

Pain of Extinction

The Death of a Vulture

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It will take two days for him to die. The food that he has just eaten has poisoned him. His kidneys will fail, causing a build up of uric acid crystals in his internal organs. These crystals will cut into and kill off the tissues that surround them, causing painful lesions, swelling and inflammation. He will likely get weaker as time goes by. Suffering from lethargy and depression, his neck will begin to droop in the manner characteristic of the sick and weak members of his kind. Eventually, dead or near to death, he will fall from his perch to the ground below. It is in this way that almost all the vultures in India and the surrounding regions have met their end over the past two decades. Where once their numbers were so great that they weren't counted seriously in most bird life surveys, they are now expected to be extinct in the wild in the next few years.

But Asian vultures are by no means alone in this headlong rush towards extinction. We are living in the midst of the earth's sixth great extinction event, the first to be caused by a single species, our own. At present, species are dying more quickly than we can count them—let alone conserve them. Some estimates place

current extinction rates at one hundred to one thousand times greater than normal 'background' levels, while also noting that this rate of extinctions is accelerating.¹ When writing about species loss, when trying to capture the immensity of the crisis that is occurring in our time, we are often tempted to begin with this kind of data. How many species disappear each day? What percentage of a particular endangered critter is now left? What is their status on the International Union for Conservation of Nature's (IUCN) Red List of Threatened Species? And so, I am drawn to say, for example, that ninety-nine per cent of the oriental white-backed vultures (*Gyps bengalensis*) are now gone.² This information seems important. It seems to convey something of the magnitude and urgency of the situation. But the magnitude and urgency of what? While this data captures the fact that something is disappearing, it fails absolutely in capturing what that something is that is actually lost.

In contrast to these more conventional accounts of extinction, this essay takes up the pain of the individuals whose deaths constitute species extinctions; the individuals that are lost, or covered over, both in their deaths and in their suffering, by an exclusive focus on the management and conservation of a species. Drawing gently and tentatively on the work of Emmanuel Levinas, my position is that the pain of others issues a demand for responsibility. Writing about the pain of vultures brings these individuals back into discussions of their extinction as ethical subjects. In this context, writing about the pain of vultures is an attempt to call others into responsibility for them and their suffering; an attempt to write in a way that might motivate action towards their conservation. At the heart of this approach to writing extinctions is a simple idea: how can we genuinely care for a species without first, or at least also, caring for the individuals that comprise it? Might not concern and responsibility for an individual—whose suffering is so visible, so palpable, real and gripping—be a powerful entry into broader conservation projects?

In taking up this approach, my goal is not to move beyond a narrow focus on the species by taking up a similarly narrow focus on the individuals that comprise that species. Rather, the individual is the starting point for this analysis, which is rooted in an understanding of individuals as definitively not self-enclosed or isolated subjects. Rather, the individuals that animate this work are what Donna Haraway might call sticky sites of becoming-with.³ Vultures, like all embodied individuals, are thoroughly relational beings. Pain, and responsibility for that pain,

cannot be viewed in isolation from these relationships. As such, I propose that the pain of another might be understood as a generative opening, drawing us into the tangle of accountabilities that emerge inside multispecies communities of living and dying. In the context of extinctions, this attentiveness to the relationality and interdependence of life is particularly important because the death, and subsequent absence of a whole species, unmakes these relationships on which life depends, often amplifying suffering and death for a whole host of others.

What this essay seeks to outline, therefore, is a situated ethics of entangled accountabilities. From deep within a time of mass extinctions, bound up in the multispecies communities of life that provide the very possibility of our being at all, we need ethical ways of writing about the deaths of species and the suffering and loss these deaths produce. These ethics require a worldliness beyond the singular individual, but they need also not to forget those individuals, not to reduce them to interchangeable cogs in an ecosystem machine.

—SUFFERING AND DYING AS/WITH A VULTURE

To recount the uncountable deaths of vultures in India and the surrounding regions is to tell a story that begins and ends with suffering and death. Vultures are never very far from death, from the carcasses that they strip bare so cleanly and efficiently. This is perhaps nowhere as true as it is in India where vultures have become an integral part of the entangled biosocial relationships in which farming and many other activities take place. In India, one of the most cattle rich countries in the world, Hindu reverence for the cow has created a complex social and political environment. While cows have an important role in the religious life of the nation, and most Indians do not consume beef (although some do), there are numerous other dimensions of the lives of cattle in India that cannot be understood as anything other than tragic.⁴ Even though almost all Indian states have bans on the slaughter of cattle, in many cases this has simply meant that slaughter is carried out illegally—and thus in a completely unregulated manner—or cattle are subjected to long and crowded transportation to slaughterhouses in neighbouring states or countries.⁵

One of the consequences of this unique environment is that millions of cows die each year in India and are not eaten by people (although they are often skinned for the leather industry). These cows are usually either taken to carcass dumps or

left at the edge of villages—dead, or near to death.⁶ Either way, however, it is vultures that are primarily relied upon in India to ‘take care’ of an estimated five to ten million cow, camel and buffalo carcasses each year.⁷

As many as 100 vultures may feed on a single cow carcass, stripping it clean in 30 minutes. Two thousand, 3,000, even 10,000 vultures swarmed the larger dumps in the early 1990s, the huge birds lapping at carcasses with their leathery tongues, thrusting their narrow heads neck-deep to reach internal organs, tussling over choice gobbets of meat.⁸

It is in this way that vultures have become a central part of Indian farming practices and their ecologies. Alongside their presence, other forms of carcass disposal have not been necessary, and nor have they been developed.

But eating cows is now killing vultures. After several years of research, scientists have determined that a non-steroidal anti-inflammatory drug (NSAID) called diclofenac is causing kidney failure and death for vultures when they consume the carcasses of treated animals.⁹ Cattle are used for a variety of purposes in India, including ploughing, milking, and as general beasts of burden. In recent years, diclofenac has begun to be used very widely for the treatment of any number of conditions that affect cattle, including lameness, mastitis, and difficult birthing.¹⁰ This widespread use of diclofenac in India is made possible by very low prices, but is also sometimes made virtually unavoidable by poverty and a need to continue working animals even when they are unwell or approaching death.

If an animal is going sick, is going downhill, they want to get the most out of the animal ... So you just pump pain killers and anti-inflammatories into it, to keep it going as long as possible ... and that’s probably why such a high level of carcasses do have detectable levels of diclofenac.¹¹

Through the use of these kinds of drugs, some of the pain of day-to-day life for cattle in India is eased. In allowing cattle to go on working, diclofenac also helps provide milk and labour for some of India’s poorest people—inevitably dispelling further pain and discomfort. But that which eases the lives of cattle and people has a devastating effect on vultures.

The pain of vultures is not a topic that receives a great deal of attention in most discussions of their (coming) extinction. In fact, after reading dozens of journal articles and newspaper reports on the ‘species decline’, I still had no sense of how painful vultures’ deaths are. When I finally asked a veterinary scientist working on Asian vulture conservation about their pain, he responded:

I think it must be painful, yes. Diclofenac poisoning causes renal failure and the kidneys basically become choked up with uric acid, with urates that aren’t being excreted—that’s the white materials in bird droppings. The kidneys just get choked up with that, and it’s crystalline, so it’s destroying the tissues. You can see down the microscope these arrays of crystals and all the killed off tissue around it, and then the kidneys become swollen. That cannot go unnoticed by the bird ... I’m sure it must be painful.¹²

I appreciate, of course, that reporting on the pain of nonhumans—unless it is their pain that is explicitly at issue, as in drug trials—is simply not a part of the conventions of scientific report writing, and certainly not of conservation biology. My concern, however, is that it is precisely this exclusion of the pain of others—in both writing and conservation practice—that renders them ethically insignificant as individuals, and so leaves us with an exclusive focus on the management of populations and the species.

In making this observation, my thinking is rooted within a Levinasian framework of sorts, in which the pain and suffering of others makes an ethical demand upon me for responsibility. Levinas situates this demand in the ‘face’ of the other—which is not a literal face—and argues that this face ‘imposes itself upon me without my being able to be deaf to its call or to forget it, that is, without my being able to suspend my responsibility for its distress’.¹³ In Levinas’ work, this notion of the ‘face’ and the demand that it makes is part of a broader philosophical system that attempts to describe a relationship with the other that is not reducible to comprehension, a relationship in which the other is not categorised and understood, but rather encountered in its absolute alterity.¹⁴ I am uncomfortable with several key aspects of Levinas’ thinking here, especially in its application to entangled multispecies worlds. A great deal of Levinas’ thinking works against the recognition

of the 'face' of nonhuman animals (let alone a broader sphere of life including plants and others), and as a result I do not attempt to apply his thinking wholesale to the deaths of vultures and others.¹⁵

Rather, I simply take from Levinas the core notion that the other's corporeality, their suffering and ability to suffer, makes a demand upon me for responsibility. As Simon Critchley has put it in a summary of Levinas' 'big idea':

ethics is lived in the sensibility of an embodied exposure to the other. It is because the self is sensible, that is to say, vulnerable, passive, open to both the pangs of hunger and eros, that it is worthy of ethics.¹⁶

Within this philosophical context, it is precisely the other's fleshy-softness, their fragility and vulnerability, that calls out for ethics. If another were not able to be harmed in any way, not open and exposed to a world of transience and change, then what need would there be for ethics?

I am not convinced that ethics is as narrow a category as this, and that vulnerability is required for another to be worthy of ethical consideration. Rather, it seems that there are numerous other ways in which we might be, and in fact are, called upon by others to respond and be responsible. My position, therefore, is that the pain of another is a sufficient, but by no means necessary, condition for ethical regard. In this context, the approach to ethics explored here can only be one of the many that is required in this time of extinctions; a single situated strand of a broader plural ethics of response. I maintain, however, that this is an important strand, and that while the pain of another cannot be the sole focus of ethics, it is nonetheless capable of issuing a claim over us and remains, therefore, an important site of and for ethics.

In this context, writing about the pain of vultures is an attempt to expose readers to their suffering and to an encounter with the demand for responsibility that the vultures make. That this essay is even necessary is evidence of the absence of this kind of ethical claim in the precise multispecies communities where it matters—at least among those that count for vulture survival in the entangled worlds of agriculture, pharmaceutical production and their regulation in India. Important questions emerge here about the (bio)social conditions within which, and for whom, these kinds of claims can be heard. Whose suffering is recognised, and by whom, as demanding response and responsibility? In this context, it seems likely

that responsiveness, our ability to hear and respond to the suffering of another, is tied into our specific situatedness in the world. To write about the pain of others is often also, therefore, an attempt to broaden the scope of an ethical claim; perhaps, in Judith Butler's terms, it is to ask of our readers that they expand the sphere of lives that they recognise as 'lives worth living'.¹⁷

As I have already noted, however, conservation efforts tend to focus exclusively on the protection of more 'abstract' entities like species, and through them 'biodiversity'. As such, these efforts always take place for another, they are guided and motivated by the needs or desires of a third party; perhaps future generations of humans who will never see a polar bear, or the people who would benefit from the pharmaceutical products that a disappearing plant might yield.¹⁸ While these considerations are not in the least trivial, the responsibility demanded by the other's vulnerability and pain is first and foremost a responsibility to that finite, suffering, individual. In taking up this position we insist that individuals—as ethical subjects—be brought back into a conservation discourse that is saturated with species, habitats and ecosystems.

Giving an account of an extinction that is attentive to the pain and suffering of individuals is a genuinely difficult task in a time of mass death. All our language works against such an effort, especially when those that are dying are nonhumans. We are asked to think in terms of a 'decline' in vulture 'numbers', or about the 'loss' of a 'percentage of the population'. Both 'death' and 'individuality' are effaced here in place of a population, a species, to be counted, managed and conserved. Very rarely, and perhaps only when the last of a charismatic creature dies in a zoo or some other place of captivity, do we really see or hear of an individual in a way that is able to grip us, to make a demand upon us.¹⁹ While vultures as a species clearly matter in some sense—they perform vital 'ecosystem services', or have aesthetic, economic or religious value (which are discussed further below)—as individuals this is not the case. Their lives do not count as lives, and therefore certainly cannot count as grievable lives.²⁰ To 'count', in this non-numeric sense—not to be a number, but to actually matter—is a precondition for the kind of ethical space that I am exploring here.

Writing about pain is an important way to refuse a reductionist focus on the species and to direct attention towards the vulnerable individuals whose suffering

claims me. To write in this way is to give an account that does not attempt an impartial, objective, presentation of the 'facts'. Rather, it is to write in a way that, as James Hatley argues, is from the outset already seized, already claimed by an obligation to the suffering other.²¹ This is not an attempt to obscure the truth of the situation, but rather to insist on a truth that is not reducible to populations and data, a truth that includes an ethical demand.²² My position, therefore, is that in the context of the mass death of vultures, in the midst of all of this pain and suffering, we are called to take up writing as an ethical act; to write in a way that exposes the pain of others, and so calls us into responsibility.

But in this essay I am not writing about the death of any specific vulture. It is not at all clear, for example, who the vulture is whose death occupies the first page: the vulture whose kidneys failed, whose neck began to droop, and who eventually fell from his perch to the ground below. While I am writing about the 'individual', it is no one vulture alone that animates this work, but the countless millions that have already died from diclofenac poisoning, as well as those few who still survive, facing a deeply uncertain future. In short, the 'individual' vultures that are the subject of this essay possess a kind of cumulative and figurative existence, gathering up diverse individuals, many of whom are already dead. In this context, it becomes clear that responsibility in a time of extinctions will need to be in some sense 'diffused'; an act of simultaneous accountability for those that suffer; mourning for those that are already dead; and hope for those that might still be able to inhabit flourishing ecologies and worlds.

—RESPONSIBILITY IN MULTISPECIES' WORLDS

As is so clear in the context of diclofenac poisoning, pain and suffering cannot generate an ethical claim that begins and ends with any individual, or even with any number of individual vultures. Individuals, like species, are not self-enclosed units, but are rather webs of relationalities, tied into interactions with others that produce and reproduce worlds. Vulture knows this; waiting on the banks of the Ganges and other Indian rivers, feeding on the decaying flesh of all those that float by, vultures inhabit a world of connectivities in which life is made possible by others' deaths. Like all embodied organisms, they are woven into relationships of what Val Plumwood called 'mutual life-giving'.²³ 'Individuals' can only emerge out of, and

survive within, these kinds of entangled relationships. But these relationalities are about more than bodily nourishment. The vultures that inhabit India today have emerged out of deep histories of interaction, adaptation and relational-becoming with humans and nonhumans. These histories are sedimented in vulture bodies, as well as in vulture behaviour and sociality. It should not be forgotten, for example, that vultures have been able to live in the ways that they have, and in the huge numbers that they have, because of the specific ‘ecological’ and ‘cultural’ environment provided in India. This is an environment in which, among other things, carcasses have been made readily available and people have adopted a far more benevolent approach to vultures than in many other parts of the world—for example, the countries to the east in which vultures were once, but are no longer, found.²⁴

It is inside this relational context that vultures’ lives have been made possible; that they have settled into (and co-produced) a unique niche in which to flourish. But it is also inside these relationships that vultures are made vulnerable to pain and suffering. Relationality is also exposure; as Butler’s recent work on corporeal vulnerability has highlighted so clearly, the openness and relationality essential to our sustained existence on so many different levels, is also the basis of a fundamental exposure to others, and so to pain, violence and suffering.²⁵ The impact of diclofenac poisoning on vultures has been so immense, in large part, precisely because they have lived so well on cattle carcasses for so long. The relationships that once nourished are now poisonous. If responsibility and genuine response to the pain of vultures is to occur, then it is inside these relationships that it must take place. How can we be responsible to an Asian vulture without at the same time taking up a responsibility to the cattle whose suffering prompts the use of diclofenac in the first place, or to the farmers whose lives and livelihoods often require them to go on milking and working cattle even after they become old, tired and sick?

In this way, the pain of vultures is a generative opening into entangled worlds of relationship and accountability. The interdependence of vultures’ lives and deaths with those of others complicates and opens out our responsibility. These are the kinds of ‘worldings’, the knots of entangled lives, that Haraway has argued we are drawn into when we touch (or are ‘touched’ by?) another.²⁶ Adopting and slightly mutating Karen Barad’s work, we might say that inside these relationalities:

'Ethics is not about right response to a radically exterior/ized other, but about responsibility and accountability for the lively relationalities of becoming of which we are a part'.²⁷ But thinking in this way also further expands our sphere of concern; beyond cattle, people and what might be loosely understood as the 'causes' of vulture suffering, and into the possibilities for life and death that are emerging in India in the absence of vultures. Central here is that the painful death of each vulture is but a part of a broader mass death event. The absence of so many vultures in an ecosystem produces what ecologists call a 'functional extinction', one that will most likely be followed by an actual extinction in coming years. When a whole species begins to disappear, when all of these vultures no longer inhabit the places and take up the relationships that they once did, the connectivities that make life possible in these places are threatened. As a result, ripples of further disturbance and death spread out into the world.

—LIVING AND DYING IN MULTISPECIES COMMUNITIES

It takes many vultures to clean a carcass. While they are not always good sharers, they are highly sociable and communal creatures. White-backed (*Gyps bengalensis*) and Long-billed (*Gyps indicus*) vultures, both of which are critically endangered in India, live primarily in colonies—usually of twenty to thirty birds, but sometimes in excess of one hundred. These vultures often roost as close as possible to dumps or slaughterhouses, building their nests in tall trees or on cliff ledges (respectively), and lining them with wool, skin, dung and rubbish.²⁸ This proclivity for the macabre has earned vultures a bad name in many parts of the world. Nonetheless, the roles that they play in ecosystems are very often vitally important.

Out in the countryside, when an animal dies, a skinner trundles it away in a pushcart, dumps it beside the road, flays it and leaves the carcass there.

In urban areas, haulers take dead animals to official dumps. [According to Asad Rahmani, Director of the Bombay Natural History Society] 'It has always been the vultures' job to dispose of the flesh'.²⁹

In the past, vultures helped contain the spread of diseases and contamination from rotting carcasses by quickly and completely consuming them. In the absence of vultures, however, cattle carcasses are piling up, making room for fast breeding scavengers like stray dogs and rats. While there are no accurate figures on

stray dog numbers in India, Markandya et al. have argued, drawing on Ministry of Agriculture census data, that it seems likely that dog numbers are increasing as a direct result of vulture absence.³⁰ While the figures are far from conclusive, they indicate that between 1992 and 2003, a period of very significant vulture decline, street dog numbers increased by around thirty per cent (from 21.77 to 29.02 million).

While street dogs (and rats and others) are consuming these newly available carcasses in large numbers, they don't clean them with anywhere near the same speed or thoroughness as the vultures once did. As a result, putrefying carcasses are increasingly left to contaminate waterways and the environment more generally. In addition, the spread of anthrax—endemic to India and once contained to some extent by vultures—is now also, potentially, a growing problem.³¹ When an animal dies of anthrax, the spores of the disease can leach out into the soil where they can remain for decades, and can also be spread by wind and in the guts of other animals. In the past, vultures have tended to clean off all soft tissue within hours of an animal's death, before the anthrax bacteria have time to form spores.³²

In towns and cities all over India, dogs have always roamed the streets. Growing populations of dogs would, however, lead to a variety of problems; for example, increases in the savage and sometimes fatal dog attacks on people, livestock and others. Indian newspapers frequently carry stories about these attacks, with a disproportionately large number involving children from poorer socioeconomic backgrounds.³³ In addition to dog attacks, there are also fears that the incidence of rabies in India might begin to climb. India has the world's highest rate of human rabies infections, with dog bites accounting for the vast majority of these.³⁴ While there are vaccinations available for rabies, and these do seem to be reaching many people, total numbers of rabies deaths are only falling slightly—perhaps because of a large increase in the number of people being exposed to the disease in recent years.³⁵ Rabies is a horrific death, for any individual of any species. According to the British Medical Association's (BMA) guide to the disease: 'Once clinical symptoms of rabies appear [in a human patient], there is no known cure and the victim is virtually certain to die an agonizing and terrifying death'.³⁶

The absence of vultures in Indian ecosystems, therefore, has the potential to have a profound impact on human health, but also on the health of other animals.

Some scientists are now concerned, for example, that members of other severely threatened species will have additional pressures placed upon them by the large increase in dog populations. These dogs will increase the likelihood of rabies, canine distemper virus and canine parvovirus being transmitted to animals like hyenas, jackals, tigers and Asiatic lions—some of which are critically endangered themselves.³⁷ These kinds of disease transmissions might eventually become part of what conservation biologists call ‘co-extinctions’³⁸ —a mode of dying-together in a world in which our dependence on, and exposure to, others is absolute. In addition to these more charismatic creatures, the most immediately vulnerable species that will disappear with vultures—or any other creature for that matter—are the species-specific parasites that live both on and in their hosts. In an effort to prevent this happening, the combined Indian and British vulture conservation effort is attempting to also conserve populations of what is believed to be a species-specific feather louse, living on captive populations of vultures.³⁹ In reality, however, many species-specific parasites, especially those with complex lifecycles which occur in only a few members of the species, will go extinct when host numbers get too low, often well before their hosts die out.

Human health and the health of nonhumans and ecosystems are all mixed up and placed at stake here in a way that clearly requires thought outside nature–culture and nonhuman–human dualisms.⁴⁰ Rabies and other diseases do not distinguish between fleshy hosts on the basis of language, rationality or any of the other special characteristics that are often thought to hold ‘the human’ apart from the rest of the world. We all suffer and are brought into pain in a multispecies world. But equally, the mass death of vultures has served to undermine important aspects of the economic, cultural and religious lives of many Indians. In doing so, this situation also highlights some of the many ways in which human ‘cultures’ (like ‘human nature’)⁴¹ are multispecies projects. For example, in recent years rifts have begun to develop within the Parsi community in India. Parsis have traditionally relied on vultures to take care of exposed human corpses in their ‘towers of silence’—believing that dead flesh defiles earth and fire. The absence of vultures has caused a great deal of concern about appropriate disposal of the dead within the community. In an effort not to simply leave bodies to decay, solar reflectors have been added to some towers to direct sunlight at bodies and so speed up the process.

For many Parsis, however, this is simply not good enough, and a great deal of controversy continues to surround what it might mean to treat the dead properly in a world without vultures.⁴² In addition to the Parsi community, some of India's poorest people have been caught up in the ripples of disturbance produced by the loss of vultures. Some of these people have in the past made a living collecting the dried bones of cattle and selling them to the fertilizer industry. In the absence of vultures these bones are now often incompletely scavenged, requiring either extended time before collection or for people to clean the bones themselves.⁴³ This situation places additional pressures on some of India's, and indeed the world's, poorest people.

—ENTANGLED ACCOUNTABILITIES

It is into this biosocial world of entangled lives and deaths that the pain of vultures draws us all. The responsibility that vulture suffering demands is a responsibility to specific individuals—to those that have died and will die. But individuals are relational beings, and so the multispecies context in which they live and die—the context that has produced their pain and that will allow that pain to ripple out into the world and be taken on by others still—must be taken into account in any genuine response to (or account of) another's suffering. In the context of extinctions this relationality becomes even more important, as the interactions on which so many organisms depend are systematically unmade when species die. While I have attempted not to reduce organisms to mere functional roles in ecosystems, this does not mean that they do not possess these roles. The painful deaths of millions of individual vultures matters, vultures demand ethical response in and of themselves, they are more than garbage disposal units for an ecosystem. None of this changes the fact that they are also incredibly efficient and dedicated consumers of rotting flesh, and that their no longer being able to take up this role *en masse* has had devastating consequences for a whole multispecies community of life.

In short, extinctions do not just take place within entangled ecologies. They must also be understood to undermine relationalities, to unmake the relationships and environments on which so many lives depend. In so doing, they produce ripples of disturbance, often amplifying suffering and death, as in the case of Asian vultures.⁴⁴ In this context it is clear that it will ultimately be impossible to be

genuinely responsible to another while failing to be responsible for the other creatures with whom they live and on whom they depend. Attentiveness to entangled ecologies and their unmaking requires relational thinking and writing practices, and thus also a relational and entangled ethics in which responsibilities ripple, leak and are pulled into places we may not have expected them to go. In opening out our responsibility in this way, we take up an accountability for a whole host of others—feather louse, cattle, Asiatic lions, bone collectors—we are drawn into their lives and deaths through their entangled becoming-with vultures.

Inside this inescapably relational context, pain and suffering cannot be understood as ‘absolute evils’ to be avoided at all costs. In many contexts, they are simply an unavoidable part of the relationships that ‘are’ multispecies communities of life. The point of an ethical response to pain is not, therefore, to be able to do away with it all together, but rather to find the capacity to respond to those suffering others that call upon us; the capacity to respond to at least some of the incredible suffering that is taking place in this time of extinctions. While there can be no objective or absolute justification for working to prevent the pain and suffering of some creatures, some species, and not others, perhaps in the end it is enough to simply say that we respond to vultures and their entangled others because, for whatever reasons, we have been called by them and their suffering. But perhaps the call that vultures make also takes on a particularly urgent and profound dimension because it is in an important sense wasting lives in ‘unnecessary’ pain; pain that is amplified out into the connectivities in which all life is embedded. With this in mind, perhaps our ethics are also a matter of taking stock and being accountable for the tragically diminished worlds that we are ushering into being around us today; worlds in which diversities, and with them lives, are being painfully lost in every conceivable way; through greed, ignorance, apathy, and in some cases even love.⁴⁵ In this context, this essay has also explored some of the stakes involved in different possible futures, and why it is that we should all make a stand for worlds rich in vultures and the diversities and connectivities that they produce and hold together.

—CONCLUSIONS

In the midst of this period of mass extinction, when so many species are slipping out of the world—not quietly, as we so often assume, but in bright bursts of violence and

pain—how are we to take up an ethics ‘adequate’ to the time? Individuals and their entangled relationalities are central here. When species disappear from the world they leave a tear in the biosocial relational field that is life; an absence and a wound that can never be filled, but must nonetheless be ‘repaired’ in some way, lest the patterns of amplification continue and the dead keep piling up. In India, it is probably too late for vultures to survive in the wild. While the Indian government introduced a ban on the manufacture of diclofenac for veterinary treatment in 2006, they did not ban its production for medical and human use or the actual treatment of animals with it. It seems, therefore, that both imported stocks and Indian produced medical versions of the drug continue to be used on cattle—despite the presence of a vulture-safe, but more expensive, alternative.⁴⁶ In the short term vulture populations are not going to rebound, and a solution will need to be found for the disposal of cattle carcasses to stem some of the spread of disease and suffering.

In the meantime, a team of Indian and British scientists has begun a captive breeding program. At the centre of this effort are a series of ‘colony aviaries’ approximately one hundred feet long, by sixty feet wide and forty feet high—as well as several smaller satellite aviaries and breeding centres around the country.⁴⁷ It is hoped that, eventually, these birds will be able to be re-released. Ultimately, however, this cannot happen until the threat of diclofenac poisoning is gone and there is a large enough captive population for it to be sustainable in the wild. Even with a comprehensive ban on the drug in the near future—which may not happen—this may well take twenty years or more. But should it actually happen, should this reintroduction actually ‘work’, I think it still important to ask in what sense has catastrophe been averted, and in what sense has it already taken place? How many diverse lives and relationships will already have been painfully lost? In the meantime, if alternative carcass disposal has not been achieved in India in the next few years, then diseases will likely increase significantly. But if an alternative means of carcass disposal is found, and vultures should miraculously find their way back to the ‘wild’, what place will there be for them in this new world? What possibilities will there be for them to strike up new relationships, to remake once shattered lives?

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—NOTES

¹ G. M. Aitken, 'Extinction', *Biology and Philosophy*, vol. 13, 1998, pp. 394–5.

² V. Prakash et al., 'Recent Changes in Populations of Resident Gyps Vultures in India', *Journal of the Bombay Natural History Society*, vol. 104, no. 2, 2007. The Oriental white-rumped vulture (*Gyps bengalensis*) is one of three species of *Gyps* vulture that is critically endangered in India and the surrounding region. The other two are the long-billed (*Gyps indicus*) and the slender-billed (*Gyps tenuirostris*) vulture. But in India, and around the world, other vulture species are also in a great deal of trouble; for the broader Indian context see R. Cuthbert et al., 'Rapid Population Declines of Egyptian Vulture (*Neophron percnopterus*) and Red-Headed Vulture (*Sarcogyps calvus*) in India', *Animal Conservation*, vol. 9, 2006.

³ Donna Haraway, *When Species Meet*, University of Minnesota Press, Minneapolis, 2008.

⁴ Paul Robbins, 'Shrines and Butchers: Animals as Deities, Capital, and Meat in Contemporary North India', in Jennifer Wolch and Jody Emel (eds), *Animal Geographies: Place, Politics, and Identity in the Nature-Culture Borderlands*, Verso, London and New York, 1998.

- ⁵ BBC, 'Court Upholds Cow Slaughter Ban', BBC News Website, 26 October 2005, <http://news.bbc.co.uk/2/hi/south_asia/4378138.stm>; Jyotsna Singh, 'India Targets Cow Slaughter', BBC News Website, 11 August 2003, <http://news.bbc.co.uk/2/hi/south_asia/2945020.stm>.
- ⁶ Singh.
- ⁷ Susan McGrath, 'The Vanishing', *Smithsonian Magazine*, February, 2007.
- ⁸ McGrath.
- ⁹ J. Lindsay Oaks et al., 'Diclofenac Residues as the Cause of Population Decline of Vultures in Pakistan', *Nature*, vol. 427, 2004; Susanne Shultz et al., 'Diclofenac Poisoning is Widespread in Declining Vulture Populations across the Indian Subcontinent', *Biology Letters*, vol. 271, 2004; Gerry E. Swan et al., 'Toxicity of Diclofenac to Gyps Vultures', *Biology Letters*, vol. 2, 2006.
- ¹⁰ Gerry Swan et al., 'Removing the Threat of Diclofenac to Critically Endangered Asian Vultures', *PLoS Biology*, vol. 4, no. 3, 2006, p. 395; Andrew Cunningham, personal correspondence, 11 Sept 2008. (All references to 'Cunningham, personal correspondence' refer to transcribed notes from an interview with Dr Andrew Cunningham, Institute of Zoology, Zoological Society of London, a senior British scientist working on vulture conservation in India. This interview was conducted in London on 11 September 2008.
- ¹¹ Cunningham, personal correspondence.
- ¹² Cunningham, personal correspondence.
- ¹³ Emmanuel Levinas, 'Meaning and Sense', in Adriaan T. Peperzak, Simon Critchley, and Robert Bernasconi (eds), *Basic Philosophical Writings*, Indiana University Press, Bloomington and Indianapolis, 1996 [1964], p. 54.
- ¹⁴ Levinas.
- ¹⁵ For two very helpful discussions of the more-than-human possibilities (and limitations) of Levinas' work, see David L. Clark, 'On Being "the Last Kantian in Nazi Germany": Dwelling with Animals After Levinas', in Jennifer Ham and Matthew Senior (eds), *Animal Acts*, Routledge, New York, 1997; James Hatley, *The Bread from One's Mouth and the Bread from the Other's Mountain: Entangled Histories and Incessant Corrections*, unpublished paper, <<http://faculty.salisbury.edu/~jdhatley/BreadoftheOthersMountain.pdf>>.
- ¹⁶ Simon Critchley, 'Introduction', in Simon Critchley and Robert Bernasconi (eds), *The Cambridge Companion to Levinas*, Cambridge University Press, Cambridge, 2002, p. 21.
- ¹⁷ Judith Butler, *Precarious Life: The Powers of Mourning and Violence*, Verso, London and New York, 2004, p. 20. There are numerous difficulties of 'translation' involved in how we might understand and articulate the pain of another, difficulties that are only exacerbated in the context of nonhuman pain; where we not only do not share language, but also do not share central features of our physiology with those that suffer. But suffer they do, and the impossibility of gaining access to another's specific experience of pain simply does not mean that we cannot be, and are not, called upon for ethical response by that suffering. What it might mean, however, is that it is more difficult to be called when

we cannot recognise or empathise with the pain of another. For this, and other reasons, we will also need other ways of writing for this time of extinctions. Many of these modes of writing will perhaps draw on the mass death literature, but in doing so it is important that they move beyond its largely humanist dimensions, perhaps stretching these literatures into uncomfortable places where they might take seriously the specificities and difficulties of ethics inside entangled *multispecies* worlds. For a helpful discussion of 'animal holocausts', for example, see Angi Buettner, 'Animal Holocausts', *Cultural Studies Review*, vol. 8, no. 3, 2002.

¹⁸ Cori Hayden, *When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico*, Princeton University Press, Princeton & Oxford, 2003, pp. 57–8.

¹⁹ Mick Smith, 'Environmental Amnesia: Walter Benjamin and the Ethics of Extinction', *Environmental Ethics*, vol. 23, no. 3, 2001, pp. 374–5.

²⁰ Butler, p. 20.

²¹ James Hatley, *Suffering Witness: The Quandary of Responsibility after the Irreparable*, State University of New York Press, Albany, 2000, p. 114.

²² But see Smith, p. 368.

²³ Val Plumwood, 'Shadow Places and the Politics of Dwelling', *Ecological Humanities*, *Australian Humanities Review*, vol. 44, 2008.

²⁴ James Ferguson-Lees and David A. Christie, *Raptors of the World*, Houghton Mifflin Harcourt, New York, 2001, p. 424.

²⁵ Butler.

²⁶ Haraway, p. 36.

²⁷ Karen Barad, *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*, Duke University Press, Durham and London, 2007, p. 393.

²⁸ Ferguson-Lees and Christie, pp. 422–8.

²⁹ McGrath.

³⁰ Anil Markandya et al., 'Counting the Cost of Vulture Decline: An Appraisal of the Human Health and Other Benefits of Vultures in India', *Ecological Economics*, vol. 67, 2008, pp. 198–9.

³¹ Liza Gross, 'Switching Drugs for Livestock May Help Save Critically Endangered Asian Vultures', *PLoS Biology*, vol. 4, no. 3, 2006, p. 303; McGrath.

³² Cunningham, personal correspondence.

³³ Anonymous, 'Dog Bite Cases on the Rise', *The Times of India*, 21 October 2005; Markandya et al., p. 195; M. J. Prabhu, 'Rabid Dog Bite Cases on the Rise', *The Hindu*, 2 May 2004.

³⁴ Markandya et al., p. 199.

³⁵ Markandya et al.

³⁶ British Medical Association, *The BMA Guide to Rabies*, Radcliffe Medical Press, Oxford and New York, 1995, p. 13.

³⁷ Cunningham, personal correspondence.

- ³⁸ Lian Pin Koh et al., 'Species Coextinctions and the Biodiversity Crisis', *Science*, vol. 305, no. 5690, 2004.
- ³⁹ Cunningham, personal correspondence.
- ⁴⁰ Stephen Muecke, 'What the Cassowary Does Not Need to Know', *Australian Humanities Review*, vol. 39–40, 2006; Val Plumwood, *Environmental Culture: The Ecological Crisis of Reason*, Routledge, London & New York, 2002.
- ⁴¹ Anna Lowenhaupt Tsing, 'Unruly Edges: Mushrooms as Companion Species', in Sharon Ghamari-Tabrizi (ed.), *Thinking with Donna Haraway*, MIT Press, Cambridge, MA (forthcoming).
- ⁴² McGrath; Jemima Parry-Jones, personal communication, 29 August 2008; Meera Subramanian, 'Towering Silence', *Search: Science, Religion, Culture*, May/June, 2008.
- ⁴³ Markandya et al., pp. 195–6.
- ⁴⁴ For a discussion of 'amplified death' in another context see Deborah Bird Rose, 'What If the Angel of History Were a Dog?', *Cultural Studies Review*, vol. 12, no. 1, 2006.
- ⁴⁵ Paul Carter, 'Parrot Interpreter: Representation, Extinction and the Electronic Information Environment', *Cultural Studies Review*, vol. 12, no. 1, 2006, pp. 89–103.
- ⁴⁶ Mark Kinver, 'Decade to Save Asian Vultures', BBC News Website, 30 April 2008, <<http://news.bbc.co.uk/1/hi/sci/tech/7373381.stm>>; Swan et al.
- ⁴⁷ Cunningham, personal correspondence.