock and poor hunting skills) were introduced into their landscapes by the Forest Department in Maharashtra and Kerala. There are similar accounts relating the introductions of leopards in Himachal Pradesh (Dhee et al., 2019 and references therein), though these could have some links with relocation of individuals involved in conflict from other human-dominated landscapes. To local communities, such acts often signify the government's heavy handedness and apathy to people. Similar parallels can be read in the storey of the runaway domestic sow and government protection for pigs in Uttarakhand (Govindrajana, 2018). Accounts of clandestine wolf reintroductions in Norway (Ghosal et al., 2015) show that such conceptualisations incorporating conspiracist theories and claims of introduction of tame animals, hybridisation, etc. are as much a part of modern, Western ideas of wildlife as they are in India.

The relationship between the state and its local citizens is paramount here. Through the delineation of PA boundaries and exertion of ownership over animals (through overarching legislation such as the Wildlife (Protection) Act), the post-independence Indian state denied legitimacy to existing local relations between people and animals (e.g., Ghosal and Kjosavik, 2015). In the process, potentially fruitful alternatives for governance were also likely lost or diluted. As discussed before, in many cases, what people may in effect be resisting, is conservation which is imposed without adequate consultation or buy in. In yet others, it may be the lack of rights, tenure and autonomy that turn people against wildlife.

The dynamics of coexistence is also guided by newer developments that are strongly entangled with a suite of factors that fall under the umbrella of modernization including technological change, globalisation, proliferation of media and other influences (for a modern Scandinavian parallel, see Von Essen, 2018). For instance, proliferation of firearms as well as roads have resulted in expanding the scale of hunting in India's northeastern region. In this region, other influences that have brought about shifts in values and ethics include conversion from animism to Christianity (e.g., breakdown of some taboos) as well as the increasing influence of urban conservation groups that have campaigned against hunting (e.g., surrender of firearms and other hunting weapons). In recent years, the influence of social media is extremely relevant in mediating public perceptions of conflict and coexistence, both positive as well as negative. Coexistence is therefore contingent on a dynamic and changing set of interlinked values.

Concerns, Caveats and Ways Forward

The Indian context is very expansive, from multi-ethnic and multi-religious scenarios, to the influences of mass movements, public intellectuals and external factors. These are overlapping influences. On the one hand, interpretations of the Indian context in support of modern environmentalist sensibilities tend to be shoehorned into a valorization of Eastern traditions and religious practises such as Hinduism, Buddhism and Jainism based on superficial similarities. For instance, similar to Inden's 1986 caution about Orientalist constructions of India in general, Patton (2000) points to the common tendency among

both ecologists and Indologists to privilege passages in Hindu scriptures that allude to a Romantic ideal of harmony with nature. Strong critiques of simplistic religious environmentalism can be found in the work of several scholars including Nelson (2006), Doniger (1976), and Nanda (2005). As these authors point out, such readings are problematic and have consequences in modern interpretations that allow only a narrow set of acceptable human relationships with animals and the adoption of specific and limited environmentalist ideologies such as those encompassed within the Hindutva mobilisations of the Hindu Right (to the exclusion of others) (Sivaramakrishnan, 2015). For example, in the modern sphere, despite limited overlap in fundamental philosophy and traditions, PETA mobilises the diasporic Jain community for promoting its arguments in favour of veganism and animal liberation (Laidlaw, 2010). Similar examples can be found in Sivaramakrishnan's (2015 and references therein) explorations which analyse environmental ethics within Indian environmental history, and also frequently highlighted examples such as Bishnoi environmentalism (Jain, 2011; Reichert, 2015).

Similarly, an unpacking of the term "tolerance" in the context of wildlife pestilence is also required. In spaces of unequal power relations, what may be viewed as tolerance is likely to have strong political ramifications it is difficult to ascertain if expressions of tolerance by local communities is just limited to social and cultural acceptance of a particular species, or a coping mechanism used to justify and overcome helplessness in the face of such problems.

On the other hand, there is the question of understanding Indian contexts for coexistence against categorisations imposed by Euro-North American conceptualisations of environmentalisms (Nadasdy, 2005). In the same way that a universal moral ethic for conservation is highly problematic, so is a monolithic, narrow view of coexistence defined only by scientists or environmentalists. Looking at the broad spectrum of environmentalism (see Nadasdy, 2005) for instance, a "dark-green" perspective of coexistence derived from radical ecocentric notions is likely to vary significantly from that of the broader conceptualisations of "light-green" or reform environmentalists which may include including some level of lethal control of problem animals or continued hunting, or harvesting at viable levels. In fact, many traditional societies that were discussed in previous sections conceive of hunting as essential to their very existence and identity, as has been pointed out emphatically in other contexts as well (Nadasdy, 2007). As pointed out by Morris (1998) and Ingold (2000), human-animal relationships are never homogenous or monolithic, but complex, multifaceted and locally co-constituted.

Therefore, the need to accept pluralism in knowledge and practise embodied in calls for "cognitive justice" (Visvanathan, 1997) is particularly relevant in the case of coexistence. Nadasdy's 2007 recommendation for accepting the ontological assumptions of indigenous groups as *literally* and metaphorically valid is also food for thought. This means that views of local communities living with wildlife who are the custodians of situated knowledges, local traditions and lived experiences need to be privileged and accepted in ways that may be anathema

to the ontological boundaries and barriers of scientists and conservationists. In the same way that Baviskar (2011) cautions against "bourgeois environmentalism" and Jalais (2008) argues for accommodating the views of the people who live with "wild" tigers as opposed to those who embrace the "cosmopolitan" tiger far removed from reality (see also Cohen, 2012), the nature of local coexistence could be defined by the lived experiences and conceptualisations of communities who actually share spaces with wildlife. Different forms of social and cultural capital (Bourdieu, 1986) embedded within the lived experiences of local communities are particularly relevant as they provide for alternate ways of knowing, interacting and coexisting with wildlife. A phenomenological approach to coexistence that privileges the subjective, lived experiences and sensibilities (e.g., Husserl, 1913/1963; Heidegger, 1971) as opposed to a universal ethic would be pragmatic. These need not be just for indigenous animist societies, but for the vast majority of rural populations for whom traditional practises and modern lived experiences intersect to form sometimes hybrid or newer relationships with wildlife. This may also mean diverging from "hands-off" preservationist conservation ideals and the re-examination of "third rail" issues such as hunting, culling, etc. that are pragmatically appropriate or culturally embedded within a particular geography.

Further, this also means questioning the patronising assumptions of the knowledge/ information deficit model—in this context, that local communities do not really know their animals or are not already aware of the positive interactions and social relations with wildlife. An emerging acceptance by conservationists of the simplistic conceptualisations on human irrationality (e.g., Knopff et al., 2016; Bombieri et al., 2018) as put forward by the heuristics and biases school (e.g., Tversky and Kahneman, 1992) is also at play when it comes to the public understandings that may impact human animal relationships. This politics of conservation is reminiscent of Kipling's exhortation (in *The White Man's Burden*, *The Times*, February 4, 1899, London) to serve the best interests of "new-caught, sullen peoples..." a civilising mission that is all too familiar in the Southern conservation contexts that is based on a widespread mistrust of the ability of local communities to manage on their own. In reality, while there have been examples of indigenous destructions of environments, for some communities and contexts, religious and spiritual leanings engender an organic/unconscious conservation ethic including that of "animal persons," (Snodgrass and Tiedje, 2008). Sponcel's argument for a "middleground" (Sponcel, 2001, p. 170) between "romantic myth" and "oversimplified counter to romanticism" in viewing indigenous communities either as protectors or destroyers of nature is, therefore, relevant (Snodgrass and Tiedje, 2008, p. 8).

Academic scholarship aligning with radical protectionist conservation paradigms such as compassionate conservation (e.g., Wallach et al., 2018) promote an impression that sentience, sapience and sociality in animals is a new discovery that calls for support of a universal moral conservation ethic that shuns any form of violence. However, as mentioned before, ontological equality and personhood figure prominently, if

not fundamentally, in many traditional animist cosmologies, but within the communities' own cultural models and social relations that are locally contingent (Hallowell, 1960). Hunter-gatherers and rural communities routinely incorporate animals into such frameworks, understanding animals as individuals with consciousness, morality, spiritual power and intentionality, and people and animals are located within webs of reciprocal relations. In some contexts, animals may be exterminated but in others, there may be explicit injunctions against destroying even individual animals that are involved in catastrophic conflict. Within local systems, these serve as critical anchors for social cohesion and ecological sustainability and form important ingredients of coexistence. However, their significance is highly specific to context as opposed to recent cosmopolitan theorisations that argue for a universal conservation ethic such as that espoused by the proponents of compassionate conservation and associated ideologies (e.g. Wallach et al., 2018; Wallach, 2020). The difference is important as these are not shared equally/ uniformly (either by communities or even by individuals within them), are of varying ethical obligations, and are activated depending on context (Snodgrass and Tiedje, 2008). Such a shift away from moral monism towards a pluralistic system of values aligns strongly with Norton's 1991 convergence hypothesis which encourages local freedom and determination, and context specific adoption of priority rules and decisions. Here, Neumann's 2004 caution to conservationists against moral extensionism or the attribution of moral standing to non-human animals outside traditionally located human spheres of ethics and morality is also critical. The consequences of viewing animals a certain way (e.g., humanising wild animals) are strongly related to our perceptions and treatment of our own species who behave differently from us. Using the example of African Parks, he points to the influence of such moral and discursive narratives in normalising violence against poachers. Similarly, as has been shown elsewhere, injunctions against hunting, meat eating, animal sacrifices and similar practises situated outside modern Western ethical frameworks could align with intolerance related to race, ethnicity or religion (Boaz, 2019; Oommen et al., 2019).

Learning coexistence from traditional societies is not easy either. Anthropological scholarship on different ontological positionings of communities have shown that these notions can vary across different cultures (e.g., Viveiros de Castro, 1998; Ingold, 2000; Descola, 2013). Nijhawan and Mihu (2020) point out that efforts by conservation organisations to co-opt them into formal conservation strategies have often been ineffective, and may in fact create unintended adverse consequences. Efforts in other countries such as Madagascar (Sodikoff, 2012) have shown that simplistic translation of such rules are unlikely to succeed, and the embedded, context-specific nature of such rules within traditional systems cannot be emphasised enough.

Species such as elephants, pigs and some large carnivores are particularly adept at responding to local stimuli especially those relating to fear, risk and opportunities whereas in landscapes occupied by others (e.g., snakes, though many such species have

more complex social dynamics than we typically assume) human behavioural modification or the removal of problem individuals may be the more pragmatic approach. In India, human relationships with snakes is a particularly interesting subject for potential insights as regional pockets such as Agumbe in Karnataka and Burdwan in Bengal have scenarios in which snakes live in close (sometimes intimate) proximity to people without being harmed (Romulus Whitaker, personal communication).

A take home lesson is that within spaces of interaction, the actions of both animals and people influence each other. When viewed from this perspective, contact zones remain negotiated spaces, with the boundaries of engagements and "transgressions" being drawn both by opportunity and fear. Further, violent, traumatic events, though relatively rare in number, are often strongly imprinted in memory, calling for further research on such interactions. In wild spaces, human fears are more immediate and pressing whereas the opposite holds true for animal interactions resulting in differently viewed landscapes of risk. While technical definitions vary according to disciplinary focus, the concept of "landscape/s of fear" has been examined from ecological (Laundré et al., 2001, 2010) and social (Tuan, 1979) perspectives, for both people and animals, and could serve as a useful starting point for local evaluations of violent as well as non-violent encounter. As pointed out by Tuan (1979), fear is one of the primary forces that shape us (fear of animals, darkness and heights being key universals among humans). Similarly, studies of predation risk in animal systems reveal numerous anti-predator responses that involve substantial costs and trade-offs for individuals and "risk effects" that prevent them from engaging in other useful behaviours, as well as resulting in increased physiological stress, and eventually "fitness costs" that translate to long-term demographic changes (Lima and Dill, 1990; Brown, 1999) could serve as the ethological extension of coexistence studies. For example, for several species, conservation has resulted in a watering down of "landscapes of fear" (Laundré et al., 2001, 2010), as hunting, harvesting and persecution of animals has reduced in some spaces. These topics require further research and exploration.

CONCLUSION

In the preceding sections, a range of explorations of historical and contemporary engagements between people and wildlife were examined. These provide empirical evidence for both positive as well as negative or ambivalent relationships. As pointed out by Frank (2015), such interactions are emphatically context-laden, and dynamic as opposed to being fixed to any particular location on the continuum.

A general pattern that emerges here, especially in the context of historical relations is that in many instances, indigenous ontologies typically engendered multifaceted engagements ranging from reverence and propitiation to elimination of wildlife, but nevertheless enabled coexistence, at least in the generic sense of the term. These have been disrupted by modern conservation whose predominantly top-down nature privileges

only a narrow set of acceptable relationships while excluding and marginalising a range of human practises. Modern conservation's adherence to moral and ethical positions aligned with urban sensitivities (e.g., wildlife watching in protected areas from which local communities have been excluded) has been particularly problematic as this has contributed to the disruption of organic relationships and the emergence of distributive justice concerns, eventually leading to discontent and even retaliatory attacks. While the clock cannot be dialled back, it is nevertheless important to look towards local and rural worldviews that are synergistic with coexistence at a broad scale. As opposed to exclusionary measures that create and reinforce dualism between people and nature, they tend to be more inclusive especially on account of their potential for shared decision-making, and their legitimacy with respect to organic origins and lived experiences.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article, further inquiries can be directed to the corresponding author.

REFERENCES

- Aiyadurai, A. (2016). 'Tigers are our brothers': understanding human-nature relations in the Mishmi Hills, Northeast India. *Conserv. Soc.* 14, 305–316. doi: 10.4103/0972-4923.197614
- Anand, S., and Radhakrishna, S. (2017). Investigating trends in human-wildlife conflict: is conflict escalation real or imagined? *J. Asia Pac. Biodiv.* 10, 154–161. doi: 10.1016/j.japb.2017.02.003
- Athreya, V., Odden, M., Linnell, J. D. C., Krishnaswamy, J., and Karanth, U. (2013). Big cats in our backyards: persistence of large carnivores in a human dominated landscape in India. *PLoS ONE* 8:e57872. doi: 10.1371/journal.pone.0057872
- Ayuttacorn, A., and Ferguson, J. (2018). The sacred elephant in the room: ganesha cults in Chiang Mai, Thailand. *Anthropol. Today* 34, 5–9. doi: 10.1111/1467-8322.12458
- Bangalore Literature Festival (2020). *Romancing the Black Panther*. Available online at: <https://www.youtube.com/watch?v=xL1Htf5vZaE> (accessed June 22, 2021).
- Barua, M., Bhagwat, S., and Jadhav, S. (2013). The hidden dimensions of human-wildlife conflict: health impacts, opportunity and transaction costs. *Biol. Conserv.* 157, 309–316. doi: 10.1016/j.biocon.2012.07.014
- Baviskar, A. (2011). "Cows, cars and cycle-rickshaws: bourgeois environmentalists and the battle for Delhi's streets," in *Elite and Everyman*, eds Baviskar, A. and R. Ray. (New Delhi: Routledge), 391–418. https://www.academia.edu/41666304/Cows_Cars_and_Cycle_rickshaws_Bourgeois_Environmentalism_and_the_Battle_for_Delhi_s_Streets
- Bejoy, C. R. (2011). The great Indian tiger show. *Econ. Polit. Wkly.* 46, 36–41.
- Bhattacharya, A. (1947). The tiger cult and its literature in Lower Bengal. *Man India* 27, 44–56.
- Bird-David, N. (1990). The giving environment: another perspective on the economic system of gatherer-hunters. *Curr. Anthropol.* 31, 189–196. doi: 10.1086/203825
- Bird-David, N. (1999). "Animism" revisited: personhood, environment and relational epistemology. *Curr. Anthropol.* 40, S67–S91. doi: 10.1086/200061
- Boaz, D. N. (2019). The "Abhorrent" practice of animal sacrifice and religious discrimination in the global south. *Religion* 10:160. doi: 10.3390/rel10030160
- Bombieri, G., V., Nanni, M. D. M., Delgado, J. M., Fedriani, J. V., López-Bao, P., and Penteriani, V. (2018). Content analysis of media reports on predator attacks on humans: toward an understanding of human risk perception and predator acceptance. *BioSci.* 68, 577–584. doi: 10.1093/biosci/biy072
- Bourdieu, P. (1986). "The forms of capital," in *Handbook of Theory and Research for the Sociology of Education*, ed Richardson, J.G. (New York: Greenwood) 46–58.
- Brighenti, F. (2011). *Kradi Mliva: The Phenomenon of Tiger-Transformation in the Traditional Lore of the Kondh Tribals of Orissa*. Lokaratna: Folklore Foundation.
- Brighenti, F. (2017). Traditional beliefs about weretigers among the Garos of Meghalaya (India). *eTropic* 16:1. doi: 10.25120/etropic.16.1.2017.3568
- Brown, J. S. (1999). Vigilance, patch use and habitat selection: foraging under predation risk. *Evol. Ecol. Res.* 1, 49–71.
- Carter, N. H., and Linnell, J. D. C. (2016). Co-adaptation is key to coexisting with large carnivores. *Trends Ecol. Evol.* 31, 575–578. doi: 10.1016/j.tree.2016.05.006
- Carter, N. H., Shrestha, B. K., Karki, J. B., Pradhan, N. M. B., and Liu, J. (2012). Coexistence between wildlife and humans at fine spatial scales, *PNAS* 109, 15360–15365. doi: 10.1073/pnas.1210490109.
- Cederlof, G., and Sivaramakrishnan, K. (eds.). (2007). *Ecological Nationalisms: Nature, Livelihoods and Identities in South Asia*. Seattle, WA; London: Blackwell Publishing Ltd.
- Chapple, C. C. (1993). *Nonviolence to Animals, Earth, and Self in Asian Traditions*. New York: SUNY Press.
- Cohen, E. (2012). Tiger tourism: from shooting to petting. *Tourism Recreation Res.* 37, 193–204. doi: 10.1080/02508281.2012.11081708
- Colding, J., and Folke, C. (2001). Social taboos: "invisible" systems of local resource management and biological conservation. *Ecol. Appl.* 11, 584–600. doi: 10.1890/1051-0761(2001)0110584:STISOL2.0.CO;2
- Descola, P. (2013). *Beyond Nature and Culture*. Chicago: University of Chicago Press. doi: 10.7208/chicago/9780226145006.001.0001
- Dhee, A., Athreya, V., Linnell, J. D. C., Shivakumar, S., and Dhiman, S.P. (2019). The leopard that learnt from the cat and other narratives of carnivore-human coexistence in northern India. *People Nat.* 1, 376–386. doi: 10.1002/pan3.10039
- Doniger, W. (1976). *The Origins of Evil in Hindu Mythology*. Berkeley: University of California Press, 173.
- Dwivedi, O. P. (2003). "Dharmic ecology," in *Worldviews, Religion, and the Environment: A Global Anthology*, ed. Richard C. Foltz (Belmont: Thomson Wadsworth), 119–129.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements. Ethical review and approval was not required for the animal study because this is not a field study involving animals.

AUTHOR CONTRIBUTIONS

The author confirms being the sole contributor of this work and has approved it for publication.

ACKNOWLEDGMENTS

I am grateful to reviewers, AA and EV as well as editorial comments from SP for significantly improving the manuscript. I would also like to thank Kartik Shanker for comments and suggestions, and Dakshin Foundation for institutional support.

- Frank, B. (2015). Human-wildlife conflicts and the need to include tolerance and coexistence: an introductory comment. *Soc. Nat. Resour.* 29, 738–743. doi: 10.1080/08941920.2015.1103388
- Franklin, A. (1999). *Animals and Modern Culture: A Sociology of Human-Animal Relations in Modernity*. London: Sage, 21–22.
- Gadgil, M., and Guha, R. (1993). *This Fissured Land: An Ecological History of India*. Oxford University Press, Oxford, UK.
- Ghosal, S., and Kjosavik, D. J. (2015). Living with leopards: negotiating morality and modernity in western India. *Soc. Nat. Resour.* 28, 1092–1107. doi: 10.1080/08941920.2015.1014597
- Ghosal, S., Skogen, K., and Krishnan, S. (2015). Locating human-wildlife interactions: landscape constructions and responses to large carnivore conservation in India and Norway. *Conserv. Soc.* 13, 265–274. doi: 10.4103/0972-4923.170403
- Gold, A. G., and Gujar, B. R. (2002). *In the Time of Trees and Sorrows: Nature, Power and Memory in Rajasthan*. Durham, NC: Duke University Press. doi: 10.1515/9780822383475-004
- Goswami, V. R., Vasudev, D., Karnad, D., Yarlagadda, C. K., Krishnadas, M., Pariwakam, M., et al. (2013). Conflict of human-wildlife coexistence. *Proc. Natl. Acad. Sci. U.S.A.* 110:E108. doi: 10.1073/pnas.1215758110
- Govindrajana, R. (2018). *Animal Intimacies: beastly love in the Himalayas*. New York, NY: Penguin Viking. doi: 10.7208/chicago/9780226560045.001.0001
- Guha, R. (1997). The authoritarian biologists and the arrogance of anti-humanism: wildlife conservation in the Third World. *Ecologist* 27, 14–20.
- Hallowell, A. I. (1960). “Ojibwa ontology, behavior, and world view,” in *Culture in History: Essays in Honor of Paul Radin*, ed. Stanley Diamond, (New York: Columbia University Press), 19–52.
- Harris, M. (1971). *Culture, Man, and Nature: An Introduction to General Anthropology*. New York: Thomas Y Crowell.
- Heidegger, M. (1971). “Building dwelling thinking,” in *Poetry, Language and Thought*, (New York, NY: Harper & Row), 145–161.
- Hughes, J. (2014). “Environmental status and wild boars in princely India,” in *Shifting Ground: People, Animals and Mobility in India's Environmental History*, eds M. Rangarajan, and K. Sivaramkrishnan (New Delhi: Oxford University Press). doi: 10.1093/acprof:oso/9780198098959.003.0005
- Husserl, E. (1913/1963) *Ideas: A General Introduction to Pure Phenomenology (Ideas I)*. Transl. by W. R. Boyce Gibson in original German. New York, NY: Collier Books.
- Hutton, J. H. (1921). *The Sema Nagas*. London: Macmillan and Co. Ltd.
- Inden, R. (1986). Orientalist constructions of India. *Mod. Asian Stud.* 20, 401–446. doi: 10.1017/S0026749X00007800
- Ingold, T. (2000). *Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. Routledge.
- Jain, P. (2011). “Dharma and ecology of hindu communities: sustenance and sustainability,” in *New Critical Thinking in Religion, Theology and Biblical Studies Series*. Farnham: Ashgate.
- Jalais, A. (2008). Unmasking the cosmopolitan tiger. *Nat. Cult.* 3, 25–40. doi: 10.3167/nc.2008.030103
- Johannes, R. E. (1981). *Words of the Lagoon: Fishing and Marine Lore in the Palau district of Micronesia*. <https://www.google.com/search?client=firefox-b-d&q=Berkeley Berkeley, C: University of California Press>.
- Karant, K. U., and Karant, K. K. (2012). A tiger in the drawing room: can luxury tourism benefit wildlife? *Econ. Politic. Wkly.* 47, 38–43.
- Karant, U., and Gopal, R. (2005). “An ecology-based policy framework for human-tiger coexistence in India,” in *People and Wildlife (Conflict or Coexistence?)*, eds R. S. Woodroffe, A. Thirgood, and A. Rabinowitz (Cambridge: Cambridge University Press), 373–387. doi: 10.1017/CBO9780511614774.024
- Knight, J. (2004). *Wildlife in Asia: Cultural Perspectives*. London: Routledge. doi: 10.4324/9780203641811
- Knopff, A. A., Knopff, K. H., and St. Clair, C. C. (2016). Tolerance for cougars diminished by high perception of risk. *Ecol. Soc.* 21:33. doi: 10.5751/ES-08933-210433
- Konig, H. J. (2020). Human-wildlife coexistence in a changing world. *Conserv. Bio.* 34, 786–794. doi: 10.1111/cobi.13513
- Kumbhojkar, S., Yosef, R., Benedetti, Y., and Morelli, F. (2019). Human-leopard (*Panthera pardus fusca*) co-existence in Jhalana Forest Reserve, India. *Sustainability* 11:3912. doi: 10.3390/su11143912
- Laidlaw, J. (2010). “Ethical traditions in question: diaspora Jainism and the environmental and animal liberation movements,” in *Ethical Life in South Asia*, eds A. Pandian, and D. Ali, (Bloomington: Indiana University Press), 61–80.
- Laundré, J. W., Hernandez, L., and Altendorf, K. B. (2001). Wolves, elk, and bison: reestablishing the “landscape of fear” in Yellowstone National Park, USA. *Can. J. Zool.* 79, 1401–1409. doi: 10.1139/z01-094
- Laundré, J. W., Hernandez, L., and Ripple W.J. (2010). The landscape of fear: ecological implications of being afraid. *Open Ecol. J.* 3, 1–7. doi: 10.2174/1874213001003030001
- Lima, S. L., and Dill, L. M. (1990). Behavioral decisions made under the risk of predation: a review and prospectus. *Can. J. Zool.* 68, 619–640. doi: 10.1139/z90-092
- Lopez, B. H. (1978). *Of Wolves and Men*. New York: Charles Scribner's Sons.
- Lyngdoh, M. (2016). Tiger Transformation among the Khasis of northeastern India: belief worlds and shifting realities. *Anthropos Bd.* 111, 649–658. doi: 10.5771/0257-9774-2016-2-649
- MacKenzie, J. M. (1988). *The Empire of Nature*. Manchester: Manchester University Press.
- Macpherson, S. C. (1852). An account of the religion of the Khonds in Orissa. *J. R. Asiat. Soc. GB. Irel.* 13, 216–274. doi: 10.1017/S0035869X00165116
- Madden, F. (2004). Creating coexistence between humans and wildlife: Global perspectives on local efforts to address human-wildlife conflict. *Hum. Dim. Wildl.* 9, 247–257. doi: 10.1080/10871200490505675
- McGregor, J. (2005). Crocodile crimes: people versus wildlife and the politics of post-colonial conservation on Lake Kariba, Zimbabwe. *Geoforum* 36, 353–369. doi: 10.1016/j.geoforum.2004.06.007
- Menachery, G. (2014). Aanayum Nazraaniyum [The Elephant and the Thomas Christians] (Malayalam). *Pazhama* 1, 7–63.
- Michael, S. M. (1983). The origin of the Ganapati cult. *Asian Folk. Stud.* 42, 91–116. doi: 10.2307/1178368
- Mills, J. P. (1922). *The Lhota Nagas*. Macmillan and Co. Ltd., London.
- Morris, B. (1998). *The Power of Animals: An Ethnography*. New York: Berg Publishers.
- Morris, B. (2000). *Animals and Ancestors: An Ethnography*. Oxford: BERG.
- Münster, D., and Münster, U. (2012a). Consuming the forest in an environment of crisis: nature tourism, forest conservation and neoliberal agriculture in South India. *Dev. Change* 43, 205–227. doi: 10.1111/j.1467-7660.2012.01754.x
- Münster, D., and Münster, U. (2012b). Human-Animal conflicts in Kerala: elephants and ecological modernity on the agrarian frontier in South India. *Fields and Forests: Ethnographic Perspectives on Environmental Globalisation*. RCC Perspectives, Issue 5, Munich.
- Nadasdy, P. (2005). Transcending the debate over the ecologically noble Indian: indigenous peoples and environmentalism. *Ethnohistory* 52, 291–331. doi: 10.1215/00141801-52-2-291
- Nadasdy, P. (2007). The gift in the animal: the ontology of hunting and human-animal sociality. *Am. Ethnol.* 34, 25–43. doi: 10.1525/ae.2007.34.1.25
- Nanda, M. (2005). *The Wrongs of the Religious Right: Reflections on Science, Secularism, and Hindutva*, New Delhi: Three Essays Collective.
- Nelson, L. (2006). “Cows, elephants, dogs, and other lesser embodiments of atman: reflections on hindu attitudes toward nonhuman animals,” in *A Communion of Subjects*, ed Paul Waldau, and Kimberley Patton (New-York: Columbia University Press), 179–193.
- Neumann, R. P. (2004). Moral and discursive geographies in the war for biodiversity in Africa. *Politic. Ecol.* 23, 813–837. doi: 10.1016/j.polgeo.2004.05.011
- Nijhawan, S., and Mihi, A. (2020). Relations of blood: hunting taboos and wildlife conservation in the Idu Mishmi of northeast India. *J. Ethnobiol.* 40, 149–166. doi: 10.2993/0278-0771-40.2.149
- Norton, B. G. (1991). *Toward Unity Among Environmentalists*. New York, NY: Oxford University Press.
- Ojalamm, S., and Blomley, N. (2015). Dancing with wolves: making legal territory in a more-than-human world. *Geoforum* 62, 51–60. doi: 10.1016/j.geoforum.2015.03.022
- Oommen, M. A. (2017). *Understanding conservation challenges: investigating conflict in a forest-agriculture fringe in southern India using multidisciplinary*

- approaches. [dissertation/ doctoral thesis]. [Sydney(AU)]: University of Technology Sydney.
- Oommen, M. A. (2019). The elephant in the room: histories of place, memory and conflict with wildlife along a southern Indian forest fringe. *Environ. Hist. Camb.* 25, 269–300. doi: 10.3197/096734018X15217309861559
- Oommen, M. A. (2020). Colonial pig-sticking, imperial agendas, and natural history in the Indian subcontinent. *Hist. J.* 64, 626–649. doi: 10.1017/S0018246X20000308
- Oommen, M. A. (forthcoming a). “Conflict, coexistence and conservation: cultural and material entanglements between people and pigs in India,” in *Nature's Present: Dilemmas, Conflicts, Opportunities*, eds M. Rangarajan, R. Sarkar, and R. Agarwal (Hyderabad: Orient Blackswan Publishers).
- Oommen, M. A. (forthcoming b). “The pig and the turtle: an ecological reading of ritual and taboo from ethnographic accounts of Andamanese hunter-gatherers,” in *Sustainable Use and Biodiversity Conservation in India*, eds A. Varghese, M. A. Oommen, M. Paul, and S. Nath (Kotagiri: Keystone Foundation), 72–84.
- Oommen, M. A., Cooney, R., Ramesh, M., Archer, M., Brockington, D., Buscher, B., et al. (2019). The fatal flaws of compassionate conservation. *Conserv. Bio.* 33, 784–787. doi: 10.1111/cobi.13329
- Panda, P. P., N. T., oyal and Dasgupta, S. (2020). *Best Practices of Human—Elephant Conflict Management in India*. Uttarakhand: Elephant Cell, Wildlife Institute of India, Dehradun.
- Pandya, V. (1993). *Above the Forest: A Study of Andamanese Ethnoanemology, Cosmology, and the Power of Ritual*. New York, NY: Oxford University Press.
- Pandya, V. (2009). *In the Forest: Visual and Material Worlds of Andamanese History (1858–2006)*. Lanham, MD: University Press of America.
- Patterson, J. H. (1907). *The Man-Eaters of Tsavo*. New York, NY: Macmillan and Co. Ltd.
- Patton, L. (2000). “Nature Romanticism and Sacrifice in Rgvedic Interpretation,” in *Hinduism and Ecology: The Intersection of Earth, Sky, and Water*, eds Christopher Key Chapple, and Mary Evelyn Tucker, (Cambridge: Harvard University Press), 39–58.
- Peterson, J. T. (1977). “The merits of margins,” in *Cultural Ecological Perspectives on South East Asia*, ed W. Wood, (Athens: Ohio University), 41.
- Pooley, S. (2016). A cultural herpetology of Nile crocodiles in Africa. *Conserv. Soc.* 14, 391–405. doi: 10.4103/0972-4923.197609
- Pooley, S., Barua, M., Beinart, W., Dickman, A., Holmes, G., Lorimer, J., et al. (2017). An interdisciplinary review of current and future approaches to improving human-predator relations. *Conserv. Biol.* 31, 513–523. doi: 10.1111/cobi.12859
- Radcliffe-Brown, A. (1922). *The Andaman Islanders*. Cambridge: The University Press.
- Rai, N. D. (2012). Green grabbing in the name of the tiger. *Econ. Polit. Wkly.* 42, 108–109.
- Ram Nath, M. (2015). *Woodsmoke and Leafcups: Autobiographical Footnotes to the Anthropology of the Durwa*. New York, NY: Harper Litmus.
- Rangarajan, M. (1998). The Raj and the natural world: the war against ‘dangerous beasts’ in colonial India. *Stud. Hist.* 14, 265–299. doi: 10.1177/025764309801400206
- Rangarajan, M., and Shahabuddin, G. (2006). Displacement and relocation from protected areas: towards a biological and historical synthesis. *Conserv. Soc.* 4, 359–378.
- Rappaport, R. (1968). *Pigs for the Ancestors: Ritual in the Ecology of a New Guinea People*. New Haven: Yale University Press.
- Rashkow, E. (2014a). Resistance to hunting in pre-independence India: religious environmentalism, ecological nationalism or cultural conservation? *Mod. Asian Stud.* 49, 270–301. doi: 10.1017/S0026749X14000110
- Rashkow, E. (2014b). Making subaltern shikaris: histories of the hunted in colonial central India. *South Asian Hist. Cult.* 5, 292–313. doi: 10.1080/19472498.2014.905324
- Redpath, S. (2013). Understanding and managing conservation conflicts. *TREE* 28, 100–109. doi: 10.1016/j.tree.2012.08.021
- Reichel-Dolmatoff, G. (1976). Cosmology as ecological analysis: a view from the rainforest. *Man* 11, 307–318. doi: 10.2307/2800273
- Reichert, A. (2015). *Sacred Trees, Sacred Deer, Sacred Duty to Protect: Exploring Relationships between Humans and Nonhumans in the Bishnoi Community*. [dissertation/ master's], University of Ottawa.
- Scott, J. C. (1977). *The Moral Economy of the Peasant: Rebellion and Subsistence in South East Asia*. New Haven and London: Yale University Press.
- Scott, J. C. (1990). *Domination and the Arts of Resistance: Hidden Transcripts*. New Haven and London: Yale University Press.
- Sidhu, S., Raghunathan, G., Mudappa, D., and Shankar Raman, T. R. (2017). Conflict to coexistence: human—leopard Interactions in a plantation landscape in Anamalai Hills, India. *Conserv. Soc.* 15, 472–482.
- Sivaramakrishnan, K. (2015). Ethics of nature in Indian environmental history: a review article. *Modern Asian Stud.* 49, 1–50. doi: 10.1017/S0026749X14000092
- Sleeman, W. H. (1844). *Rambles and Recollections of an Indian Official*. London: Hatchard and Son.
- Snodgrass, J. G., and Tiedje, K. (2008). Introduction: indigenous nature reverence and conservation—seven ways of transcending an unnecessary dichotomy. *J. Stud. Relig. Nat. Cult.* 2, 6–29. doi: 10.1558/jsrnc.v2i1.6
- Sodikoff, G. M. (2012). “Totem and taboo reconsidered: endangered species and moral practice in Madagascar,” in *The Anthropology of Extinction: Essays on Culture and Species Death*, ed G. M. Sodikoff (Bloomington: Indiana University Press), 67–86.
- Sondhi, S., Athreya, V., Sondhi, A., Prasad, A., Verma, A., and Verma, N. (2016). *Human attacks by leopards in Uttarakhand, India: an assessment based on perceptions of affected people and stakeholders*. A technical report submitted to the Uttarakhand Forest Department.
- Sponsel, L. (2001). Is indigenous spiritual ecology just a new fad? reflections on the historical and spiritual ecology of Hawai'i. *Grim* 2001, 159–174.
- Sukumar, R. (1994). “Wildlife-human conflict in India: An ecological and social perspective,” in *Social Ecology*, ed R. Guha, (New Delhi: Oxford University Press), 303–317.
- Sukumar, R. (2011). *The Story of Asia's Elephants*. New Delhi: Marg Publications.
- Sunseri, T. (1997). Famine and wild pigs: gender struggles and the outbreak of the Majimaji War in Uzaramo (Tanzania). *J. Afric. Hist.* 38, 235–259. doi: 10.1017/S0021853796006937
- Surawea, W., Warrell, D., Whitaker, R., et al. (2020). Trends in snakebite deaths in India from 2000 to 2019 in a nationally representative mortality study. *eLife* 9:e54076. doi: 10.7554/eLife.54076.sa2
- The Indian Express (2020). *Phantom of the forest (auth. Surbi Gupta)*. Available online at: <https://indianexpress.com/article/lifestyle/art-and-culture/phantom-of-the-forest-shaaz-jung-documentary-the-real-black-panther-6279305/> (accessed June 22, 2021).
- Thekaekara, T. (2019). *Living with Elephants, Living with People: Understanding the Complexities of Human-Elephant Interactions in the Nilgiris, South India*. [dissertation/doctoral] [The Open University].
- Thekaekara, T., and Thornton, T. F. (2016). “Ethnic diversity and human—elephant conflict in the Nilgiris, South India,” in *Conflict, Negotiation, and Coexistence: Rethinking Human—Elephant Relations in South Asia*, eds P. Locke, and J. Buckingham (Oxford University Press), 300–329. Available online at: doi: 10.1093/acprof:oso/9780199467228.003.0014
- Thompson, E. P. (1971). The moral economy of the English crowd in the eighteenth century. *Past Present* 50, 76–136. doi: 10.1093/past/50.1.76
- Tuan, Y.-F. (1979). *Landscapes of Fear*. New York, NY: Pantheon Books.
- Tversky, A., and Kahneman, D. (1992). Advances in prospect theory: cumulative representation of uncertainty. *J. Risk Uncertain.* 5, 297–323. doi: 10.1007/BF00122574
- Vidal, J. (2008). “The great green land grab,” in *The Guardian*, Available online at: <http://www.theguardian.com/environment/2008/feb/13/conservation> (accessed March, 2014).
- Visvanathan, S. (1997). *A Carnival for Science: Essays on Science, Technology and Development*. London: OUP.
- Viveiros de Castro, E. (1998). *Cosmological Perspectivism in Amazonia and Elsewhere*. HAU: Masterclass Series, 145–168.
- Von Essen, E. (2018). The impact of modernization on hunting ethics: emerging taboos among contemporary Swedish hunters. *Hum. Dim. Wildlife* 23, 21–38. doi: 10.1080/10871209.2018.1385111
- Von Essen, E., and Allen, M. (2020). ‘Not the wolf itself’: distinguishing hunters’ criticisms of wolves from procedures for making wolf management decisions. *Ethics Policy Environ.* 23, 97–113. doi: 10.1080/21550085.2020.1746009

- Walker, B. L. (2001). Commercial growth and environmental change in early modern Japan: Hachinohe's wild boar famine of 1749. *J. Asian Stud.* 60, 329–351. doi: 10.2307/2659696
- Wallach, A. D. (2020). Recognizing animal personhood in compassionate conservation. *Conserv. Biol.* 34, 1097–1106. doi: 10.1111/cobi.13494
- Wallach, A. D., Bekoff, M., Batavia, C., Nelson, M. P., and Ramp, D. (2018). Summoning compassion to address the challenges of conservation. *Conserv. Biol.* 32, 1255–1265. doi: 10.1111/cobi.13126
- West, P., Igoe, J., and Brockington, D. (2006). Parks and peoples: the social impact of protected areas. *Annu. Rev. Anthropol.* 35, 251–277. doi: 10.1146/annurev.anthro.35.081705.123308
- Zimmermann, F. (1982). *The Jungle and the Aroma of Meats: An Ecological Theme in Hindu Medicine*. Delhi: Motilal Banarsidass Publishers.

Conflict of Interest: The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Copyright © 2021 Oommen. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.