ECOCENE POLITICS

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Lives

Modernity is where human exceptionalism has thrived—the idea that humans are special among nature's creatures, simply by virtue of being human. This amounts to a secularized theology, where people are God-like, even in the absence of an explicit creator. Ecological thinking is rendered impossible by this founding assumption of a difference in kind between people and everything else.

Sideways, small thinking that pays attention to multiplicity requires us to complicate the idea of living, whether this means the idea of a human or of anything else. Thankfully, many have already started doing this work, and in this chapter, I want to take stock of several crucial ideas for re-dimensioning humans in the Ecocene. I also want to offer several others that I think can make good allies.

Any embodied being must exist within a network of relationships: it is strictly impossible to conceive of radically solitary embodiment. This fact forces us to start our investigation with the interplay of lives and their surrounding worlds, because without a world it is impossible to consider lives. What does this interplay look like if the world is voluminous and fundamentally mysterious?

One route into this problem is given by the resurgence of the concept of Gaia in a series of works concerned with the Anthropocene. In particular, Isabelle Stengers and Bruno Latour have inherited this concept from James Lovelock and Lynn Margulis, transforming it—as good heirs do—into something else, namely a concept more amenable to politics than the original. But before we get to the political implications of Gaia, it is useful to take stock of how it first appeared.

Lovelock is widely credited with the creation of Gaia theory. As he recounts the genesis of his own thought in *The Ages of Gaia* (1995), it

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all started at NASA, where he was employed to help in the mission of finding life on Mars. He considered the work of his other colleagues unsuited to the task, because of the methods they were employing, which were more or less biased by their expectations of a fundamental similarity between life on different planets. He therefore formulated his own hypothesis:

> [...] the most certain way to detect life on planets was to analyze their atmospheres. [...] life on a planet would be obliged to use the atmosphere and oceans as conveyors of raw materials and depositories for the products of its metabolism. This would change the chemical composition of the atmosphere so as to render it recognizably different from the atmosphere of a lifeless planet (1995, 5)

This idea suggested to him that Mars was indeed a dead planet, as it had a stable atmosphere that indicated the lack of living organisms that would modify it through their metabolic interactions with the environment. As a kind of control for this hypothesis, he started looking at the atmosphere of the Earth, which is characterized by fluctuations that are explained through the activity of the living. It is well known, for example, that the atmosphere of the Earth at the beginning of life, a little less than four billion years ago, was devoid of oxygen. Anaerobic bacteria are the first ones to have appeared in the ocean, but their evolution gave rise to other kinds of bacteria that produced oxygen as a result of their interaction with the environment. This great event is the origin of oxygen on earth, a gas that is poisonous to the first inhabitants of the planet. Indeed, anaerobic bacteria survive today, but only inasmuch as they do not come into contact with this deadly gas.

On Earth, gases "are in a persistent state of disequilibrium". Current release of CO_2 through the burning of fossil fuels is a case in point: human metabolism with the environment is producing by-products—CO_2—that are radically modifying the atmosphere. The basic process is what has gone on since the beginning of life on Earth. It is the quantities that we are injecting into the atmosphere that are so dangerous for our own thriving.

Lovelock therefore argues that organisms create the conditions of their own flourishing, which is strictly true. But they can only do so if there is an abundance of creatures: "life could not exist on a planet sparsely, except at the beginning or the end of its tenure", because

there needs to be a critical mass of interactions with the environment and between organisms in order to have a discernable effect on the atmosphere, and therefore on the conditions of life itself. "The evolution of the species and the evolution of their environment are tightly coupled together as a single and inseparable process". Lovelock concludes that Gaia is a living superorganism, and this conclusion has generated controversy and facile dismissals of his overall insights.[1]

The original formulation of the Gaia hypothesis relies on systems thinking, and therefore is at the scale of the planet as such. It is crucial to note that this scale is only possible because of the Earth's provincialism within the Universe. It is only because the Earth is one among many planets that the global scale of analysis can exist. If there was nothing else but the Earth, it would not be possible to conceive of a global scale. So even the largest scale of analysis really gets its force from being conceptualized in relation to something else that renders it 'local' in some sense. Within the global therefore rests the demand to think locally, which is something that I have argued an ecologically grounded politics requires.

This pull towards the surface of the planet was eminently followed through in the work of Lynn Margulis. She was instrumental in developing the idea of Gaia together with Lovelock, but in addition to focusing on the whole system as the unit of analysis, she also developed the thought of particular interactions and the ways in which organisms cannot be considered individuals, an idea that I will come back to later. The only true individuals, she argues, are bacteria. Beyond that, there are only relationships and processes, a comfortable disequilibrium between creatures and environments, which become inseparable.

Throughout her career, she has shown how what appears to be an individual creature is always co-created. This kind of diffused symbiosis means that creatures never evolve, never change as individuals, but rather as unlikely concrescences in a perpetual exchange of roles, attributes, services, and so on. This feat is also accomplished through

1 Dismissal of the Gaia hypothesis is common in social science, perhaps more so than in the physical sciences. It is usually not argued for, but relied upon for the supposed obvious absurdity of the hypothesis. For example, Malm (2018), in critiquing Latour, takes it as a sign of the latter's weak arguments that he relies on Gaia's "discredited" idea. This is simply not true—the idea is not discredited; if anything, it is becoming more and more important.

the exchange of genetic material, a discovery that seriously questions the primacy of genes in what are called individuals. The view of life that Margulis championed is an enchanted one that cannot be abstracted from generative interactions; it is nothing but generative interactions.

The genesis of the idea of Gaia is important in order to understand how it develops into political theory. Stengers and Latour each have their particular versions of Gaia, and I will mostly rely on Stengers' conception. However, I want to first discuss the general contours that I think they nonetheless share and that can serve us well in laying a different kind of political foundation.

Gaia is an old name, so old in fact that she "is not a goddess properly speaking, but a force from the time before the gods" (Latour 2017, 81). As a *force*, she is portrayed by Hesiod as a "figure of violence, genesis, and trickery" (83), one that "emerges in great outpourings of blood, steam and terror" (81). According to Stengers, what Gaia retained of her old self was the idea of force, expressed as the irruption of processes within human life that are inherently indifferent to human life itself (see Stengers 2015, 44). It is also important to dwell on the concept of terror, which I will argue is shared among all kinds of creatures. Gaia terrorizes, a fact that is becoming clearer as moderns are relearning the sheer shock that the forces of nature can provoke. This kind of deep, near-debilitating fear is necessary for the survival of humans as much as owls, spiders, or bees. Sheltering from devastating forces is a necessity that is brought home by terror.

There are several aspects of this conceptualization of Gaia that Latour and Stengers take up. First, there is the idea that our designation of the world as abiotic, and the living as biotic, is wrong because the two are strictly inseparable. It bears noticing again that planetary science, of which Gaia is an offspring, is not the science of ecologists, but rather that of astronomers and geologists (Latour 2017, Lovelock 1995). In other words, Gaia as planet becomes strange and interesting when compared to other planets (as we saw Lovelock do) that—as far as we can tell—are indeed strictly abiotic. The Earth is not a lifeless planet because of the inseparable interaction between life and its conditions of existence, which are themselves nurtured by life. This is what makes the Earth interesting and special. Every major characteristic of the planet can be traced back to interactions of life and matter. The only exception is the

geological makeup of the Earth, which is in fact the only aspect of our world that makes it comparable with other bodies in space *as* planets.

The other characteristic of Gaia that is of great importance is the stochastic nature of its particular processes. There is no necessity for Gaia to be the way that it is or to endure in the form in which we may observe it at any particular moment. This is also where Lovelock's conceptions are left behind and those of Latour and Stengers take over. Though it is true that the living have a decisive role in material affairs, this does not also mean that natural processes (formed, as we now know, through complex biotic-abiotic alliances) take sides. Here Latour and Stengers also seem to differ. For the former, it seems as if the self-interest of any particular being somehow enacts conditions that favor its own life. For Stengers, Gaia is the name of an intrusion first and foremost, which would imply that it is radically indifferent to the affairs of any particular being. It is only on aggregate that we may discern patterns that seem to favor one being over another, but from any embodied point of view Gaia appears as a violence that must be endured, a whimsical force that may or may not blow in the right direction.

These differences notwithstanding, there are some important consequences of thinking about the world in terms of a *living* world. This need not mean that the world itself is alive, which is an interpretation often given to Lovelock's Gaia, one that he himself has encouraged, though with much more nuance.[2] Instead, this simply means that we cannot conceive of a world within the terrestrial realm (so excluding other planets) that does not owe some of its fundamental characteristics to the living. If we conceptually strip away life from the Earth, it is no longer the planet that it is; it becomes a planet like any other, namely dominated entirely by abiotic processes. This, though it may at some point in the future become true, is for all intents and purposes (that is, from the point of view of any living creature) strict fantasy. The planet we live on is what it is because of the living.

This point is deceivingly simple, but it has tremendous consequences. The most important one is the realization that the figures of the globe

2 For Lovelock, the aliveness of the planet is related to an unintentional intelligence that can be inferred as a characteristic of Gaia as a superorganism. The planet's *active* self-regulation leads to the idea that it functions as an organism that has its own metabolism and states of homeostasis punctuated by disequilibrium. He therefore concludes that the Earth is alive "only in a physiological sense, and therefore the science of studying the planet should really be called geophysiology" (1995, 11).

and that of Gaia are strictly incompatible. Latour develops this point at length in *Facing Gaia* (2017), concluding that "[...] one can grasp nothing about the intrusion of Gaia [...] if one confuses it with the contemplation of a globe" (222). Why? Because the image of the globe mischaracterizes what is proper to Gaia in every conceivable way. To start with, the globe is a planet like every other, whereas Gaia is entirely special within what we so far know of planets. Thinking at the level of the biosphere also mischaracterizes the way in which the Earth has become what it is, namely through a radically contingent series of interactions that continue to change and to determine 'the global'. In other words, the global level of analysis, viewed through the concept of Gaia, is derivative of smaller-scale processes, and not the other way around.

Instead of a whole system, Gaia is a patchwork of processes that conspire to generate greater (and always temporary) effects. The best image for Gaia is not the sphere floating in space, as if it were *as a whole* that it became significant. The more appropriate image is, following Latour, that of the skin, perhaps the flesh, of a body. The sciences have shown that the space of life, and by extension the precise space that makes Gaia what it is, is extremely thin, a matter of mere kilometers extending from the mid-atmosphere to the subsoil.[3] That is it. That is the where and the how of life, the area that Latour calls the critical zone (2017, 2020), both in the sense that it is critical for generating the qualities of life, and for the battle for particular ways of living.

Gaia as flesh carries with it a whole new political potential than that of the globe.[4] "The Globe offers a geometric way, as it were, of representing the supreme arbiter that reigns over all conflicts—and that consequently depoliticizes them at once" (Latour 2017, 238). The totality of the globe all too easily slips into techno-managerial plans to save 'the biosphere', while radically ignoring the fact that the issue of salvation is always located on the surface of the flesh, in the everyday decisions

3 As argued in Chapter 2, the soil itself is currently seen in soil ecology as a skin.

4 I have argued extensively that descriptions of the world are fundamental for understanding possibilities for action and are therefore always tied to political projects. It is therefore also the case that describing Gaia at the level of the globe also has political potential, but of a kind that is inimical to the political theory I develop here. The political project associated with the globe leads directly to proposals such as geo-engineering that are willfully blind to the living processes that make up the planet. This blindness is a direct result of their level of analysis.

that contribute to its health. In other words, there is no question of holism in the thought of a living world, but always already of particular situations, defined territorially and dynamically (that is, without fixed borders), that intervene in very particular local configurations. This *is always the case*. The global does not obviate it, it simply hides it. As Timothy Mitchell has shown, the grand politics of carbon on a planetary scale is nothing outside of its multiple local instantiations and variations (2013). Talk of the global at all should almost never happen, except as the cautiously drawn sum of partially counted interactions.

Refusing the holism of the global opens up the radical diversity of lives. This gesture of refusal entails a whole constellation of concepts that accompany the obsession with totality and unity. For the present purposes, two others are important to signal out: the ideas of balance and harmony. These twin notions accompany big, global thinking; the distance required by such thinking makes it seem as if the whole is ordered in a particular kind of way, reaching towards equilibrium. This illusion is shattered by the thought of Gaia as flesh, which forces us to look at particular interactions within a particular time. There are no overarching norms besides whatever norms the participants collectively decide upon. This is why politics is crucial to Gaia, but expelled by the balanced globe. And this is why there is a profound need for political concepts that are rooted in disequilibrium and fleshy messiness.

Ecology itself, particularly in its applied branches, has been infected by the thought of equilibrium, but ecology is also where some partial ways of conceptualizing the flesh reside. William Drury, in *Chance and Change* (1998), argues that "nature works on the basis of one-on-one species interactions, variability, and chance" (1998, 1). What he calls "comfortable disorder [...] is what makes the natural world work". He presents a detailed naturalistic argument for why "chance and change are the rule, the future is as unpredictable to other organisms as it is to us, and natural disturbance is too frequent for equilibrium models to be useful" (7).

This takes the previously-sketched thought of Gaia as a thin margin of liveliness seriously, and does so from a strictly ecological, naturalistic perspective, through a series of field observations that reveal both how the mind (trained in a particular kind of way) imposes order on the world, and how the world resists such imposition. One way in

which the imposition can be resisted is indeed through a focus on the lived experience of organisms, which in the concept of Gaia cannot be counted out as irrelevant but instead become the bedrock of any worldly conception. The way in which individual creatures behave is, to echo the perspectivism we saw in Chapter 2, both radically similar (they follow their interests in almost perfect ignorance of the future) and radically discontinuous (owing to differences in embodiment). Naturalist fieldwork is in this sense very close to perspectivism and multinaturalism and, inasmuch as it acknowledges this common pattern of thinking, it is also that which discovers a heightened level of stochasticity in the environing world.

The uncertainty of the world mirrors that of the individual creature. Drury says that "individual organisms cannot afford consistency", precisely because the world around them does not allow for it. It may even be that, because of the multiplicity of biotic-abiotic connections, the world and its living beings mutually destabilize each other, creating the "comfortable disequilibrium" that allows for temporary flourishing. They are forces in their own right that manage to maintain a working disequilibrium *because* they are at odds with each other.

Latour and Drury both stress the fact that, seen from the scale of experience, individual relations are not infinite. Drury spends a great deal of time showing how in any particular environment creatures only really interact with, and therefore care about, a very limited number of other creatures. This is important, and I will come back to it. Equally important though is the implication that, due to the constancy of change, there is always a margin, created by uncertainty, that allows creatures to adapt to new conditions and to create new subsistence relations. This is the sense in which the living cannot afford consistency.

From this point of view, the very consistent model of modern development is its own worst enemy, precisely because it forces environments to the preferences of a particular kind of creature. This is bound to catch up with it in time, precisely because of natural variability, which is further intensified by cumulative human activities. By uprooting itself from territorial matters, modernity condemns itself to a deadly consistency. Instead, the politics of the living must be grounded in inconsistency and change.

No single creature can have a complete view of the world, for three reasons. First, the world changes continuously, partly in response

to the actions of creatures, and so it can never be frozen in a single state. Second, each creature has a limited sensory range, and can thus never adequately represent to itself the full spectrum of space. Third, creatures are interested in a limited number of things, but these are in turn not necessarily representative of the wider situation, nor indeed are they the most important constitutive elements of that situation, nor are they 'proxies' for other, unseen elements. So, creatures are liable to undermine their own maps of the world by stepping on landmines that they do not see, because they do not know of their existence.

Creatures are also routinely wrong about what they expect to find where. This is part and parcel of evolution, because not finding an expected food source, for example, jolts one out of complacency and forces them to expand their map. Whether descriptions are outright bad or merely good enough, depends on the actions that they make possible. In any given situation, descriptions draw the boundaries of what is possible, and tell participants how, where and to what end the territory can be used. From this perspective, evolution is not just a matter of genetic mutations that are positive enough to pass on to future generations. There is also an interaction between the representation of the world by creatures, its continuous modification by these and chance events, and the subsequent adaptation of organisms to their own interaction with the world.

The territory frustrates the expectations of the living and forces them to adapt. This applies to bacteria and fungi as much as to bears. Each creature makes the best of its environment, and does not move about blindly. It uses an impression of the territory, whether inherited or built from scratch, that allows it to move about in semi-meaningful ways, which themselves modify the possibility of future meaningful movements, in a kind of heuristic evolution. It is not that descriptions are always one step behind reality; reality itself—or the characteristics of voluminous space, if you will—is hugely determined by these partial creaturely movements that unknowingly, and sometimes willingly (but also always to some extent unknowingly), modify their territory according to the failures of their descriptive apparatus.

From an embodied perspective, the world is but a series of local and fragmented interactions that matter to the experiencing subject. Everything that falls outside of this experiential range is, strictly

speaking, uninteresting. However, anything at all has the capacity to become interesting, inasmuch as conditions change to make it so. The Ecocene is just such a radical change of condition for humans, both allowing for and demanding a radical expansion of what matters to humans. Political thinking in the Ecocene cannot be holistic, but must focus on the particular interactions that particular beings enjoy and need. The catch is that humans should be acutely aware of their own ignorance, as there is a vast reservoir of unknown relations that may be crucial to us but about which we know nothing.

The centrality of ignorance amounts to a perpetual commitment to observation and study, to finding out exactly what the nature of our community is. Given, indeed, both chance and change, this is a never-ending task, and a fitting one, I think, for basic political practice. Creatures in the abstract may only be circumscribed by the relations that they experience, but politics in the Ecocene knows better than thinking that its own knowledge of 'the biosphere' is complete, or can ever be. Ignorance is a cousin of uncertainty, both sharing in the genealogy of change as the norm in natural processes. Adapting to the requirements of ignorance and change requires us to break with the certainties of modernity. This kind of radical break is happening, and will continue to happen.

The biological sciences, as well as the political ones, have grown accustomed to thinking in terms of individuals. This is currently undergoing a radical reshuffling. In biology, for example, the holobiont is steadily enriching our understanding of what makes an individual. The argument is that "neither humans, nor any other organism, can be regarded as individuals by anatomical criteria" (Gilbert et al. 2012, 327). The radical nature of this statement is easily glossed over, but it bears pointing out that anatomical criteria have traditionally been considered the most *solid* ones for identifying, and analyzing, individuals. Instead, the holobiont "has been introduced as the anatomical term that describes the *integrated organism* comprised of both host elements and persistent populations of symbionts" (328, emphasis added). Lynn Margulis did much to pave the way for this work. As she reminded us, only bacteria are individuals in any meaningful sense (2000).

Gilbert et al., as well as others (see for example Tauber 2017), demonstrate that any anatomical feature can only be accounted for as

the common work of several different kinds of processes, all of them accomplished through cooperation. It is pointless to ask what the ultimate unit is, in an attempt to save some version of individualism.[5] There is nothing but collective processes, all the way down. This is as true for human cell permeability (regulated through microbial symbionts; Sariola and Gilbert 2020) as for plant nutrition (accomplished through mycorrhizal networks; see Sheldrake 2020). In other words, multiplicity, variability, internal and external relationality, and enduring forms of mutual cooperation seem to be the rule, rather than the exception, in the organization of life.

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The holobiont complements the ideas of multiplicity and relationality explored in Chapter 2. The perspectivist conception of a fundamental self-difference internal to any particular being is a literal self-difference, an infinite multiplicity.[6] Alongside the ecological necessity of change and variability over time, we are well accustomed to taking the existence of internal multiplicity as a fact, albeit a boundless one: there is no boundary around the potential aggregative nature of what we call an individual. Multinaturalism, perspectivism, and ecological thinking together propose a richly textured reality of multiplicity, both in the abiotic and the biotic realms.

Distinguishing between these two realms is of course important, though for a project of mutualism it is secondary to pointing out their

5 The ultimate argument for the actual existence of individuals would have to be genetic: at base, there are different kinds of organisms with their own genes that cooperate in specific kinds of ways. But this turns out to be false. "Genomes evolve in such a manner that they need their partners to achieve complex genetic integration. None of the three species in that symbiosis has a "complete" genome. It is the holobiont that does. We are not individuals by genetic criteria" (Gilbert et al. 2012, 330).

6 It is not just perspectivism that overlaps in interesting ways with the idea of holobiont. Māori philosophy, for example, also has a view of the body that is similar to the multiplicity sketched here in important respects. As Salmond explains, "body parts are often spoken about as agents in their own right, alongside the person themselves—for example, [...] turn and look at me, you and your eyes. [...] The body was at once a micro-cosmos and a living community" (2017, 200). It stands to reason that, if the body is conceived of as a community, different parts of this community may express themselves in particular ways in different times, therefore imparting a form of agency on what, from a strictly individual perspective, appear as 'parts'. For more on Māori philosophy and its radically relational ontology, see Chapter 5.

interrelations. In other words, the question of their difference matters inasmuch as it reveals the mode of their sameness. For example, the biotic and abiotic conceived as infinite multiplicities differ in terms of intensity, that is to say in terms of the rate of change over time and the nature of their respective endurance through time. The abiotic and the biotic are like two streams moving according to different internal rhythms, but these rhythms are what they are because of their interrelations, not because of the internal coherence of 'the biotic' or 'the abiotic'.[7]

Both multinaturalism and ecology foreground the ideas of multiplicity and variability. From the point of view of a particular individual, what then becomes crucial is the potential availability of space for expressing their own kind of variability, given certain fluctuations in environment. The ecological idea of habitat redundancy is therefore crucial for a terrestrial politics because it is the condition of possibility for successful adaptation and change. In ecological science, the idea of habitat redundancy simply points out that a multiplicity of marsh habitats, for example, is important for any particular kind of marsh-feeding bird, because it is what ensures their capacity to adapt to environmental change. So, if conditions change here, they can move there. If there is nowhere to move, the necessity of change leads the particular beings under pressure into a dead-end.

But there is no reason to suppose that the idea of redundancy only applies to 'others', and not to humans as well. Inasmuch as the characteristics of multiplicity, variability and change define the world of the living as such, the need for redundant habitats also applies to humans. It is a popular belief that human beings are so adaptable that they have settled in all possible habitats. This is true, but it is also false, in the sense that this process of settlement, particularly under the guise of modernity, has resulted in a radical simplification of human habitats and their respective homogenization.[8] In effect, the expansion of human

7 Distinguishing the biotic and abiotic on the basis of temporal intensity is itself problematic at the margins: thinking about millennial trees, for example, reveals how the borders of matter and the living are themselves porous. Peter Wohlleben, for example, speaks of his discovery of a tree stump that should have long ago disappeared, given its great age, but which was nonetheless alive through its root association with neighboring trees. Similarly, the oldest pine trees discovered stretch back multiple millennia, being alive though mostly being made up of petrified wood. See Wohlleben's popular *The Hidden Life of Trees*.

8 See the parallels here with the discussion of space in Chapter 2.

habitation in all possible biomes has also led to the homogenization of these biomes and their respective impoverishment (in terms of interactions between participants in those spaces).

Redundancy of habitat is crucial for humans just as it is for all animals, but the modern mindset has made it increasingly hard to recognize this fact, or to recognize that it is not just a matter of quantity (how many spaces are available), but primarily of quality (the exact details of each potential habitat). By enlarging the human presence in a fundamentally similar way in many different kinds of environments (as the project of modern development has done), societies have begun to slowly cut the branch from under their own feet. Whatever future disturbance will occur (this is impossible to predict exactly in terms of content, but formally guaranteed) will, under conditions of simplification and habitat homogenization, be much more deadly than if there were qualitative redundancy.

Modern development has tried to muscle out environmental disturbance by literally hardening the environment. Dams, canals, barriers of all sorts, straight lines that are predictable, all of these features of the 'developed' landscape are meant to insure the gamble of uniformity. In the Ecocene, this kind of approach reaches its limit: it is not disturbance as such that is the news, but rather the kind of disturbance that makes our barriers obsolete. All of a sudden, the need for qualitative habitat redundancy has caught up with us.[9]

There are ways of renovating relationships between humans and all other inhabitants of worlds, such that the quality of potential habitats is ensured. Some of those ways will be presented in Chapters 4 and 7. The point I want to make here is that the ideas of multiplicity, variability, and redundancy are much more firmly grounded in ecology and,

9 One deadly aspect of homogenization is the quintessentially modern practice of paving. "Modern contemporary society has a new perfect tool for the complete destruction of soils: constructions. We are not speaking about construction of new houses and dwellings for still increasing numbers of population. We are speaking about one- or two-storied shopping centers, warehouses and administration buildings, roads, and airports. They occupy hundreds of thousands of square kilometers where the soil was dug out and replaced by concrete, pavement, and asphalt" (Kutílek and Nielsen 2015, 18). This process, basically synonymous with modern development, permanently annuls the generative properties of soil by replacing it with hard surfaces that are guaranteed to disrupt processes, such as hydrological circulation, that had ensured variability and redundancy. This will prove increasingly deadly.

dare I say, ontology than the dominant idea of 'diversity'.[10] Diversity as such (including biodiversity) rehashes, perhaps unwittingly, grand systems thinking, but misses the point of what makes for a rich natural community: it is not diversity—sheer number—as such, but rather the interplay of multiplicity, variability, and the redundancy of potential habitats.[11]

For humans as well as for other gregarious animals, the availability of different kinds of habitats is not only a survival necessity but is part and parcel of what may be called their quality of life.[12] Elsewhere (see Tănăsescu 2017), and in dialogue with the work of William Jordan on environmental restoration (re-encountered in Chapter 6), I have proposed that the redundancy of variable habitat (achieved through restoration) is directly relevant to the cultural richness of future human beings. Put simply, there are a handful of ways in which one can relate to parking lots, so if everything becomes a parking lot, the very possibility of cultural diversity is foreclosed. This is so because of the strict relation between ontological multiplicity and variability and its sublimation into cultural, expressive forms. But this may hold true for other animals as well. We can easily imagine that when elephants are confined to just one of their potential habitats, elephant cultures become much poorer too. The same is true for an incalculable number of different embodiments.

The physical simplification of an environment has long been used by colonizers as a great tool of subjugation, precisely because cultural resilience is so reliant on worldly multiplicity. The settlers wishing to subdue the Native Americans on the American plains managed to do so by reducing the number of buffalo. Settlers everywhere, from New Zealand to Australia to the Americas and Africa, as well as from the internal colonial projects of modern development within Europe itself,[13]

10 For a sustained critique of biodiversity, see Deliege and Neuteleers (2015), and Youatt (2008, 2015).

11 Much of the literature on biodiversity reduction, particularly as caused by 'invasive species', comes from the study of islands. However, nothing is an island except an island, and it is because of non-redundancy that islands are so precarious and amenable to violent shifts.

12 This is also true if we interpret quality of life as health. As Sariola and Gilbert (2020, 13) argue, diseases like asthma and phenomena like antimicrobial resistance are "expected consequences of lower resilience to perturbations".

13 Nation building in Europe itself has also applied the colonial recipe of simplification. The nation could only emerge as a homogenous category through the literal reduction of multiplicity, both in natural and cultural terms. The annexation of

have tended to homogenize landscapes, and this has always been crucial to colonial ambitions. Modernity in this sense is the ultimate colonizer, as it has been (and continues to be) extremely successful at simplifying habitats, particularly through the project of development. The contemporary dramatic decrease in sheer numbers of animal lives, often termed the sixth mass extinction, is a direct consequence of the modernist drive for reduction in complexity.[14]

Part of the difficulty of accepting the centrality of multiplicity and change is the dominance of the idea that each species has its own place of life, its own 'niche'. As Drury (1998, 157) reminds us, "rather than specializing on a narrow band of resources, each species occupies a diversity of habitats, and habitats themselves are conspicuously heterogenous. We must appreciate as well that during most of a species' history nearly all habitats differed greatly from what we see today, in part as a result of the impact of environmental events such as ice ages". The idea of a niche may have a particular circumscribed usefulness, but as a model for how the world works it is radically insufficient.

In principle, anything can live anywhere inasmuch as holobionts manage to make a living there. Unfortunately, the applied branches of ecology have been less than faithful to the insights of their own founding science, and instead have embraced discredited social scientific concepts to apply to the natural world. Conservation biology has therefore become one of the last places where one can use designations such as 'invasive', 'alien', or 'non-native species'.[15] It has also led to extreme efforts to keep

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new territories by the nation state has more often than not gone hand-in-hand with engineering projects that 'tamed' natural variability and, by extension, population variability. Also see discussion of the Danube Delta in Chapter 2.

14 Simplification need not always take the form of an intentional project (though it often does—the best example is perhaps the worldwide drive to extinguish wetlands and render rivers predictable). There are many ways in which modern development, for example, simplifies habitats and is deadly to a staggering number of creatures, simply as a 'side-effect' of actions that are otherwise deemed necessary for human well-being. Think, for example, of the effect of lighting on ecological dynamics: artificial lighting is extremely disruptive to creatures adapted to the dark and is itself responsible for a good slice of the reduction in insect populations everywhere. Yet obviously in this case lighting is not employed in order to simplify habitats. Rather, lighting is understood narrowly as a benign intervention for human well-being, and all its other effects become invisible from the point of view of development.

15 It is significant that most of the literature on the pernicious effects of such invasive species comes from islands, which, as we have seen in footnote 11, are poor examples for the vast majority of habitats on earth.

habitats composed in a certain way, as if those were the only ways in which they could be composed, by natural law. Instead of focusing on the redundancy of potential habitats, conservation biology has all too often focused on a legislated form of diversity for habitats that effectively become islands. The belief that a certain arrangement of 'diversity' is the best possible one is pervasive and surprisingly stubborn, though it is thankfully increasingly challenged.

> An important portion of the order ascribed to landscapes is supplied by the perceptions of the human observer. Keystone species in vegetation made up of relatively few species attract attention and are called dominant or primary. [...] Some species are called rare, yet most species occur in relatively small numbers. And, for our own reasons, we call some species attractive and others weeds or pests (Drury 1998, 182)

The Ecocene can no longer afford this kind of fundamentally modernist thinking. Instead, heeding Latour's call, the Ecocene forces a coming-down-to-earth, whether violently abrupt or willfully sought out. It also forces a perpetual rethinking of the fixed concepts we use to understand the world, whether these be ossified criteria of belonging (native versus alien) or racing to find *the* thing that makes a situation work (keystones, niches, autochthons). On the other hand, thinking in terms of the planet, the globe, the grand system, is what stands in the way of our responses to planetary convulsions; radical localization and reterritorialization are needed, such that multiplicity and variability can be given adequate space to develop. A small politics of open-ended assemblies, defined simply in contextual and changeable terms, is what the dawn of ecology, the irruption of Gaia, demands.

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From an embodied point of view (the only point of view available, in the final analysis) the characteristics of the world (volumetric multiplicity) and of the living (intense multiplicities) are also problems to solve. In other words, the interaction between creatures and the world consistently throws up the problem of survival, which must be actively sought out. Doing nothing literally leads to wilting away, because living is a constant process of readjustment to a constantly variable background. This means that each creature, whilst being directly interested in its own survival, also fundamentally shares in the universal problem of survival. In other

words, each creature has an innate basis for approximating another's tribulations, inasmuch as they are similarly structured by the very fabric of a living world.

This is in part the insight that Descola and De Castro draw out of animism. As Peter Skafish explains it,

> the subject is confronted in its experience not with a reality where other beings are initially objects but rather by a seemingly limitless panoply of other subjects, whose specific identities are derived from but also concealed by their various kinds of bodies. That is, beings are experienced as subjects that are only different from humans in that they are clothed in strange, exotic bodies, and truly understanding these subjects (who they are, and what and how they think) therefore requires understanding their bodies (80)

But attempting to understand the body only works because of the fundamentally similar nature of being embodied, that is to say because of the similar demands that enduring through change presents to any embodied subject.

Rich Borden (2017), commenting on Whitehead's notion of process (as opposed to matter), argues that "what we take to be 'things' are actually more like 'events'; akin to standing waves that come and go over time, though they may appear to be permanent, they are variable, transitory concrescences". Being situated at the crest of such a standing wave—the embodied perspective—cannot but constantly present a challenge, one that is intuitively shared across embodiments. Even though bodies differ greatly, they also share a kind of fellowship, given by the relationship of their very embodiment to the dynamic volumetric spaces in which they live. In other words, all embodied creatures share, in light of being bodies, in some degree of constitutive vulnerability.

The notion of vulnerability is important for understanding what may act as an onto-normative grounds for imagining political communities. Following the discussion above, vulnerability is a feature of lively existence in the same way that multiplicity and variability are. In this sense, vulnerability cannot be construed as merely a lack, which has been the usual way of presenting it in political thinking. The vulnerable is not lacking something, but rather any being participates in the fact of vulnerability as an openness to change. This is what I call constitutive vulnerability, which is a power, the power to be changed and therefore to

endure through change. Adaptability in general is not a willful process, but rather a blind search whose very condition is vulnerability, that is to say creaturely openness towards the tribulations of the world.

Vulnerability is too often associated with powerlessness of some kind, and therefore is investigated through either passivity (Harrison 2008 examining sleep, insomnia, and death) or harm (being vulnerable, in Butler's sense). I don't mean to deny those senses of the word. However, they do not exhaust the concept. An ecological view of vulnerability reveals it as the condition of possibility of change and successful adaptation. In this sense, the vulnerable are the more powerful because, in being open to new relationships, they can also survive changing environments. The idea of an ideal fit between organism and world (nativism) infects thinking to the point where it becomes hard to recognize that being slightly out-of-synch is what has allowed, and continues to allow, a multiplicity of forms of life to flourish. The opposite of vulnerability is not power or strength; it is rigidity.

In this ontological sense, the chances of creaturely endurance are directly proportional to how vulnerable the creature is, in the sense of how structurally open towards new possibilities that natural variability may offer. This sense of the term hails from the previous discussion and remains on a strictly ontological level. However, the description of creaturely existence as sharing in constitutive vulnerability offers a basis for an ethical (and therefore political) concept of vulnerability as denoting a structural similarity between beings that is crucial for understanding political practice in the Ecocene.[16]

We have already seen the particularly Amazonian, animist take on this concept. Now, I want to turn to another rich source that can help spell out the ways in which constitutive vulnerability imparts, on human beings, a duty to try to understand the position of the other. This duty is itself made possible by constitutive vulnerability. In other words, inasmuch as a fundamental kind of fellowship in the community of life can be conceptualized, it requires of human beings a vigilance as to the potential application of this kind of fellowship. This is closely related to the point about our vast ignorance as to how the worlds around

16 Ethics and politics are concerned with how to act based on what is. It is in this sense that descriptions of the world matter, greatly. How one characterizes what is has everything to do with how one may act.

us are composed. This ignorance, wedded to the fact of constitutive vulnerability, demands that humans be *a priori* open to (if not actively seeking) imaginative extensions of their creaturely fellowship. People regularly do this, and in fact it takes effort and sustained violence to stop people from identifying with landscape features and other lives in a fundamentally sympathetic way.[17]

The growing literature on care (for example Puig de la Bellacasa 2017; Martin, Myers, and Viseu 2015) is very important for the transition from constitutive to ethical vulnerability. But it is not about caring for one particular match between a kind of life and a kind of world, but rather caring for the very possibility of dynamic matches. Care responsive to constitutive vulnerability is about helping creatures endure *despite* the vicissitudes of life.[18] It is, in this sense, to enter into properly political community with a growing number of existents, inasmuch as there is concern for their ability to adapt, and therefore to change and survive. To care for one's child, for example, is not to stunt them in a perpetual childhood, but rather to help them adapt to changing conditions, both internal (given by self-multiplicity) and external (environmental).

I have characterized constitutive vulnerability as a fundamental openness towards the environing world. We have seen several theoretical strains that are already predicated on the ontological dimension of vulnerability, as the very basis for traveling in the direction of a different kind of embodiment. In this constitutive sense, vulnerability is a fundamental part of the ability to endure through time, by changing one's form in relation to the changing environment. Ethically, however, vulnerability tends towards powerlessness and passivity. Is there a sense in which the power of constitutive vulnerability can be extended to its ethical variant?

To find out, I want to turn to Cora Diamond, a philosopher who has produced some of the most evocative work on the moral significance of creatureliness, the feeling of fellowship with another animal, and the functioning of the moral imagination in the context of embodied life.

17 For a detailed engagement with the intuitive movement of the moral imagination through creaturely fellowship, see Crary (2002, 2007, 2016), Mulhall (2008), Diamond (1978, 1991, 2003), Gaita (2016), Cavell et al. (2009).

18 There are fruitful overlaps here with Haraway's notion of response-ability, that is to say, the ability to pay attention to and maintain dynamic assemblages. See Haraway's (2016) *Staying with the Trouble: Making Kin in the Chthulucene*.

Work on vulnerability has largely focused on human beings, in ways that are problematic for a wider political engagement with the Ecocene (as explored below). Diamond's work allows for a concept of vulnerability that is both constitutive in my sense (ontologically grounded), and normative in ways that are productive for wider political concerns.

Diamond has explored the work of the moral imagination in ways that go beyond the mere application of moral judgment,[19] and instead relies heavily on the feeling of fellowship that humans may share with an indefinite number of creatures. She has therefore taken literature as a medium through which the kinds of creaturely connections pertinent to the moral imagination are questioned. Following the arguments presented so far, we could also use ethology, ecology, and critical anthropology as inspiration for how the moral imagination may inhabit the skin of another.

In *The Importance of Being Human*, she argues that "through novels and stories, we are able to see how our pursuit of private ends may conflict with what we owe others; we come, through such literature, to care about the sufferings or the humiliation of a wider range of human beings" (Diamond 1991, 49). Though in this essay she is specifically concerned with the moral significance of the concept of the 'human', elsewhere she shows that the moral imagination functions similarly in relation to other creatures (for example, Diamond 1978).

In discussing a Walter de la Mare poem about a titmouse, Diamond pauses on the expression the poet uses to refer to the little bird as "a traveler between life and death" (Diamond 1978). The fact that the bird "has a life"[20] is not significant because it transmits biological knowledge. Having a life, in this sense, is not a biological fact; it acquires moral weight when understood as participating in the stimulation of a certain kind of fellowship with a creature that, despite vast differences in embodiment, nonetheless participates in the same fundamental process that renders all living things vulnerable.

19 For a Diamondian ethics developed specifically away from moral judgment, see Alice Crary (2007).

20 This expression of Diamond's is contrasted with the idea that having a life is a biological fact. As a biological fact, it is morally meaningless; it acquires moral weight, as it were, when understood as an expression that signals a certain kind of fellowship, allows the listener to contemplate the mystery of another's life, to be touched by someone else having a life to lead.

Through literature, Diamond tends to focus on vulnerability as the expression of an ability to suffer, though she is very critical of strict utilitarian interpretations of suffering as morally significant. Citing Rorty, she argues that literature may help us grasp "the kinds of suffering endured by people to whom we had previously not attended" (1991, 49), but there is no point in trying to quantify just how much suffering. Instead, the idea is that the sympathetic imagination can be made to resonate in the tone of another, that is to say that through literature (but not only literature) we may be able to understand the specific way in which another embodiment relates to the problem of surviving in a challenging environment.

To this end, she comments on Dicken's character Scrooge, who goes from a cruelty of spirit in relation to children to some form of mutual understanding. What changes Scrooge's attitude is not a utilitarian calculation of children's interests. Instead, he can only start to see the importance of other people having interests of their own when he acquires "a live sense of oneself as, with others, bound toward death, of others as one's 'fellow passengers to the grave'" (Diamond 1991, 49). This parallels the idea that imagination permits the embodiment of a titmouse via a similar idea of fellowship in the vicissitudes of life.

Scrooge becomes generous toward children only after he "is touched by human childhood, the vulnerability of children, the intensity of their hopes, the depths of their fears and pains, their pleasures in their play, their joy in following stories" (Diamond 1991, 42). What allows Scrooge to become available to the needs and interests of children is not the force of those needs themselves, but rather the whole state of living-as-child, which is characterized by mystery and vulnerability. In other words, it is a certain kind of moral imagination that Dickens, and Diamond, foreground as fundamentally important. Dickens "attempts to show us how an imaginative sense of the touchingness of childhood, tied to a sense of oneself as child, may be present in acts of humanity, and how its absence may also be felt in what we do and what we are capable of feeling" (Diamond 1991, 42). Having an imaginative sense of what it is like to be a child is discernible in the way we act toward children, with generosity, kindheartedness, and so on. Being callous toward children may reveal a lack of such imaginative bonding.

By paying close attention to how people may act *vis-à-vis* fellow creatures, we can discern the ways in which the moral imagination

may be playing a role in connecting the constitutive vulnerability of embodiment to the ethics of dealing with one another. In Diamond's words, we may characterize actions "by the imaginative activity that enters them" (1991, 41), and this characterization becomes incredibly useful in renovating terrestrial relationships. In particular, it becomes important because it allows us to discern the ways in which imaginative activity always already suffuses multispecies relationships. The way in which people speak of particular trees, or the care that they take with the needs of their pets, the way that they may characterize landscapes as possessing certain powers, goes beyond mere metaphor and instead exemplifies how the moral imagination suffuses ways of speaking and acting.

Literature stimulates the moral imagination regardless of whether we are speaking of human or animal others, and what Diamond allows us to see is that it does so by engaging fundamental mechanisms that are embedded in how we live and speak. In literature, we use the criterion of imaginative identification as a marker of good representation of the characters: we say the author succeeded in representing the character well inasmuch as we can empathically imagine the character's particular subject-position. Stephen Mulhall, commenting on Diamond's use of Dickens, expresses the point of what the novelist is doing as an attempt "to attend to a child *as* a center of a distinctive view of the world, and so to attend to children in their own right" (2008, 8, italics in original). Similarly, what de la Mare's poem suggests is that a titmouse, by virtue of being a living subject, can (and perhaps should) be approached in a way that allows for an imaginative construction of *its* embodied position.[21]

Mulhall develops at length, in *The Wounded Animal*, what exactly it is that the sympathetic imagination relies upon, or rather what it is that is common to embodiment such that sympathetic representation can work. For both human and nonhuman animals, there are certain basic facts of embodiment—"they too are needy, dependent, subject to birth, sexuality, and death, vulnerable to pain and fear" (2008, 32)—that renders them constitutively vulnerable. The vulnerability of being embodied is not a matter of counting an exhaustive list of qualities one

21 There are obvious parallels between this view and the multinaturalism and perspectivism discussed in Chapter 2.

must share in order to be worthy of moral consideration, but rather itself the very basis of our ability to travel in the direction of another and to inhabit her position. Using J.M. Coetzee's Elizabeth Costello as an example, Mulhall argues that it is "the fellowship of mortal creatures that provides our means of access to nonhuman animal being" and that this access is fraught with "resistance, contradiction, impossibility". This is because "understanding any manifestation of animal life, of finite embodied experience, is a matter of deploying our imaginative capacity to be dead and alive at the same time, and risking the panic-stricken collapse of our whole edifice of knowledge" (47).

In other words, the moral imagination requires that we inhabit the distance between vulnerability as a power to change and therefore endure, and the creaturely resistance to change as potentially dangerous. From any individual point of view, openness is also a problem, because change is both necessary and fundamentally threatening. Staying roughly the same is somewhat preferable to changing and therefore ethical vulnerability appears as a problem, the problem of exposure. It is in this sense that Mulhall and Diamond focus the ethical concept of vulnerability on the fact of death and finitude more generally, but this need not mean that ethical vulnerability is a lack, or the inscription of harm. Rather, it is the negotiation of change caught between creaturely fidelity and wider processes of de- and recomposition.

Inhabiting the perspective of another, or trying to answer the call to understand another's embodiment entails deadly contradictions. Elizabeth Costello discusses the case of the people living against the backdrop of the Holocaust, who supposedly did not know what was going on, though surely anyone that used their human capacities even to a minimal degree did know what was going on. This knowing while not knowing is one instance of the suppression of the sympathetic imagination because of the personal difficulty that comes with heeding its call. But a similar contradiction, a kind of knowing and not knowing, is also characteristic of the proper use of moral imagination, which itself leads to suffering on behalf of the other, even if the other is not a subject in pain. There is a moment of death in leaving oneself behind in order to understand another, and a moment of unbearable contradiction in this flight from oneself only to inhabit a perspective as vulnerable—constitutively so—as one's own, and as incomplete and provisional.

There is, in other words, a grave difficulty in sustaining the call of the moral imagination.

According to the literature I have used, as exemplified through Diamond, Mulhall and Coetzee, there is no logical limit to the sympathetic imagination. This is a point made very clear by the critical anthropology explored earlier, and here we see a fruitful juxtaposition of ideas of diverse origins that coalesce towards a political ethics for the Ecocene. As Skafish argues, "at the moment of a global ecological crisis whose material conditions owe so much to Western metaphysical categories, it would be extremely tone deaf to continue to think that only better modern concepts are sufficient for thinking it, and that those of other peoples have already been converted into modern ones or are simply irrelevant to us" (2016, 72). Similarly, we may find on the margins of mainstream Western modern traditions the fragments of ways of thinking and doing that may allow for renovation and recomposition. Crucially, we may also find ways of forming alliances beyond the modern/non-modern distinction.

Today, a great variety of works, in philosophy, art, and science, are already sustaining the move away from strict hierarchies of species and towards creaturely assemblies united by moral imagination. In ending this chapter, I want to further specify the contours of vulnerability as a moral concept, as well as the overall importance that its relationship to constitutive vulnerability has for Ecocene politics.

* * *

So far in this chapter, I have tied creaturely multiplicity and self-difference to environmental multiplicity expressed as change. I have explored the opportunities and problems this ontology throws up and its political importance. As a possible bridge between the ontological and the field of action (politics), I have developed the concept of vulnerability as an onto-normative category that can stretch the moral imagination in ways that do not betray its ontological foundations.

Politics is bound to inhabit the space between processual change and the endurance of particular creatures through time. This space is well understood through the concept of vulnerability, in its double sense of constitutive (denoting the definitional openness that creatures must have in order to endure) and ethical (denoting the experience of

change as a potential problem by individual creatures) vulnerability. In concluding this argument, I want to spend some time on the space between processual change and individual embodiment and endurance.

The growing awareness of the Anthropocene has been met with a growing literature on the end of the world. It has become weirdly commonplace to talk of the sixth great extinction and to accept, to some degree, the inevitability of an increasing and generalized loss. But the whole imaginary of 'the end' is fundamentally tied to just one sense of vulnerability, namely the ethical one: *this* particular thing is ending, and there is a level of desperation understandably felt at this loss. However, focusing too narrowly on the end misses the broader point of the necessary reframing of politics in-between the concern for individual beings and the ability to adapt to changing processes. This is why I choose to speak of decomposition and recomposition, rather than 'the end'. It is not in order to deny the idea of loss, which is absolutely implied in both the Anthropocene and the Ecocene, and to which we must respond, but rather to uncover the possibilities that arise when we accept the structuring role of ecological processes over and beyond particular ideas of belonging.

Vulnerability is pertinent to the Ecocene both as a condition, and as an ethical principle invoking the power of the moral imagination to inhabit the exposure of many different kinds of beings (the list is, crucially, endless). The Ecocene only increases this fundamental exposure because it is the irruption of processes over and beyond any single being. To focus too narrowly on beings appears a luxury of relative stasis, something no longer sustainable in times of profound and indefinite change. Yet to ignore beings for processes risks callousness. Furthermore, vulnerability is increasingly known through the vast apparatus of science. Whereas in the Holocene humans could rely on their intuition and direct senses for most of their labor, this is no longer the case; the pathogens affecting plants and animals alike, the changing weather patterns to which we are not adapted, all of these require an alliance between the micro-scale of the senses and the capacity of the sciences to generalize through the extensive deployment of immense sensory devices.

The concept of vulnerability that I have tied to the Ecocene is a tortured vulnerability, caught between the acceptance of—and the desire to protect oneself from—change. It undermines any idea of 'solving' the

Anthropocene. The significance of the new era is precisely that it cannot be solved, and it is as if we are waking up from a bad dream. As the general intensification of change threatens a growing list of attachments, politics is tasked with remaining within the undertow created by rapid transformations. The Ecocene is tragically caught between constitutive vulnerability and the capacity to live in another's skin and therefore experience its vicissitudes. It is useless to wish this condition away. Instead, the question is which political concepts can build on this new condition so that recomposition can accompany loss. Reciprocity, responsibility, and mutualism are such concepts, as I will argue in what follows. But these ideas do not deliver us from the necessity to endure within the permanent difficulty of the Ecocene. They may simply allow us to grow accustomed to the difficulty itself.

The possibility of renovating practices is a very real one, and it flows through exactly the same channels of expanding the moral imagination that have always been there. The way in which practices evolve in relation with the increasing knowledge we may have of the environing world is instructive. Currently, for example, a debate is simmering in the biological sciences on whether we can use the concept of pain for plants, or whether their ways of communicating and sensing the environment can warrant speak of their partaking in conscious activity. The point is not that, once we have decided the matter of whether or not plants feel pain, we are required to change practice. Rather, it is questioning itself that changes practices, inasmuch as it opens up relational possibilities that did not exist before.

Raimond Gaita, in exploring his own relationship with his dog, notes that "we do not think of behaving towards goldfish or insects in the way we behave towards our cats and dogs". He continues: "I suspect it is not their objective differences in themselves that matter to us so much as *the relations those features make possible for us*" (2016, 19, emphasis added). Indeed, it is not a matter of settling ethical disputes by invoking biological facts. Rather, the more we know about the multiplicities that lie behind appearances, the more likely it is that new kinds of relationships can be forged. Here, again, the anthropological record is highly instructive. There is no reason to believe that one cannot have relationships with goldfish similar to that which Gaita has with his dog. It is always a matter of what counts, and what counts is always already

a hybrid of fact and value. In the Ecocene, what counts is both forever open to change (adding more) and inscribed within a wider program of perpetually rethinking membership in a community. The fact of vulnerability can become an important criterion of belonging.

The Ecocene tension between the desire to control processes such that our preferred creatures survive and the enabling of creatures themselves to use their exposure to their advantage is seen in very practical ways. In the next chapter I will show this idea in practice through the work of rewilders who introduce animals to environments from which they have previously disappeared. In doing this, they want the creatures to endure, but often to endure as they have been imagined. The creatures, on the other hand, always surprise us because they are encountering fundamentally new environments. A European Bison that became extinct in an area 300 years ago *cannot* be introduced to the same environment, and therefore will not be the same creature, whatever that might mean.

Focusing on processual change instead suggests a kind of suspension of expectation, and a certain tolerance for finitude, for mortality perhaps. It may be that caring for the conditions of life, like habitat redundancy, and therefore fighting against modern simplification, is a way of deploying vulnerability politically. It may be that we have to literally make space, and give up on strict notions of what should live where. This would allow for the possibility of caring, through a focus on process, for things unseen, unremarked, disliked, or even not yet existing.

This is an intergenerational care that takes time to cultivate because it does not, and cannot, control what should and should not be. It is not just a concern for the existence of future humans as such (this is not the intended sense of 'intergenerational' in this discussion). It is a series of interventions guided by the sympathetic imagination and the requirements for the tribulations of any life to endure. Intergenerational care in this sense is anti-individualist: it is not about my children, because what I may care about matters as a momentary concrescence in a process that cannot deliver, in the future, *what* I care about. It can only deliver the inheritance of caring itself. This is an intergenerational relay with the difficulty of the moral imagination, and an insistence on inhabiting and passing on that difficulty itself.