

Communication and culture: A multispecies endeavour within a shared habitat

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Abstract

COVID-19 can be seen as feedback for anthropocentric social, economic and environmental decision-making that disrespects other living systems. The paper makes a case that respects for multiple species, and the onus of beneficence should be applied to all living systems of which we are a strand. Human beings are not exceptional insofar as they are able to communicate, make decisions, demonstrate a sense of community and show empathy or to make political calculations. What does this mean for the way we live our lives? Respect for persons needs to include animals, plants and the earth. It is time to rethink rights and responsibilities to protect habitat. Goodall stresses that the loss of habitat leads to species that have never been in contact before (and thus without any resistance) causing cross species infections.

KEYWORDS

communication, culture, kinship, multispecies

1 | INTRODUCTION

The current challenges facing humanity require a different approach to the way we live our lives. We need new forms of education, democracy, governance and non-anthropocentric systemic ethics (McIntyre-Mills, 2014) informed by critiques of our attitude towards other species (Braidotti, 2018). What would the world be like if we were to live in harmony with nature? What if we could create new forms of education in which we learn from nature? Currently, colleagues are exploring these themes with me, and some of the ideas sketched in this piece will be elaborated in my contributions to 'From Polarisation to Multispecies Relationships' (McIntyre-Mills and Corcoran-Nantes, 2021) (Springer) and 'Transformative Education for Regenerative Development.' (McIntyre-Mills et al., forthcoming 2021, Edward Elgar).¹

We need to grasp the nettle do what we can to listen to the feedback that nature is giving us.

Climate change, pandemics, poverty and conflict are the big issues of the day, and they are interrelated.

The root causes for all these concerns are 'environmental apartheid,' (Shiva, 2020a) and anthropocentrism.

Kirksey et al. (2014, p. 1):

Ethnographers are now exploring how 'the human' has been formed and transformed amid encounters with multiple species of plants, animals, fungi, and microbes. Rather than simply celebrate multispecies mingling, ethnographers have begun to explore a central question: Who benefits, cui bono, when species meet?

The short and obvious response has been human beings have applied an exploitative approach that has commodified plants and animals, and the result has been profit for some at the expense of the majority of living systems. This paper reflects on themes raised in an edited volume 'From polarisation to multispecies relationships: Regeneration of the Commons in an era of mass extinctions' (McIntyre-Mills & Corcoran Nantes, 2021, p. 777)

and extends a discussion on what *non-anthropocentric* rights, responsibility and accountability to future generations of life could entail.

Previously, I have written about ‘recognising our hybridity and interconnectedness’ for ‘Current Sociology,’ and in this paper, I want to show what we have in common with other species and how our interdependency is in itself a form of communication. The ability to make political and or ethical decisions and the ability to communicate are not purely human characteristics. Thus, human beings do not sit above other species. Animal behaviourists and interspecies researchers have stressed that the boundaries need to be rethought. This has implications for ethics (Cochrane & Cooke, 2016), democracy and governance.

According to the Belmont Report, two aspects need to guide human ethics, respect for person and beneficence (1979, p. 4):

Respect for persons incorporates at least two ethical convictions: first, that individuals should be treated as autonomous agents, and second, that persons with diminished autonomy are entitled to protection. The principle of respect for persons thus divides into two separate moral requirements: the requirement to acknowledge autonomy and the requirement to protect those with diminished autonomy.

The Belmont Report (1979, p. 5) continues that beneficence entails that:

Persons are treated in an ethical manner not only by respecting their decisions and protecting them from harm, but also by making efforts to secure their well-being. Such treatment falls under the principle of beneficence. The term ‘beneficence’ is often understood to cover acts of kindness or charity that go beyond strict obligation. In this document, beneficence is understood in a stronger sense, as an obligation. Two general rules have been formulated as complementary expressions of beneficent actions in this sense: (1) do not harm and (2) maximise possible benefits and minimise possible harms.

Fuentes (2020) stresses the importance of kinship across species as follows:

For me, the most important contribution in this proposal is the broadening of the

Belmont concept of ‘respect for persons’ to include other animals... The writer Maupin (1987) tells us that we live in a world filled with both biological kin and logical kin. He refers to those kinship relations that we are born into as biological, and those that we choose, construct, and nourish, as logical.

The Belmont Report (1979) mentioned above only refers to human subjects. Ethical guidelines for human researchers, practitioners and members of the public need to recognise our biological kinship and interdependency. Respect for multiple species needs to be based on recognition of our hybridity and interconnectedness informed by a sense of awe and supported by norms rooted in a belief in our precarious interdependency and the implications of dispossession (see Butler, 2011; Butler & Athanasiou, 2013). A moral compass to protect diversity needs to be buttressed by a Global Covenant (Held, 2004) and the Ecocide Law (Higgins, 2018; Higgins et al., 2013). The lack of gendered, non-anthropocentric emphasis on the way in which nature has been controlled and mastered needs to be remedied. Few (with the exception of Deborah Bird Rose, Donna Haraway and Anna Tsing) have spoken out about multispecies relations, and fewer have stressed *the need for a multispecies approach that honours the rights of all sentient beings to a habitat* that makes life worth living, with perhaps the exception of Donaldson and Kymlicka in their work ‘Zoopolis’ in which they argue that habitat for all animals needs should be considered a right: from appropriate space for domesticated animals (such as pets and agricultural animals) to the liminal creatures that share our cities and gardens with us and the wild animals who have a right to their own habitat. As stewards, we have a responsibility to ensure their rights are met through passing and implementing laws to protect them.

Currently, ethical frameworks are inadequate (see McIntyre-Mills, 2014) as they are inherently anthropocentric and misplaced; humanity can only be protected by protecting the biodiversity in which we are embedded.

In ‘Frontiers of Justice,’ Nussbaum (2006) stresses the need for the right to a life worth living to be extended to all sentient beings. Nussbaum’s (2011, p. 31) 10 capabilities are directly concerned with well-being, a life worth living and the extent to which these can be addressed. These capabilities include the following, according to Nussbaum’s definition: (1) living a life that is not cut short prematurely (2) bodily health, (3) bodily integrity, (4) sense, imagination, and thoughts, (5) emotions, (6) practical reason, (7) Affiliation, (8) links to other

species, (9) Play, (10) Control over one's environment. In Nussbaum's version, the capabilities approach focuses on 'the protection of areas of freedom so central that their removal makes a life not worthy of human dignity'.

Nussbaum discusses capabilities in terms of all sentient beings and thus makes a small step towards non-anthropocentrism in terms of recognition of rights; nevertheless, her overall focus is still on human development not on the rights of animals and habitats. Nussbaum (2006) in 'Frontiers for Justice' stressed that the social contract should, however, be extended to protect the capabilities of all sentient beings so that they can live a life worth living and so that they are able to achieve their capabilities. Mahayana Buddhists stress that the path to enlightenment rests in compassion for all sentient beings who can be regarded 'as our mothers' (Thubten Dondrub, 2020, pers comm, Mind and its Potential). Indigenous people also recognise the land as 'our mother.' Indigenous wisdom blurred the taxonomic categories across species through totemic worship as has been discussed elsewhere (see McIntyre-Mills, 2021 on Australian Indigenous belief, Romm, 2021, and Romm & Lethole, 2021 on African totemism, with specific reference to Venda clans' relationship to elephants). In both instances, kinship is extended to other species (both plant and animal) to whom they claim allegiance and which they are bound to protect as stewards. In Venda, women leaders, known as the makhadzi, can help to address this stewardship role (Pat Lethole, 'Mphathe' Makaulule, pers comm, 2021).

Indigenous knowledge systems view features of the landscape as totems. In the pantheistic Peruvian culture, the Andes are worshipped as a god and the condor (a raptor) is also worshipped as it soars above the earth. Pachamana is considered to be the goddess of fertility and the source of life. Indigenous cultures believe that organic and inorganic life are kin in one living system. For example, as my mentor Olive Veverbrants (pers com 2000) explained to me in Alice Springs, when a pregnant woman feels her foetus move, she links the movement with a creature or feature in the landscape. It may be a bird, a lizard, a plant or a rock formation. This becomes a totem to which the child is related in her or his place. Totems are part of family and are not merely potential food items that need to be protected from over hunting or over gathering by declaring them sacred by some groups—to which they are affiliated and thus refrain from eating them. Totems are also ways of binding people to a specific place and fostering an ethic of care or custodianship. In Western culture, we have categories that distinguish between the organic and inorganic, but in Indigenous cultures, a relationship can be formed, which transcends this divide.

Harris and Wasilewski (2004) stress the need for 'the four R's' (relationship, responsibility, reciprocity, redistribution) versus two P's (power and profit). This distinction will become increasingly important to address risk.

According to Romm (2018): Harris and Wasilewski

refer more generally to Indigenous views, which they argue need to be strengthened and revitalized across the globe, including in Indigenous cultural settings. They define relationality by referring to the metaphor of a family.

Romm continues by explaining that they refer to:

... profound sense that we human beings are related, not only to each other, but to all things, animals, plants, rocks—in fact, to the very stuff the stars are made of. This relationship is a kinship relationship ... We thus live in a family that includes all creation (2004, p. 492).

Ulrich Beck developed the concept of 'World Risk Society' (1995) to refer to the paradox of industrialised, profit-oriented society that has resulted in climate change, nuclear risks associated with the storage of waste, accidents and war. The extensive divides between rich and poor have escalated the risks associated with poverty and conflict, whilst the risks associated with 'Frankenstein Food,' (Beck, 1999, p. 106) have also increased. The Daily Mirror took the British Government to task in the wake of the Bovine spongiform encephalopathy (BSE or mad cow disease) caused by feeding cattle offal (comprising diseased tissue) instead of allowing them to graze as herbivores.

The lack of a *gendered*, non-anthropocentric emphasis on the way in which nature has been *controlled* and *mastered* needs to be remedied. Few with the exception of Vandana Shiva, Deborah Bird Rose, Donna Haraway and Anna Tsing have spoken out about multispecies relations, and fewer have stressed the need for a multispecies approach that honours the rights of *all* sentient beings to a habitat that makes life worth living, with perhaps the exception of Donaldson and Kymlicka in their work 'Zoopolis' in which they argue that habitat for all animals, needs should be considered a right from appropriate space and that wild animals have a right to their own habitat. Donaldson and Kymlicka stress that as human stewards, we need to consider rights for animals who share space with us as domestic pets and agricultural animals that rely on us. They need a form of citizenship. Liminal creatures who live on the margins of our lives in

gardens, on nature strips or on the edges of cities, need denizen rights, and wild creatures need to have the right to wild territory.

Many species are able to communicate as highlighted by Meijer (2016) who stresses that bats sing, bees dance, domestic dogs, cats and horses read our behaviour and body language, parrots use language to achieve goals, primates have learned sign language and dolphins have specific sounds that equate to names. Species-specific intelligence needs to be respected. The notion that human beings should be called 'bird brained,' if considered slow, is simply ill informed. Many species demonstrate a sense of self if the mirror test is not used and instead species-specific intelligence is taken into account. Meijer (2016) explains that dogs can recognise their own urine smells and are less interested in this smell than the smell of other dogs, for example. This demonstrates a sense of self. Meijer (2016, p. 74) also stresses that even if a gorilla does not gaze at a mirror, she stresses that this is because gazing at another would be regarded as aggressive. Similarly, she stresses that in some cultures, this is also regarded as impolite.² Thus, the mirror test, developed by western male academics, should not be regarded as the basis for deciding on species intelligence or sense of self.

The species-specific intelligence of birds varies with and responds to their environments (Ackerman, 2016). Some birds are able to remember where they have stashed supplies for the winter months, and this develops particular pathways in their brains which other species may not need to develop (Ackerman, 2016, p. 210). But research has found that birds are capable of passing on new useful knowledge to others, such as how to open a food dispenser (Meijer, 2016, p. 72) that demonstrates the ability to convey information that is retained and passed on to future generations living within the region long after the first birds had died. Thus, birds can communicate and create local cultures that help the survival of their group. Turtles³ and birds are able to navigate across the seas and skies to return to breeding or feeding sites, and they do not need a compass. Squirrels in Cape Town carry a map of where they have stashed their supply of winter acorns. It is time to listen and learn from other species. They were imported by colonisers along with the oaks and although once considered non-indigenous, they are now part of a changing and contested landscape.

Animal intelligence needs to be respected; for instance, De Waal (2009) stressed that besides intelligence, the characteristics of Empathy, Reciprocity and Fairness are demonstrated by *several species*, not just primates or elephants. Elsewhere, I have discussed (McIntyre-Mills, 2017a, 2021) that competition for

survival is not the only basis for survival and that cooperation is not species-specific. Dawkins (2019) explains how vampire bats can share blood with their less successful group members, but he uses the example to show that ideology is not the basis of compassion. A 'natural inclusion' focus argues that all nature has the potential to cooperate in the web of life and that fungi can either share nutrients or lessen their intake, in order to help hybrid root systems survive in a shared habitat (Rayner, 2010, 2017a, 2017b).

Climate change and capitalism has destroyed vast tracks of the environment and the notion that 'ownership' of land or the right to license or patent life needs to be challenged. The TRIPS⁴ agreement has provided minimal protection for Indigenous people as it removed the moral right of authors, according to Whimp (2000, p. 13).⁵

Kathy Whimp explains that the law allows the removal of *legal rights* but then suggests that *moral protection* be provided, which seems a cynical option, because property rights are based on *possession, creativity and discovery* in Western Law. By invoking discovery as *a right to dispossess others*, colonial countries dismissed the different notion of relationships to kin and nature. Whimp and Busse stress in their introduction to a seminar on 'Protection of Intellectual, Biological and Property Rights in PNG' that anthropologists have neglected the notion of property. Another aspect that was not emphasised is the notion of consumption and what constitutes the right to consume and the nature of consumption. The idea of consumption as a property right flowing from the continuous ownership of land and the right to decide the way the item is used was foreign to many in South Pacific (in which Australia is one of the largest islands). The idea that traditional economies (and societies) always know best is too simplistic, as Whimp (2000) stress, but we certainly do need to relearn the art of living simply and accepting the notion of living within limits.

The scale of destruction caused by 'consuming the planet' (IPPC, 2021; Urry, 2010) to 'extinction' (Bostrom, 2011) is part of the problem, and the other is the growing size of the human population at the expense of other living systems on which we rely. The notion that the land is a resource for profit as opposed to sacred—to the mother spirit of the earth or Pachamama—needs to be stressed. In conversation with Norma Romm (in preparation for work related to this paper), she suggested I read an article on the philosophy of Buen Vivir, which means living *in community* and *with nature*. According to Gudynas (2011, p. 442):

One of the most well-known approaches to Buen Vivir is the Ecuadorian concept of *sumak kawsay*, the

kichwa wording for living in community 'together with other persons and Nature.' Gudynas goes on to explain that:

While the Bolivian one is focused on Buen Vivir as an ethical principle, that of Ecuador offers a stronger approach because the concept is conceived as a plural set of rights. The Bolivian formulation offers more options for cultural diversity than the Ecuadorian, but does not include Buen Vivir as a right. The Ecuadorian text clearly stated that development in line with Buen Vivir is required to fulfil the rights of Nature or Pachamama (with a biocentric posture that recognizes intrinsic values in the environment) (Gudynas, 2011, p. 443).

But despite *the rhetoric*, the reality is somewhat different as the environment has been 'sold out' to market interests, where the critics of Prime Minister Morales have claimed that corruption by government representatives is widespread.⁶ It is suggested that the practice of governance and accountability is quite different from the rhetoric of care. Thus, care requires not only *a priori norms* but also to monitor and govern in an open and transparent manner, based on *a posteriori indicators* of governance (McIntyre-Mills, 2017c; McIntyre-Mills et al., 2014).

The way forward is to give rights to multiple species and the land on which we depend. This requires a new Ecocide Law.

Tsing (1995, 2015) and Haraway (1991, 2011, 2016) have stressed that culture is a multispecies relationship. Human beings are not exceptional in their ability to communicate. Human beings domesticated dogs with whom they shared camp spaces (as fellow hunters) and with whom they communicated through sounds. At first they used signs to signal (like animals) and then as they gained currency as a result of a regular trusted response, they became accepted as shared signs between humans and dogs. Humans added additional meanings to signs that developed into symbols laden with meaning. Other species communicate as well. Birds are known to develop a shared language that is mutually understood as do a range of other creatures from squid to dolphins in the sea, from crows who teach kin and kith to use tools, to laboratory rats (who share 98 percent of their genes with human beings) and primates, like and gorillas, bonobo, chimps who are our near relatives.

Gagliano et al. (2018) have undertaken laboratory research to show what is more surprising (perhaps to some) is that plants communicate, remember and make

decisions. Rayner (2010) has also explained how root fungi are able to share resources and reciprocate in order to ensure mutual survival. Thus, the notion that decision-making is a solely human characteristic is now highly debatable.

The notion of ethics and culture also needs to be reconsidered as a more than human endeavour. Last week, I received a video link from Keith Gottschalk (2020 a contributor to the forthcoming volume 'From Polarisation to multispecies relationships') about a small group of people living in the Turkish mountains who emulate bird calls, so that they can communicate across distances.⁷ The vocabulary allows them to call for help, such as requesting bread or an extra bag to carry vegetables down from the mountain. The children at school are taught the bird language, and it is now regarded as a heritage language to be protected. Similarly, I also received an article about how the urban soundscape shapes bird calls who imitate the loud urban sounds. As habitat is lost, the birds move to the suburbs (Pinnock, 2020). The Hadada ibis makes much harsher sounds than previously, so that they are audible above the urban noise. The cultural sounds and 'bird language' change in order to adapt. If the urban green spaces and trees are lost, we risk losing even more connections with other species. What will cities be like without shade and birdsong?

Pinnock (2020) also suggests:

The famous opening bars of Beethoven's *Symphony No. 5* is a direct crib from the white-breasted wood wren and the beginning of his *Violin Concerto in D, Opus 61*, is from a blackbird. At the end of the second movement of his *Pastoral Symphony*, a clarinet does the perfect imitation of a cuckoo. In fact, his music is littered with birdsong.

Tsing's (2015) approach resonates with these multi-methods, cross-cultural and cross-disciplinary volume (McIntyre-Mills, 2021) to follow strands of the food web and the destruction of diverse habitats in a series of essays and vignettes. In this paper, the case is made that living systems are a continuum from organic to inorganic life. Human beings are animals who have close relatives with many species, from laboratory rats with whom we share 98% of our genes (Greenfield, 2000), to primates who can be taught to use sign language and who show empathy as do other species such as elephants and dogs with whom we are co-evolved (De Waal, 2009; Haraway, 2003). Furthermore, Allan Rayner,⁸ Peter Wohlleben (2016) a forester and ecologists Suzanne Simard (2019) and Camille Defrenne⁹ explain the ways trees support one another¹⁰ through communicating through a

network that shares chemicals and through hybrid fungi that help to regulate and share nutrients.

Reciprocal altruism is not the preserve of human beings. Many species demonstrate empathy and altruism, from bats who regurgitate food for members of their kinship group (Dawkins, 2019) to dolphins who help to push drowning human beings to the surface or zoo elephants who share their water by squirting it to other neighbouring creatures (Bates et al., 2008; De Waal, 2009; Meijer, 2016).

Similarly, all species develop forms of communication that support their survival. Suzanne Simard (2016) explains that trees, for example, 'communicate' through their root systems.

The notion that consciousness is a human preserve can be questioned. We may never know what it means to be conscious as a member of another living system, but that does not mean that consciousness is not experienced by trees that release chemicals to indicate distress as a result of lack of nutrients or a threat.

Species-specific consciousness was accepted as a possibility by Nagel (1974) who stressed that consciousness is more than brain function and cannot be reduced to a machine like function. But more importantly, he stressed that being a bat or being a human being is about personal experience. We can never have access to the consciousness of another human being, but this does not mean that we deny that our parents, children or partners have consciousness, even if sometimes we do not understand them when we think we are communicating clearly with them.

Similarly, a bat has species-specific consciousness that enables a Vampire Bat to communicate, share food and reciprocate favours when one bat has been more fortunate than another in searching for food, thereby ensuring their mutual survival, because bats remember that they are not always successful in finding food and they need to rely on one another (Dawkins, 2019, p. 245–256). Shanor and Kanwaal (2009, p. 226) explain that Moustached Bats communicate using a range of whistling sounds:

Close observations have shown that friendly bat whistles are frequently accompanied by a lot of touching and 'kissing.'

... Kissing usually consists of a brief contact between the mouths of two bats and may be accompanied by a quick lick of the significant other's lips as well. ...

Consciousness has now been accepted along a wider continuum to include a range of both sentient beings and plants. The human relationship with other species has

varied from instrumental to spiritual, but few have accorded constitutional rights, except for Ecuador that has attributed rights to the land. But individual species rights for animals are still a long way off. Europe has made a few tentative steps towards decent conditions for farm animals, but they cannot be regarded as enabling full capabilities for animals to express their functional and emotional lives. New Zealand (to its credit) has banned animal transportation. These are very small steps away from the *dismal record of abuse* of other sentient beings. Nussbaum's capabilities for sentient beings are presented as a human development approach and are thus anthropocentric, but to her credit, she takes a step towards emphasising the rights of all sentient beings. Disability rights for the voiceless and frail have led to Judith Butler stressing the need for a recognition of human interdependency and care (see Butler & Athanasiou, 2013; Butler & Taylor, 2010). But we do need to stop, pause and reconsider what this actually means. Animals and plants do communicate. Communication per se does not require human voices. It can rely on text, signalling and symbols. Sounds, movements and chemicals can convey information and the whole realm of communication is opened up in Meijer's (2016) research on the vast array of animal communication.

2 | HABITAT AND RIGHTS FOR MULTIPLE SPECIES

The COVID-19 pandemic has provided Goodall (2020)¹¹ the platform to speak out about how cross-species infections are caused by the way human beings are encroaching on the habitat of wild animals such as pangolins and bats. Her stature as a leading primatologist and conservationist has enabled her to speak out about previous epidemics such as swine and avian flu and to highlight the treatment of farmed and trafficked animals.

Enabling farm animals and wild animals' space for a life worth living would also protect us from illness. One of the positive aspects of the COVID-19 epidemic is that it has raised awareness of cross species pathways for epidemics that can reach pandemic proportion as species are thrust into increasingly closer contact as urbanisation and habitat loss escalates. Coronaviridae Study Group of the International Committee on Taxonomy of Viruses (2020) stress that corona viruses occur amongst many animals:

In the midst of the global COVID-19 public-health emergency, it is reasonable to wonder why the origins of the pandemic matter. Detailed understanding of how an animal

virus jumped species boundaries to infect humans so productively will help in the prevention of future zoonotic events.

The potential to jump across species is caused by the way in which their freedom and habitat has been curtailed as they are farmed, transported, contained and marketed. Coronaviridae Study Group of the International Committee on Taxonomy of Viruses (2020) suggest that many of these species would never normally come into contact such as bats and pangolins. They have no immunity against the virus because they have never previously been in contact. It is only when they are kept together in close confines in wet markets with other displaced animals that they become cross infected. The next step in the evolution of an epidemic is when human beings are in contact with a mutated virus that has become more adept at crossing species.

Kirksey et al. (2014, p. 4) stress that Anna Tsing suggests that ‘human nature is an interspecies relationship’ which raises the question, what is the nature of this relationship? The answer is that it is a very mixed one; in the most part, it is a relationship of exploitation but paradoxically mixed with awe and a great deal of denial. The notion that as human animals, we can own, commodify and exploit other species has brought us to 2020, a year of rising temperatures, bush fires, multispecies loss and a global pandemic.

This paper explores the way in which a ‘multispecies turn’ has been introduced as a result of COVID-19. Some may say it is the virus we had to have as it has made human beings pause and reflect on their place in the web of living systems. It has also highlighted the need to reconsider rights and responsibilities as we reflect on what the new normal will be as we move towards 2021 and beyond. Climate change, economic recessions and political instability are the current global challenges.

How should we live our lives and why did we not anticipate that business as usual is unsustainable? Scott (1998) in ‘Seeing like a State’ gives detailed examples of the way in which the state has crushed diversity—from designing monocultures in forestry to ironing out diverse political opinions. His work could be said to take the approach at which Foucault hints in his lectures on biopolitics by giving further examples that are relevant to the concept of ‘the banality of evil’—Hannah Arendt’s (1963) notion that the individual everyday decisions taken by many can *collectively* result in the

normalization and acceptance of evil and that many of the aspects of governance and democracy that we take for granted today need to be rethought.

The COVID-19 pandemic represents the ‘worst crisis’ since World War 11, according to the UN chief, Guterres.¹² The human death toll, social and economic suffering is unprecedented except during war. According to the UN, the world faces famine as a result of morbidity and mortality associated with the pandemic, which augments the challenges posed by droughts and other natural disasters, including locust plagues and displacements caused by conflicts.¹³

Abram (2020) stresses that prior to COVID-19, rising levels of carbon, rising sea levels and an increased number of bush fires, for example, have led to minimal changes to our attitude towards climate change (Beck, 2010). We could use the opportunity to flatten the curve of infection, unemployment and carbon emissions by developing sustainable ways of living.

3 | THE WAY FORWARD?

Mair (2020) sums up the challenge for the future, namely, a centralised or decentralised response that either prioritises *exchange* values or the *protection of life*.

Society could choose to maximise social and environmental factors and meaningful jobs, rather than focusing on business as usual, where a *minority* win at the expense of current and future generations of life. Clearly, nation states that put people and the environment first, rather than the economy could demonstrate that society is capable of rapid transformation. Perhaps a positive aspect of COVID-19 could be a rapid U-turn towards new form of governance that cares for people and the environment and supports partnerships to enable the common good. Mair (2020) explains the four extreme options elegantly as follows:

1. ‘State capitalism: centralised response, prioritising exchange value
2. Barbarism: decentralised response prioritising exchange value
3. State socialism: centralised response, prioritising the protection of life
4. Mutual aid: decentralised response prioritising the protection of life.’¹⁴

The first two options prioritise economics and profit. The second two options prioritise people and the environment.

Abram (2020) stresses that the worldwide governance responses to the pandemic have resulted in a rapid

adaptation and mitigation of ‘unlimited growth, unlimited travel, and unlimited consumption.’

4 | NEW FORMS OF GOVERNANCE TO PROTECT HABITAT FOR THE WELL-BEING OF MULTIPLE SPECIES

A long-term sustainable approach is needed. Increased welfare responses are merely a positive short-term response, but this will be very inadequate to address the pain that will be experienced by many people in both developed and developing countries who wonder where the next meal will come from and whether they will have access to medical care. At the time the paper was written, despite the massive welfare interventions made by Australia, an Australian Broadcasting Council analysis of unemployment (drawing on Australian Bureau of Statistics data) stresses it peaked at 7.9 % in 2020 during the pandemic as “Job Keeper” policies at that time helped to prevent worst case scenarios unfolding.

The central aim of ‘From Polarisation to Multispecies Relationship’ is to show how the convergent social, economic and environmental links with climate change create cascading risks, such as the loss of habitat and the displacement of species. More intensive forms of agriculture, mining and urbanisation at the expense of habitat pose an existential threat. The case is made that by pursuing profit human beings, other animals and plants have suffered as a result of high carbon emissions, rapid development, over-exploitation and loss of habitat due climate change.

I wrote sections of the volume on which this paper draws as I followed the news of devastating fires in Australia at the end of 2019 to February 2020. Mass extinctions as a result of fires were widespread, and higher temperatures have also impacted species such as fruit bats and koalas who were unable to withstand days of high temperature. This underlines that sharing habitat will become increasingly important as human and animal refugees seek sanctuary. The images of the Koalas seeking water in domestic gardens and from a group of cyclists on a road have caught the fleeting attention of internet viewers but sustained attention by global citizens to reshape international policy and law to protect habitats to ensure the well-being of many species. Similarly, the large numbers of human beings displaced through fires and waiting for evacuation on the beach in the State of Victoria, Australia echo the displacements of people fleeing natural disasters in many parts of the world. Current international laws and systems of governance are inadequate and need to be reframed to protect sentient

beings who are being displaced as climate change destroys their habitat (see Planetary Passport, McIntyre-Mills, 2017a).

All sentient beings have a right to a life worth living. This requires access to habitat in which they can express their full capabilities (Nussbaum, 2011). The right for animals to live undisturbed lives requires recognising their rights, simply because they are sentient. During the pandemic, human beings in isolation relied upon their animal companions, because they were useful for our mental well-being. It is time for human beings to recognise rights for animals ranging from domestic pets to the creatures with whom we share living space in cities, agricultural animals and wild creatures, all of whom ought to be accorded rights (Donaldson & Kymlicka, 2011).

The right for plants to exist in biodiverse habitats also needs to be recognised if living systems are to have a hope of surviving (Higgins, 2016; Stephens et al., 2019). Non-anthropocentric researchers have stressed the need to recognise that many animal sentient beings have empathy, reciprocity and a sense of fairness (De Waal, 2009). Other researchers go further arguing that all living systems have agency and communicate in some way, from one celled to the most complex organisms (Meijer, 2016; Rayner, 2017a; Stephens et al., 2019). The boundaries need to be redrawn to recognise justice for plants. This has been stressed by both barrister Polly Higgins and physicist Vandana Shiva in making a plea for an Ecocide Law (Higgins et al., 2013) and a recognition of an Earth Charter.

In ‘Transformation from Wall Street to Wellbeing’ (McIntyre-Mills et al., 2014), a case was made for extending conceptual and spatial boundaries by drawing on West Churchman’s approach to design through unfolding values and sweeping in social, economic and environmental considerations. Just as the artificial human–animal barrier has been breached, the artificial barrier between people and nature needs to be breached by recognising our hybridity and interconnectedness (McIntyre-Mills, 2018) and appreciating that systemic ethics (McIntyre-Mills, 2014) needs to underpin new non-anthropocentric forms of democracy and governance. Wild habitat has been lost, and the species that once lived in isolation (and have no immunity to viruses) are thrust into contact with one another. The domino effects of loss continue as agricultural land and liminal green spaces *in and around* cities disappear.

Donaldson and Kymlicka (2011) argue that all animals should have political rights acknowledged, ranging from wild animals *who ought to be given sovereign status* in ‘self-governing communities’, liminal animals that share our cities or live alongside cultivated lands should be given some space and accorded so-called ‘denizen’ status’

– as they do not have their own land– whilst domesticated farm animals and pets need to be accorded *citizenship status* (Donaldson & Kymlicka, 2011; also see Meijer, 2016, p. 220).

It could be argued that dignity can be attributed to all life. If we (appropriately and non-anthropocentrically) see ourselves as a strand in a web of life, it removes the notion that destruction of habitat can be justified in the name of ‘progress’ or ‘business as usual’ at the *expense of the majority of living systems in this generation and the next*.

The inescapable fact is that energy is *continuous* and that all the strands of living systems return to inorganic elements when they die and in turn provide the basis for new life. The notion that only human beings are sentient beings that have higher order feelings and dignity is anthropocentric.

Animal researchers demonstrate (through citing a range of studies) that animals have empathy and are capable of reciprocity and a sense of fairness. Some species may be *voiceless*, but they are all able to communicate in their own way (Meijer, 2016) and may be able to deliberate and solve problems as a group. Language is not the only means to communicate. COVID-19 provides a lens for studying global society and demonstrating its interconnectedness:

Andersen, executive director of the UN Environment Programme, said the immediate priority was to protect people from the coronavirus and prevent its spread. ‘But our long-term response must tackle habitat and biodiversity loss’ (Carrington, 2020).

The virus spans human–animal species boundaries and needs to be understood not in terms of species-specific categories but in terms of the way it spreads and the impact it has made on our lives. As it breaches spatial boundaries, most societies retreat into lockdown, with the exception of a few who strive to achieve ‘herd immunity,’ in the absence of a vaccine. Face masks¹⁵ and ventilators and access to digital media to communicate are central concerns as the pandemic causes morbidity amongst two million (and rising) and thousands of deaths worldwide. For instance, on 5 April, 64 675 people had died, whilst 1 201 443 cases¹⁶ had been recorded; by 22 May, the number of recorded cases exceeded 5 million.

If politics is about who gets what, when, why and to what effect, it is time to rethink politics as cross species engagement to ensure the balance of individual and collective needs. A new politics needs to acknowledge our interconnectedness, based on recognition and respect.

The Ecocide Law (Higgins et al., 2013¹⁷) is central to protect multiple species as the earth needs a good lawyer to disrupt the cycle of greed, over-exploitation, lack of distribution, poverty and conflict.¹⁸ But the legal perspective needs to be buttressed by a *rights* perspective to protect *all* sentient beings (simply because they are sentient) as well as their species-specific habitats. Rayner (2010, p. 100), a biologist who specialises in plants and specifically fungi, sums up a lesson on plant politics (and economics) that demonstrates that plants pool and redistribute resources.¹⁹ Plants depend on one another to sustain a habitat. He recognises that all living systems are based on a flow of energy and that sustainable living systems share resource. He succinctly sums up the lessons for multispecies relationships. Instead of polarising categories, a new approach is developed in ‘From Polarisation to Multispecies Relationships: Towards Regenerating the commons’ (2021). The volume on which this paper draws recognises our fluidity and interconnectedness with living systems. We need to enter into a new respectful dialogue with nature and extend Martin Buber’s ‘I thou’ approach to multiple species. Shotter (2016) makes a plea for this mindset, and the volume stresses that the process of *being and becoming* through communication and dialogue can be extended to include non-anthropocentric respect for the dignity of all life, based on the acceptance that language is not the only means to communicate.

The notion that regular small adjustments are all it takes to enable one bird to fly in harmony with a flock gives me hope that despite the challenges posed by climate change and COVID-19, it is possible to do things differently.

All it would take is for each of us to make small adjustments in the way we live. Based on the rules of reciprocity, many species have learned that cooperation is as important for evolutionary survival as competition.

Just as a cell can emerge into complex life forms through small adjustments, so can each individual cooperate in the interests of collective survival.²⁰ New forms of praxis are inevitable if we are to have a hope of survival.

Just as a bloated vampire bat knows it needs to share with its fellow bats who have been unsuccessful hunting (see Dawkins, 2019), so human beings will need to learn to share water, food and energy with those who are less fortunate. Furthermore, if we appreciate that bats (like rats) are capable of complex forms of communication and that they show empathy for their associates who are hungry and share food, then we too ought to accord them rights, simply by virtue of their sentience.

Although I agree with many of the points made by Dawkins about the need to believe in the capability of

human beings to be rational and caring (without having to evoke god), it needs to be acknowledged that a sense of meaning and a belief in God are fairly universal. Belief and mindfulness or prayer buttresses and sustains in trying times. If people can grasp the potential of selflessness and 'bottom up' creativity and the way in which transformation can be achieved (through caring and compassion), then perhaps there is hope for the future. Although the Dalai Lama (2005) does not mention Dawkin's work (1996, 2006) by name, he refers to the notion that spirituality and the many sciences need to be explored in more depth.

Perhaps people in 2021 and beyond will be able to realise that we are just one strand of emergent life in a rich, interdependent tapestry? New patterns of behaviour can be created if each one of us chooses to take that step. Invoking a shared sense of the common good and a shared sense of our creativity can be achieved by agnostics, atheists and deists. As long as we are able to accept that each person or culture can be free and diverse to the extent that our thinking and behaviour does not undermine the rights of others. Abstract notions can be portrayed in new narratives, and the one for 2020 needs to be based on a sense of humility and care.

The recent research at the University of Florence and at the University of Western Australia by on extending human capabilities to understand the way in which plants 'talk to one another' extends some of the points made earlier by Lyall Watson (1973) in his contentious work that explores the boundaries of science and folklore.

A University of Western Australia news report²¹ explains that Monica Gagliano has teamed with colleagues Professor Daniel Robert at the University of Bristol (UK) and Professor Stefano Mancuso at the University of Florence.²² The team at Florence state in this video that they aim 'to make use of the knowledge' and that they are using cyborg simulations of plant behaviour as well as aiming to use plants as readers of a range of environmental signals that can together be decoded by sensors.

The notion that plants can be used and are useful needs to be extended by also appreciating their spiritual significance, for instance as the Balinese wrap Fig trees in a simple cloth to signify their significance spiritually and by offering symbolic gifts to them. They regard plants such as bamboo, rice and figs with reverence (Tng, 2014),

Rayner (2017a: 468) explains natural inclusion as follows:

We need to move on from viewing evolution in terms of abstract selection by an extrinsic arbiter, to understanding evolution as an

intrinsic process of natural inclusion, i.e. the fluid dynamics, co-creative transformation of all through all in a receptive special neighbourhood. Underlying the move is a simple but fundamental shift in the way we perceive all natural, tangible phenomena, including ourselves, as local expressions of a mutually inclusive relationship between energy and space as distinctive informative and receptive presences ...

Rayner (2017a, p. 463) quotes C.S. Lewis as follows:

The whole Philosophy of Hell ... rests on a recognition of the axiom that one thing is not another thing, and specifically, that one self is not another self. My good is my good and your good is yours ... 'To be' means to be in competition (C.S. Lewis 'The Screwtape Letters).

Human capabilities can be extended through indigenous ways of knowing and being. These ways respect the interdependency of living systems, by expressing this relationship as family, spiritual connection and a sense of awe.

The last word will be given to the Dalai Lama (2005, p. 51) who said:

I once asked my physicist friend David Bohm this question: From the perspective of modern science, apart from the question of misrepresentation, what is wrong with the belief in the independent existence of things? His response was telling. He said that if we examine the various ideologies that tend to divide humanity, such as racism, extreme nationalism, and the Marxist class struggle, one of the key factors of their origin is the tendency to perceive things as inherently divided and disconnected. From this misconception springs the belief that each of these divisions is essentially independent and self-existent ...

Our interdependency on living systems requires a rethinking of ethics, democracy and governance that requires facing up to 'existential risks' (Bostrom, 2011) to protect the web of life (Capra, 1996). This requires an appreciation of the role of the mind in shaping the life chances of current and future generations and developing an ecological mindset (Bateson, 1972). The focus on empiricism and materialism to the exclusion of the

nature of consciousness is one that needs to be balanced by greater humility and appreciation of the many ways of knowing and an appreciation for the areas of convergence that could help us to protect multispecies relationships.

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ENDNOTES

¹ These collected volumes explore alternative ways of living that support multispecies habitats. Small case studies are collected together into volumes that demonstrate that it is possible to live differently. The aim is not only to share small practical demonstration projects of how things can be done differently but also to make a plea for re-faming the structures that shape our lives. Much of the work is inspired by Vandana Shiva who has worked on seed security and has supported the concept of social movements to support ecovillages (Shiva, 2020b) as well as diverse habitats to sustain diverse species. This paper draws on my contributions to these forthcoming edited volume comprising 21 contributors from Africa, Australia, Asia (Indonesia, Bangladesh, Vietnam), the United States, Brazil, the United Kingdom and Europe. The Springer volume 'From Polarisation to Multispecies Relationships: Regeneration of the commons in an era of mass extinctions' comprises research based on multi-methods, cross-cultural and cross-disciplinary approaches to follow strands of the food web and the destruction of diverse habitats in a series of essays and vignettes, and the approach resonates with Tsing's (2015) approach as well as Midgley's (2000) systemic interventionism. The case is made that living systems are a continuum from organic to inorganic life. Human beings are animals who have close relatives with many species (from laboratory rats with whom we share 98% of our genes see Greenfield, 2000), to primates who can be taught to use sign language and who show empathy as do other species such as elephants and dogs with whom we are co-evolved (De Waal, 2009; Haraway, 2003).

² In South Africa, respectful behaviour, known as *hlonipha* in Xhosa requires lowering the eyes. This was explained to me by my mentor and key informant Adelaide Dlamini. It was important information as I needed to show respect when I met more traditional men and woman when doing research for my MA thesis in Cape Town and the Eastern Cape. When undertaking research in Alice Springs this was also explained as appropriate by my mentor Olive Veverbrants. In Aboriginal culture looking someone in the eye and holding eye contact is considered bold and impolite. So, when interviewing sitting alongside and not staring too intently is appropriate behaviour.

³ A loggerhead turtle made "a 37,000-km swim across the Indian Ocean to a turtle nesting site on Western Australia's Pilbara coastline. ... Sabrina Fossette, a research scientist from WA's Department of Biodiversity, Conservation and Attractions, said: 'This turtle spent 20 years in captivity and still, you put her in the water and she suddenly remembers she probably has something to do on the other side of the ocean and just starts crossing it,'" [https://www.abc.net.au/news/2020-03-07/yoshi-](https://www.abc.net.au/news/2020-03-07/yoshi-turtle-journey-tracked-37000km-from-cape-town-to-australia/12024088)

[turtle-journey-tracked-37000km-from-cape-town-to-australia/12024088](https://www.abc.net.au/news/2020-03-07/yoshi-turtle-journey-tracked-37000km-from-cape-town-to-australia/12024088)

⁴ According to Correa (2002, p. 1), 'The Doha Declaration on the TRIPS Agreement and Public Health, adopted by the WTO Ministerial Conference in November 2001, which affirms that the TRIPS Agreement should be interpreted and implemented so as to protect public health and promote access to medicines for all, marked a watershed in international trade demonstrating that a rules-based trading system should be compatible with public health interests. The Declaration enshrines the principle WHO has publicly advocated and advanced over the last four years, namely the reaffirmation of the right of WTO Members to make full use of the safeguard provisions of the TRIPS Agreement to protect public health and enhance access to medicines' (my emphasis).

⁵ Whimp (2000: 143–168, in her chapter on 'Access to genetic resources: legal and policy issues' cites Gervais (1998:78) with reference to TRIPS. She explains that the removal of the moral rights of authors from legal rights was a win for the Anglo-American legal system. She cites 'Standards concerning the availability, scope and use of Intellectual Property Rights' and explains that "Article 27 allows member states to prohibit the patenting of 'plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological or microbiological processes'. But she also explains that Article 27 states that 'Members shall provide for the protection of plant varieties either by patents or by effective sui generis [special purpose] system or by any combination thereof.'"

⁶ <https://www.theguardian.com/world/2019/nov/15/evo-morales-indigenous-leader-who-changed-bolivia-but-stayed-too-long>

⁷ <https://www.youtube.com/watch?v=4ZIMpsJxrEk> UNESCO: List of Intangible Cultural Heritage in Need of Urgent Safeguarding - 2017 URL: <https://ich.unesco.org/en/USL/00658> Description: 'Whistled language is a method of communication that uses whistling to stimulate and articulate words.'

⁸ Rayner, A. https://en.wikiversity.org/wiki/Natural_Inclusion

⁹ The secret language of trees - Camille Defrenne and Suzanne Simard, <https://www.youtube.com/watch?v=V4m9SefyRjg>

¹⁰ https://www.ted.com/talks/suzanne_simard_how_trees_talk_to_each_other?language=mg

¹¹ <https://www.cnn.com/videos/us/2020/03/19/coronavirus-jane-goodall-acfc-full-episode-vpx.cnn>

¹² <https://www.aljazeera.com/news/2020/04/chief-coronavirus-worst-crisis-wwii-live-updates-200331233659496.html>

¹³ Morrison, S. 2020 World at risk of famines 'of biblical proportions' due to coronavirus pandemic, UN warns cited by Evening Standard, 22nd April, 2020, accessed 22 April, 2020. The article cites David Beasley who heads the World Food Programme. <https://www.standard.co.uk/news/world/world-at-risk-of-famines-of-biblical-proportions-due-to-coronavirus-pandemic-un-warns-a4420536.html>

¹⁴ <https://theconversation.com/what-will-the-world-be-like-after-coronavirus-four-possible-futures-134085>

¹⁵ Ironically, the Western world is covering its face in a way that would have been unheard of previously.

- ¹⁶ <https://www.worldometres.info>, https://covid19.who.int/?gclid=CjwKCAjwqtj2BRBYEiwAqfzur838XKsBBxiJUxRm3yAjpZ0Z2sXKIbq-hJNGhm-a81Rmt7fr08KGSBoCgggQAvD_BwE
- ¹⁷ Higgins, P., Short, D. & South, N. 2013 Protecting the planet: a proposal for a law of ecocide. *Crime Law Soc Change* **59**, 251–266 (2013). <https://doi.org/10.1007/s10611-013-9413-6>
- ¹⁸ <http://thecodedoc.com/en/home/>
- ¹⁹ In this source, Rayner (2010) explains: 'Hence the inescapable truth is that the ecological and evolutionary sustainability of natural life forms, from the cells and tissues in a human body to the trees in a forest depend upon close attunement with the diversity, complementary nature and changeability of all within their neighbourhood, to which they themselves contribute. When energy supplies become scarce, sustainable living systems pool and redistribute internal resources within integrated structures and survival capsules, they do not compete to proliferate faster on the dwindling supplies.'
- ²⁰ See Dawkins (2019) for an explanation that draws on computer simulations of emergence that explains the importance of bottom-up creativity.
- ²¹ <http://www.news.uwa.edu.au/201204034491/research/talking-plants>
- ²² Talking plants – Futuris <https://www.youtube.com/watch?v=p75Jw7gkmuQ>

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