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**CONFRONTING HUMAN SUPREMACY IN DEFENCE OF THE EARTH**



# The Ecological Citizen Vol 7 No 1 2024

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# Education and the great transition?

David W Orr

David is Professor of Practice at Arizona State University, AZ, USA, and Paul Sears Distinguished Professor of Environmental Studies and Politics at Emeritus Oberlin College, OH, USA.

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**W**e eight billion, divided into 195 highly unequal nation-states extracting, processing and moving trillions of tons of matter each year, using eighteen terawatts of energy annually and burning five cubic miles of primeval goo, are rapidly transforming the ecosphere to the peril of countless lifeforms including ourselves (Krausmann *et al.*, 2017). We are in the rapids of human history and capsizing is not a remote possibility. The question for those of us in the business of thinking, propagating ideas and equipping youth for lives in a confusing and uncertain world is *What do we do?* Living in the shadows or the sunlight of our legacy, what would our great, great grandchildren wish us to have done?

Likely, they would ask us to overcome our blindness to what is right before our eyes: heat, storms, fires, floods, desecrated lands, extinctions and injustices and what these portend for their lives. Perhaps, they would ask us to reckon with the possibility that “our ideas are too puny for our circumstances” (Barber, 2017) and to think more broadly and wisely about what it means to be human. They would surely demand that we stop using the atmosphere as a dump and that we preserve Earth’s forests, rivers, soils, seas, mountains, lifeforms and grasslands. Certainly, they would ask us to enlarge the democratic vista to include them, their great, great grandchildren, and other species; an intergenerational, interspecies democracy of sorts. They would expect us to have created a durable foundation of well-considered personal rights and duties, tolerance for differences and dissent, government powers necessary to ensure security, continuity of institutions, a cultural respect for words that mean what they say and the wherewithal for truth and reconciliation.

For many reasons the university *as presently conceived* is an unlikely source of remedy. It is committed, not to transformation, great or otherwise, but more

often than not to patching up flaws in the modern paradigm on the wager that it carries the seeds of its own repair and renewal. The educational system – with its millions of students each year, billions of dollars of research funding, trillions in capital assets – operates with the assurance that goes with its assumed monopoly of solutions to what ails modern societies. It exists unmolested in the world of influence and money as long as it does not threaten the dominant culture and its underlying faith in economic growth and human domination of nature. Its organization often impedes non-trivial conversations across disciplines. Its financial dependency limits serious reckoning with large ideas of justice, peace, interdependence and ecology. It deals primarily in what E.F. Schumacher called “convergent problems” not “divergent problems”. The former are linear and so amenable to scientific or technological solutions. The latter are more like dilemmas that are, by definition, unsolvable but avoidable with foresight. Increasingly our basic problems are of the latter sort, they are divergent moral and political questions “refractory to mere logic and discursive reason” (Schumacher, 1977: 128). For reflection or simply mulling things over, the velocity of learning, research, administration and oversight is too fast on some things, too slow on others. Too often, colleges and universities have become hives of “busy-work on a vast, almost incomprehensible scale” (Smith, 1991). More often than not, students graduate as careerists, not agents of transformation. Not least, the very organizations that purport to educate are themselves often incapable of learning relevant to the precariousness of it all.

Nevertheless, it is difficult to envision a transformation to a more decent, inclusive and durable world without universities and educational institutions at all levels stepping up to meet the largest challenges of our time. We need their leadership to repair public institutions and enlarge our vision of democracy. We need their help to restore respect for truth, facts, logic, data and history. We need their creative powers to help recalibrate failing institutions, constitutions, and economies with the way Earth works as a biophysical system. We need their example as models of solar-powered, ecologically designed communities. We need their help to equip the young to be citizens in a civic community and in an ecological order – a generation of “radical professionals”; competent dual citizens with purpose, stamina, and vision (*cf.* Schmidt, 2000: 265–80). We need their convening power to bring diverse peoples together to forge a new and larger vision of democracy here and elsewhere. We need their help to imagine a non-violent world, one free of nuclear weapons. We need their gumption to foreground the urgency of the ecological crisis and the need to restore a lively, biodiverse world. In short, we need all of their powers and assets of education, research, convening, spending, investment and reputation harnessed to the task of making a world more fair, just, decent, durable and secure – a world that works for everyone as far into the future as one can imagine. We need educators and educational institutions that nurture a profound yet practical awareness of our interrelatedness in the evolving enterprise of life.

The repair and renewal of educational institutions, however, will require a more critical assessment of education. Here is my list of things to keep in mind on such occasions:

- Ecological disorder reflects a prior disorder in the way we think and what we think about, making it central to all educators;
- Humans are fast thinkers but slow learners;
- The word *system* – implying our interconnectedness with all that was, is and will be – is the most radical and necessary in our language;
- True self-interest is inclusive, not exclusive;
- Not all knowledge is good and not all of it can be deployed responsibly in a world of feedback loops, leads and lags, surprises and long time lapses between cause and effect;
- New knowledge is not necessarily better than old knowledge rediscovered, *i.e.* “slow knowledge” (Chargaff, 1980).
- Formal education deals with half of the brain, dismisses the other half and seldom engages the hands or heart. The result is often an “inverted cripple” with a single overdeveloped capacity (Nietzsche, 1933: 125);
- The planetary crisis cannot be attributed to the uneducated, but rather to the highly degreed, *i.e.* “itinerant professional vandals” (Berry, 1987: 50);
- Formal education, bounded as curriculum, can be completed in a few years, but true learning is an unbounded process over a lifetime;
- The important problems are those *of* education not those *in* education.

A final note. In the larger ecology of learning, situated on the periphery are many ‘alternative’ small educational centres scattered around the world. They serve as important adjuncts to colleges and universities. They are not a substitute for formal education, but offer the opportunity for students, faculty and others to step back and put things into perspective and to sort the important from the trivial. One such example is Schumacher College in Devon, UK (see <https://campus.dartington.org/schumacher-college/>). The College occupies an old carriage house on an estate that dates back to 1388. Named for the author of *Small is Beautiful*, Schumacher College concerns itself more with large questions than with answers. Typically, the questions posed in seminars and conversations at Schumacher are the divergent kind that challenge established paradigms and pomposity of any kind. The atmosphere is seldom as certain as in the higher reaches of the academic world. The scale is minuscule – several hundred students per year. Its clock-speed – the rate at which things happen – is human-scaled. Its stock in trade is the kind of dependable old knowledge that has accumulated over many centuries. Daily routines at the College allow for serendipity and spontaneity. The focus is a kind of disciplined diversity and boundary-crossing thought. The program includes meditation, music, serious lectures, gardening and walks along the Channel coastline that mimic geologic history. In other words, it is diverse but unified around the connection of body, mind and soul. The College clientele is diverse. The classes in which I participated over the years included students of all ages from all kinds of backgrounds from all over the world. Still, they typically bonded quickly into a supportive community in part because they work together to keep the place going. More importantly, at the periphery and removed from the mad bustle and busy-ness of their ordinary lives,

participants have the time to sort the trivial from the important and observe the world and themselves from a calmer and saner vantage point. There are other such places.

At a 1981 Lindisfarne Association gathering, polite discussion had regressed to arguments around fixed positions: the “global generalists” led by international legal scholar Saul Mendlovitz squared off against the “minute particularists” led by Kentucky writer, Wendell Berry. One argued for the importance of the national and international systems of law, government and economy that structured granular possibilities below; the other was firmly entrenched in William Blake’s view that:

*He who would do good to another, must do it in Minute Particulars,  
General Good is the plea of the scoundrel, hypocrite & flatterer:  
For Art & Science cannot exist but in minutely organized Particulars,  
And not in generalizing Demonstrations of the Rational Power. (Blake, 1877: 55).*

Exasperated, the moderator, poet Gary Snyder, abruptly stopped the haemorrhaging of civility to announce that the issue would be decided once-and-for-all ... on the volleyball court. The members of the Lindisfarne association adjourned into the warm southern Colorado sunlight and separated themselves into teams according to their generalist or particularist predilections. I do not recall who won the game or even if anyone kept score, but I vividly recall the humour and conviviality, as well as the seriousness of the issues raised.

I leave it to others to wrap such peripheral institutions and experiences into a proper pedagogy and philosophy. I do know, however, that they foster humility, humour, conviviality, breadth, depth and connections missing sometimes in universities. For students and facilitators alike, such experiences are rather like the effect of salt in stew: small by volume but large by effect, changing the flavour of the mysterious thing called education. If we are to be truly drawn forth – the root meaning of the word *education* – we need such places and times to reconnect with our souls, the soil under our feet and the life all around us. In such places, the ‘great transition’ begins with a quiet transition in all of us as students. For if education does not celebrate our connectedness and the wholeness and Holiness of it all, then what is education for?

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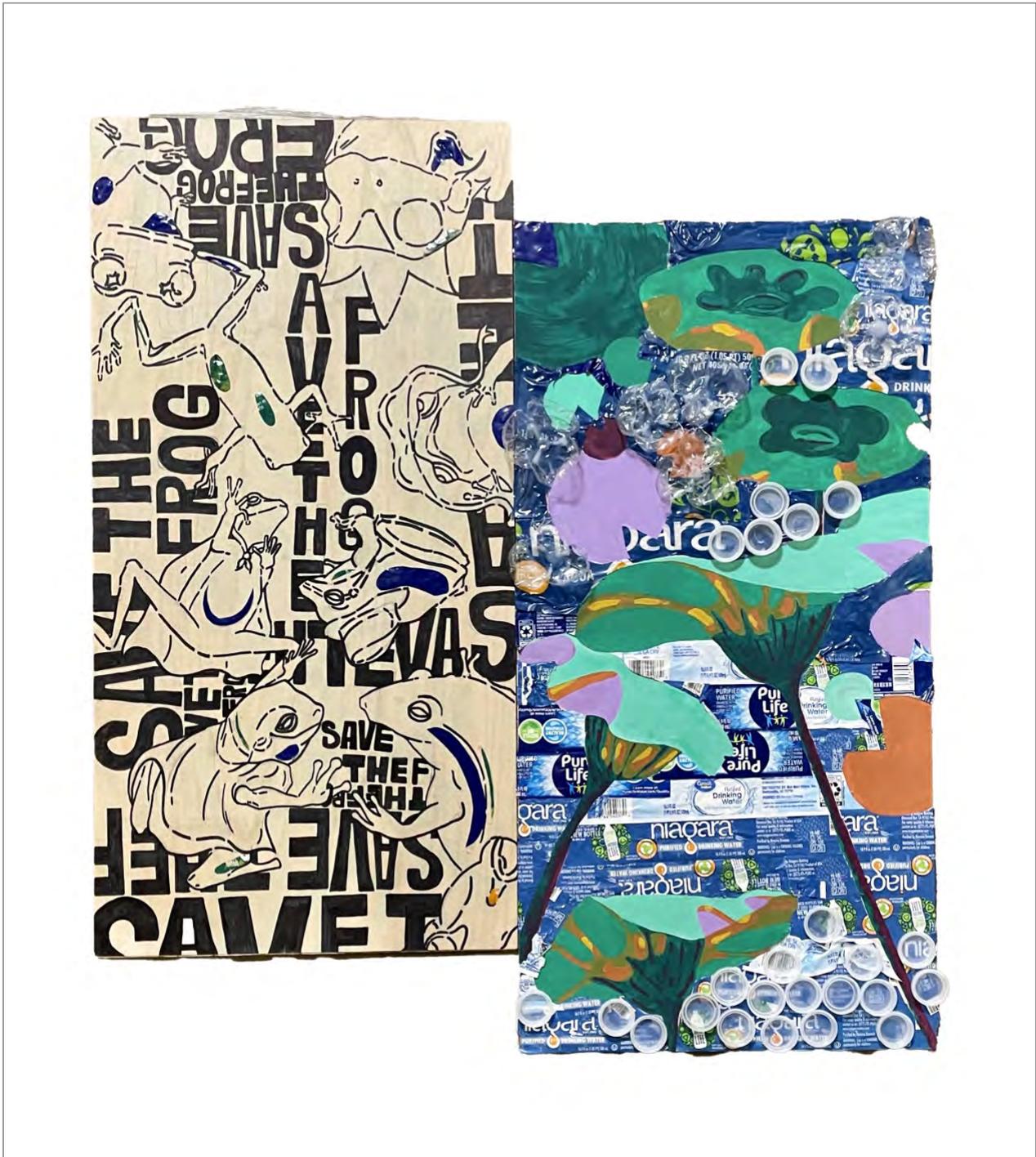
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Save the Frogs  
Jada Dexter

About the artist: Jada is a college student studying Art Education who has a passion for environmental art. She says, “recently I was inspired to make a recycled piece commenting on the negative effects of waste on amphibious life and ecosystems. I would love to spread this message to others and help save the frogs!”

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>

# Greening education: A multidimensional power struggle

Antony Allen

Antony is a writer and scholar who works on pursuing environmental justice and human rights. He lives in England and is currently a student with the Open University, UK.

**Education can be understood as a process designed to further the discourses of those agents, both state and non-state, who enjoy positions of power. These discourses are often environmentally destructive – promoting human mastery over nature and technology as the solution to the ecological crisis. However, by ‘greening’ education, and empowering individuals as ecological citizens, it is possible to challenge these approaches and balance the inequalities of power that shape our society. Such an undertaking would seek to incorporate both the intrinsic and instrumental value of nature into decision-making processes and promote non-anthropocentric relationships with the more-than-human world.**

**Keywords:** anthropocentrism; education; human supremacy; intrinsic value

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**I**n our dynamic world, profoundly shaped by the values of self-interest and capitalist growth, education can be understood as an instrument of social engineering employed to maintain social and economic norms. However, education can also be a site where those norms are resisted and critiqued. What would it take to ‘green’ education and make it capable of challenging our society’s ecocidal anthropocentric norms?

In this article, I examine the key challenges to the ‘greening’ of education and the dimensions of power in which this battle is fought – with a focus on the situation in the UK. I shall draw on the examples of Extinction Rebellion and Just Stop Oil as grassroot movements, before examining the UK government’s response to these challenges, to provide a background to the structural reforms that I would argue are necessary to achieve a shift towards the ‘greening’ of education and an ecologically just society.

## The purposes of education

Education – comprising knowledge, values, skills and attitudes as well as the systematic processes through which they are delivered – is more than an

occupation of youth. It is an ongoing process shaping our understanding of, and interactions with, the world around us. Rigorously designed and monitored, the education system in the UK explicitly details acceptable areas of study, the frameworks through which they should be approached and the measures used to assess the efficacy of knowledge dissemination. Utilizing the curriculum, and the institutions charged with its delivery, policymakers are able to subtly instil social, political and economic values into those in its care – including a capitalist work ethic, conformity and a respect for institutional hierarchy – to fabricate citizens that uphold the agreed norms of society. This secondary process of learning has been referred to as the “hidden curriculum” (Jackson, 1990) and teaches not only respect for authority but also that failure to comply with established rules will result in punishment and sanctions, creating a culture of fear that prevents individualism or challenges to social and political discourse, limiting the potential for significant change.

This use of education to shape the terms of a social contract is not an accidental occurrence. It is the deliberate application of structural power, designed to legitimize the UK’s economic approach to the environmental issues of today. Communicated through institutions and government policies, this approach is grounded in the principle of *techno-optimism*: the belief that technology holds the answer to the issues of climate change, terrestrial and marine pollution and the ever-growing need for energy. In this arrangement, we are automatically assigned the rights and duties of ‘environmental citizens’. As such, we are expected to accept that our environmental wellbeing can be ensured without radical change to our ways of life or to the economic system. All that is needed, we are led to believe, is the market-led application of net-zero strategies and perhaps the use of Pigouvian taxes (Pigou, 1938; Hawkins, 2020) to offset the negative environmental consequences of economic growth and state-led environmental policies. In this way, economic development is permitted to continue provided it outsources its environmental destruction to regions beyond public concern. The establishing of environmental citizenship as the social norm leaves us apparently free to pursue our own interests, to continue our profligate consumption of energy and resources, and secure our own futures safely insulated – or so we are assured – from the ecological impact of our actions.

This model of so-called ‘sustainable development’ or ‘green capitalism’ is – despite its obvious inadequacies in the face of the ecological crisis – now the only approach allowed to be formally taught in the UK, as government guidance prohibits the teaching of any anti-capitalist views (HM Home Office, 2022). This means that, for educators, any attempt to provide a *genuinely* ecocentric education is now a risk to their own job security and reputations.

To strengthen the anthropocentric discourse of ‘sustainable development’, a “false separation” has been engineered between the human and more-than-human world (Latour, 1991, 2004), reinforced by those holding structural power to project a sense of human mastery over the natural world. This ecocidal ideology is embedded in society through bodies of knowledge and systems of formal education that impart an impersonal, mechanistic

understanding of the natural world, planetary systems and the biophysical processes that govern them.

The ‘impersonal’ approach to environmental education fails, however, to provide the learning experiences required to foster ethically rich connections between students and the more-than-human world around them. The natural environment becomes something that is studied, analysed and explored solely through detached scientific observation. This can hinder students’ development of a sense of wonder and an intimate love of the natural world for its intrinsic value – such as can develop from the joys of walking in the woods or waking up on a mountain above the clouds. Those of us seeking to champion the cause of ecological justice and the ‘greening’ of education have already experienced the transformative power of the natural world and developed a love for the environmental spaces we view as sacred. It is this love for the natural world that holds the power to overcome the structural constructs of those seeking to maintain the present economic system, and achieve the realization of an eco-centric society with an education system fit for the future.

Such a system would transcend the confines of formal education, drawing on the lessons and experiences from around the world to create an informal network in which all citizens, not just those engaged in higher education, could be considered students. The beginnings of such a network are already to be found – for example, in the UK farmer-to-farmer education is already widely utilized, and community engagement initiatives, such as the Thames 21 project (<https://www.thames21.org.uk/>), are delivering training schemes for those seeking to lead environmental campaigns and pursue a greener future. These steps are a gradual way to instil ecological values into the collective national identity. However, the UK is still far behind a state such as Ecuador, which recognizes the agency of the natural world, *Pachamama*, in its constitution (Berros, 2015).

### An education for ecological citizenship

Pursuing the transition to a genuinely ‘green’ education is a controversial and complex undertaking – particularly when one considers the contested nature of the international order. With current power structures favouring anthropocentric attitudes towards domestic and international interactions, the definitions of ‘sustainability’ and ‘green’ are continuously being reframed to support the belief that economic growth is limitless.

Central to this conflict are the different dimensions of power, concentrated in both institutions and people, that shape the norms of daily life. For states, this power is structural, channelled through policies that govern the curriculum and dissemination of knowledge, decide what areas of research and education will receive funding and resource allocation, and write the social narrative to frame selected issues as security concerns. As ecological citizens, we do not have these vast reserves to draw upon; instead we must skilfully employ the power of language and communication to share information, raise awareness of ecological values and advocate for environmental justice to influence changes in social behaviours.

Drawing on the intrinsic moral value of the more-than-human world, ecological citizenship aspires to transcend traditional understandings of national borders, incorporating both human and non-human rights in decision-making processes, to achieve a just use of ecological space through systems of asymmetrical obligations (Humphreys, 2019: 66). These asymmetrical obligations recognize that rights are not reciprocal and that actors with large and destructive ecological footprints have a moral duty to reduce their consumption. In doing so, it presents citizenship as a universal global contract, in which a conscious individual choice must be made to protect the integrity and wellbeing of planetary processes, immediately enacting the positive duties to reduce one's own consumption and challenge those who would take more than their just share.

In challenging others, the use of language and the means through which it is communicated have the power to realize a social transition; however, it must be used effectively to influence the public and mobilize change. Consider, for example, the words of Extinction Rebellion's famous letter to the press:

*When a government wilfully abrogates its responsibility to protect its citizens from harm and to secure the future for generations to come, it has failed in its most essential duty of stewardship. The 'social contract' has been broken, and it is therefore not only our right, but our moral duty to bypass the government's inaction and flagrant dereliction of duty, and to rebel to defend life itself. (Green et al., 2018)*

The language was clear and the accusation legitimate, yet the movement failed to communicate effectively to generate lasting change. Disruptive protests in the UK alienated those who had not yet embodied the ecological values of the organization, and allowed the government and media to rewrite the narrative and criminalize environmental rights defenders. As a result, the UK government has been able to consolidate its power over environmental issues through the implementation of the Police and Crime Bill, limiting the scope and scale of citizen action, while justifying the ban on the teaching of ecological material by categorizing it as an 'extreme view' (HM Home Office, 2022).

This erosion of civil freedoms, the right to peaceful assembly, self-determination and a balanced and meaningful education has seen the UK being formally downgraded by the CIVICUS Monitor as having an obstructed civic space (CIVICUS, 2023). This loss of hard-won rights has surely contributed to the anxiety and helplessness experienced by the large proportion of the population concerned about climate change (Office of National Statistics, 2021).

This feeling of powerlessness highlights the failings of the current education system in creating the human capabilities necessary for citizens to engage with state and non-state actors in a meaningful way to address ecological issues. Despite an unprecedented abundance of environmental literature being readily available, it has not translated into the empowerment of the public and the

implementation of citizen-led solutions. For many, the only option available is to raise awareness for campaigns, such as Just Stop Oil, by protesting and lobbying policymakers. Though it provides a means for the public to express their concerns about the lack of meaningful interventions in the fight against climate change, it fails to engage in dialogue to develop solutions.

While we may not condone or encourage actions currently deemed illegal, history teaches us that laws are reflective of the populations' preferences and can be changed if enough pressure is applied in the correct places. Through education both formal and informal, we can create a society capable of realizing ecological changes. To champion this change, we must utilize the readily available data and information to highlight the need for individual behaviour changes, translating it from cold, clinical statistics to meaningful stories that create personal responses. Doing so will remove the monopoly on information held by academic and political actors, to achieve an ecologically literate society (Kahn, 2010).

This literacy needs to be the focus of 'green' education initiatives – returning the responsibility of education to both teachers as paid state employees *and* family, friends and communities sharing knowledge and the importance of engaging with the local environment. Such initiatives must communicate ecological values in a language that holds enough weight to counter the social and economic costs of an ecological transition. In this struggle, education and learning are key tools through which change can be achieved.

### A multidimensional approach

When seeking to reframe the parameters of education to include the agency of the natural world, we must bear in mind that governments around the world seek to create policies that are seen to protect their citizens from harm while allowing for the pursuit of economic growth and energy security (*cf.* HM Government, 2022). Such an approach inevitably favours the security and survivability of the state ahead of environmental protection. In real world terms, this means polluters escape prosecution, additional licenses being granted for fossil fuel extraction, and the freedom for citizens to cause environmental harm within the constraints of a system of economic sanctions and incentives designed to modify social behaviour (HM Government, 2023: 59–62).

However, this same need for security can be utilized to drive change as political parties are dependent on public approval for their representative authority. To effectively 'green' education, we need to create a system that educates not only those who consent through silence to the false solutions offered by the government, but also state and non-state actors.

Whilst we cannot directly educate industries, who are interested solely in growth and profit, we can influence them by educating consumers – most importantly, by raising awareness of the ecological costs associated with their purchases. A simple example would be the introduction of graphic warnings (similar to those now found on tobacco products) on products with a high ecological impact. Such an approach would help to ensure that the invisible

costs of economic action are factored into decision-making. While not a formal learning experience, it would enable consumers to make informed purchases and raise awareness of the ecological cost of their lifestyle.

For the wider public, we need to ensure a structured system of education for ecological activists is available. Before the rise of a network society, these activists were educators taking upon themselves the responsibility to gather, analyse and share information on areas of environmental concern. Combining this historical approach with the technology that is available today, we can create communities and citizens with the capabilities necessary to campaign in a language that communicates ecological values to create an affective response within their target audience.

For institutions, we must first seek to overturn the legislation that criminalizes environmental activism and prohibits teachers from developing the critical thinking skills within future generations. We must call for a decentralized curriculum that allows educators to undertake training in their local environment to create individual learning experiences that enable students to connect with the environment, learning to see the more-than-human world as intrinsically valuable, and not merely of instrumental worth.

This transition will not be a quick process, but with a growing awareness of the ecological crisis among the public, these strategies can empower individuals to take action, mobilize collectively for change and take a multidimensional approach to the pursuit of a genuinely 'green' education – one that champions ecological values, uses language that empowers, communicates strategies for the decentralization of environmental governance and fosters a spirit of individual accountability and passion for the natural world.

For such a transition to be realized, both structural and grassroots powers need to converge and find a way in which their values can align, moving away from disruptive protests to effectively communicate ecological values in a way that engages and empowers all elements of society. A genuinely 'green', or ecocentric, education can then be understood as one that has abandoned the hierarchical constructs of traditional education – in which passive students are taught to cultivate a detached, impersonal relationship with the more-than-human world – and instead actively encourages an intimate, loving, ethically rich understanding of our Earth, and promotes a transition towards an ecocentric society.

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# The climate literacy revolution

Marek Oziewicz

Marek is the Marguerite Henry Professor of Children's and Young Adult Literature and Director of the Center for Climate Literacy at the University of Minnesota-Twin Cities, MN, USA.

**In this article the author shares a vision of transforming education into a force that will accelerate a transition to an ecological civilization. This vision informs the work of the Center for Climate Literacy at the University of Minnesota, which seeks to build a global community of teachers dedicated to implementing universal climate literacy education in their classroom practice. Drawing from scholarship in the environmental humanities, they champion the notion of climate literacy as a broad narrative competence (rather than a narrow science competence) that is available to all from a very early age. They believe that climate literacy can be integrated across all subject areas, at all grade levels, in all schools everywhere. Their pilot programs with math, English, biology, Chinese and social sciences teachers confirm that climate literacy education can be organically seeded, and then scaled up, even within the current education systems – as long as teachers are given the resources, training and support they need.**

**Keywords:** climate change; education; storytelling

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**H**ow do we design ecocentric education? Would it require an overhaul of the current education paradigm or can it be embedded in the existing structures and grown from within? No less importantly: what does ecocentric education mean and what difference can it make at the present moment of accelerating climate emergency and biodiversity loss? In this reflection I share a generative vision developed by a group of educators and humanities scholars in response to these questions. Our proposal is not a silver bullet that will 'solve' the climate emergency. We offer instead a set of scalable strategies that can be implemented by teachers in any classroom, within any subject area and at all grade levels. We believe these strategies have the capacity to help teachers and students build the conceptual tools they need to grasp the human-planetary predicament of the Anthropocene, thus transforming education from within at a grassroots level. Our umbrella term for this learning is *climate literacy*: an understanding of the climate emergency that includes facts and numbers (*i.e.* climate science, environmental science and other fields) but focuses primarily on developing values, attitudes and behavioral changes

aligned with becoming good Earthlings, kin to all life. Climate literacy is about developing a capacity to care for every creature's ecospheric inheritance and thus safeguard the Earth's integrity in the present and for future generations (Oziewicz, 2023a). This vision of climate literacy is how we see ecocentric education in practice.

### The emergence of climate literacy education

Historically, calls for 'greening' education have been part of the environmental discourse from the outset. In *Our Plundered Planet* (1948), Fairfield Osborn argued that it is a mistake to think of nature as existing outside of society; in *A Sand County Almanac* (1949), Aldo Leopold championed the concept of a holistic environmental ethic – a land ethic; Eugene Odum's *Fundamentals of Ecology* (1953) introduced the idea of ecosystemic connections; and Rachel Carson's *The Silent Spring* (1962) drove home the lesson about how modern technology is capable of destroying entire ecosystems. This initial awakening led to a spate of revolutionary developments in the 1970s: the creation of the US Environmental Protection Agency, the first Earth Day, and the first large-picture studies of how human expansionism threatens nonhuman life – especially John Harte and Robert Socolow's *Patient Earth* (1971) and Donella Meadows and colleagues' *The Limits to Growth* (1972). Starting with the 1968 UNESCO Paris conference, and then with the Stockholm (1972), Belgrade (1975) and Tbilisi (1977) declarations, these ideas gave rise to environmental education. Environmental education has since evolved into a massive field led by professional organizations and flagship journals, especially *The Journal of Environmental Education* and *Environmental Education Research*. Yet, while many theorists and practitioners maintain environmental education's original ecocentric focus, mainstream environmental education has largely dropped its radical transformative edge, becoming a melioristic, anthropocentric, "neo-liberal project that undermines everything [original] socially critical E[nvironmental] E[ducation] stands for" (Kopnina, 2012: 710). On its own, environmental education has not and will not make a difference in the face of accelerating biodiversity loss and climate change. Like mainstream environmentalism, it has become part of our growth-addicted industrial civilization.

Nowhere was this blunting of the ecocentric focus clearer than in the emergence of the concept of *sustainability*. Sustainability was coined as – and remains – an economic concept. It helped define the Global North–South divide and helped identify unsustainable production–consumption patterns of the North as key drivers of poverty and environmental degradation in the South.

Famously, the World Commission on Environment and Development report (1987), *Our Common Future* (the 'Brundtland Report') defined sustainable development as development that "meets the needs of the present without compromising the ability of future generations to meet their own needs" (16). It recognized, correctly, that sustainability is the outcome of embracing ethical rather than market values. That said, the report also called for improving

technologies and social organization to better manage “the ability of the biosphere to absorb the effects of human activities” so as to “make way for a new era of economic growth” (16). The goal was to “achiev[e] sustainable development by the year 2000 and beyond” (5). Oh yeah, this went really well!

On paper, it looked great. Sustainability was quickly embraced as a solution to having and eating the cake of unlimited economic growth vis-à-vis a grudging acceptance of biophysical planetary limits. It led to the first UN Conference on Sustainability and Development, the so-called Earth Summit, in 1992 and then to a series of other international conferences – starting with Kyoto in 1997 – that led to the Paris Accords of 2015. The failure of all these voluntary agreements to slow down, let alone reverse, biodiversity loss, climate change and other externalities of a global industrial economy is widely acknowledged (UN Framework Convention on Climate Change, 2023) yet the conversation continues – and it should. Simultaneously, UN agencies negotiated targets that were packaged into specific frameworks: the Millennium Development Goals (2000–2015) and then the Sustainable Development Goals (2015–30). Both of these included an educational component called, variously, ‘education for sustainability’, ‘education for sustainable development’ or ‘environment and sustainability education’. Compared to environmental education, education for sustainable development is at once more promising (in some ways) and more limited (in other ways) for engaging with the current metacrisis. For example, after it was coupled with the climate focus, sustainability considers economic, political, social and cultural factors as facets of the same larger challenge of civilizational transformation (UNESCO, 2010). Yet, through its conceptual marriage with ‘development’ – a less ecocidal term for economic growth – sustainability is also more susceptible to be used in the service of the entrenched petronormative interests.

The third and most recent strand of ‘green’ education has been *climate literacy education*. This strand emerged in the 2010s, somewhat parallel to education for sustainable development, but specifically in response to the climate emergency rather than to the challenges of economic development. Climate literacy – also called ‘climate change education’ and ‘climate science literacy’ – has been understood in two ways: on the one hand, as a narrow, technocratic, science competence and, on the other, as a holistic, multidisciplinary, socio-cultural competence. I have sketched the relationship between these two in another piece (Oziewicz, 2023a) and I’m one of the many voices (Beach *et al.*, 2017, Bang *et al.*, 2022) suggesting that the narrow science framing cannot get us far. For example, in the US the Next Generation Science Standards (2013) include climate change as a sub-idea within the Earth Space Science Progression core idea for grades 6 to 12 – with a mere few hours of learning per year. In this framing, climate change is absent from Life Science and Physical Science core ideas, which has the effect of masking its entanglement with our food systems, physical environments, consumption habits, dominant ideologies and other spaces of human activity that drive climate change. We can do better and we must.

## Toward climate literacy: Our premises and commitments

In 2022, after years of network-building with scholars across the world, we established the Center for Climate Literacy at the University of Minnesota (<https://climateliteracy.umn.edu/>). The Center serves as an institutional home base for a range of projects aimed at transforming education, at a grassroots level, into a force that will help usher in an ecological civilization. Our target audience is teachers: we believe that given training, support and resources, every teacher in every grade and every subject area is able to incorporate elements of climate literacy in their classroom teaching. Our membership, however, is open to everyone, in academia and beyond, from librarians, authors and creatives to people across all professions: everyone who was a child, or has children, or wants to see education becoming a force to ensure a livable future for human and nonhuman people alike. We believe in mass-scale collective work across domains, such as advocated by Alexander (2022), or the Climate Majority Project (<https://climatemajorityproject.com/>). However, our focus, much like Project Drawdown's job function action guides (<https://drawdown.org/programs/drawdown-labs/job-function-action-guides>), is on work within one specific professional domain: education. Teachers as agents of change are critical and irreplaceable for this task. K-12 education is a massive socio-cultural system. It involves a large percentage of every country's population – over 16 per cent in the USA if you count students and teachers alone, and over 40 per cent if you include their families, administrators and support staff (see <https://nces.ed.gov/FastFacts/>). Climate literacy education delivered at schools thus has the potential to impact many millions. This impact is direct, deep, and part of one's everyday learning rather than occasional extracurricular activity – even if it is a regular school strike like Fridays for Future.

Our work at the Center rests on two premises and three commitments. The premises include a recognition of where we are and a vision of where we want to be. The former is a truth imperative: We're waging a war against the planet and we're winning. All main systems of our civilization – our politics, industries, law, economy, education and others – were created without concern for the biosphere. We're destroying our only home like we have no other choice – except we do. This leads to our second premise, which is that a different future is possible. We have sleepwalked into the climate emergency because we are a climate illiterate society, caught up in a “human-supremacist worldview” that takes the planet for granted and sees all its life forms as subject to human whims (Crist, 2019: 3). We can wake up from this nightmare and leave the ecocide behind: it's not who we are. We have the knowledge, the ability and the means to transition to a sustainable, just and ecological civilization.

We believe that education is key to accelerate this transformation, and this informs our three commitments:

*i. Commitment to climate literacy.* We believe that in order to transition to an ecological civilization we need to achieve universal climate literacy. As I suggested earlier, climate literacy is different from environmental and

sustainability literacies. It is also different from, and wider than climate science literacy. Climate science education is necessary, but it is naive to expect it would be enough to trigger the social and political change needed to transform our societies' attitudes and structures of perception. Just as science was not enough to end slavery, win women's rights or challenge racism, climate science will not be enough to engender a societal transformation commensurable with the challenges of the climate emergency. This is because climate change and other urgencies of the Anthropocene are not a STEM (Science-Technology-Engineering-Math) issue. They are a *worldview* issue and consequently require a holistic, expansive approach. This is why we promote climate literacy as an understanding of the climate emergency that centers on developing values, attitudes and behavioral changes aligned with how we should live to be good ancestors, good kin to all life and stewards of sustainable futures.

ii. *Commitment to education.* We believe that teaching about climate change should be at the heart of our educational practice. Schools are ground zero for this effort. Climate literacy can be scaffolded and should be taught to all K–12 students across all subject areas, especially with care-centric frameworks like CLICK (Oziewicz, 2023b). So far, because climate change has been largely absent, marginalized or ghettoized as a STEM issue, schools offer next to nothing in terms of preparing young people for the challenges of living in a climate-altered planet, let alone empowering them to be agents of change. We need education that will do just that, from an early age and across all subject areas. Our teacher development initiatives demonstrate that teachers are eager to incorporate climate literacy components in the subjects they teach. This teaching works. We only need to scale it up.

iii. *Commitment to stories.* We believe that stories for young audiences are the primary tool for building universal climate literacy. Stories are 'easy' tools inasmuch as they speak to even very young Earthlings, yet they are also the most advanced tools we have, capable of evoking emotional responses and rewiring our cognitive architecture at any age. A massive body of research across several disciplines shows that human minds are evolved for narrative understanding (Boyd 2009; McGilchrist 2022) in which our meaning-making happens through processing all content of our embodied experience as stories or components of stories (Herman, 2013; Stibbe 2021; Nxumalo *et al.*, 2022). This recognition – that stories are the primary means by which individuals and societies navigate reality – is also the core premise of the environmental humanities. Although our technocratic, reductionist, techno-fix obsessed culture continues to deny it, climate change is not primarily a challenge to our technologies but a challenge to our story systems. Our future will be determined by developments in the space of language and imagination: by whether we are able to embrace new ways of ecocentric thinking, a new ethic of partnership with the non-human and a new story about who we are, as a species, in relation to all other forms of life on the planet. In this unprecedented transformation, literature, film, games and art for young people are not supplementary but rather the most important avenues for

raising awareness and mobilizing social adaptation to the realities of a climate-altered world.

### How we work

Although we share many of the above premises with other organizations and NGOs, we believe that the combined commitments to climate literacy, education and stories are unique to our vision – as is the realistic aspiration to reach millions of students and teachers in existing K–12 classrooms. As educational professionals, often leading teacher-education programs, we are insiders to education as a system. We have the power to change it from within by creative grassroots action with students and teachers, without waiting for change to trickle down from school boards, education departments, state or federal regulators. We propose to train teachers, within and in addition to teacher training programs; these teachers will empower their students and train other teachers too.

Toward this goal we are developing five main lines of work, each involving several projects:

- An online literature database and glossary, called Climate Lit, that features books, films, games and other narrative formats teachers can use for climate literacy instruction (<https://www.climatelit.org/>).
- A peer-reviewed, open access, pocket journal called *Climate Literacy in Education* (<https://pubs.lib.umn.edu/index.php/cle/issue/archive>). Edited by an international editorial collective, this journal publishes four types of content relevant to teaching climate literacy: lesson plans or modules, teaching reflections, critical essays and creative/multimodal work.
- Professional development, such as teacher fellowships, summer institutes, webinars and discussions, workshops, undergraduate internships and other training opportunities that build the climate literacy education community.
- Research and partnerships that connect climate literacy scholars across the world to amplify our voices at professional conferences, journals and other venues.
- Community building through outreach to teachers, educators, authors, librarians, activists, parents, schools, organizations, governments and other stakeholders to expand a global community that works toward and advocates for climate literacy education in all schools everywhere.

Will this work? I have strong reasons to believe so. As a literature scholar, teacher-educator and story systems theorist, I have seen how stories open people's eyes, and energize and inspire them. Imagine this happening in classrooms all over the world. Imagine students engaging with stories that build their emotional courage and resilience to discuss the atrocities of ecocide and stand up to it in their lives. Imagine students honing their cognitive and creative capacities to explore alternatives to how we live now and growing into climate literate adults. Imagine teachers trained and supported for climate literacy work in their everyday practice. And imagine the resources we could

build for climate literacy education by partnering with academics, publishers, authors, illustrators, artists, parents and grandparents: all of them supporting teachers with whatever is needed to expand this work in actual classrooms. This is how the climate literacy revolution can help transform the emergency we face. It all starts with stories. That become dreams. That become work. That becomes reality.

American botanist and Potawatomi author Robin Wall Kimmerer opens her book *Braiding Sweetgrass* (2013) with a two-page Native American origin story of Skywoman arriving on Earth. “Children hearing the Skywoman story from birth” Kimmerer explains, “know in their bones the responsibility that flows between humans and the earth” (5). The story “holds our beliefs, [...] our relationships,” and ideas about “how we can go forward” (5): a constellation of teachings Kimmerer refers to as “the Original Instructions” (6). Our Western industrial civilization has forgotten these original instructions. Our origin story is about exile from the garden, the curse of work, alienation from other living beings, and not belonging. Only education, and only other stories can reprogram our deepest values and perceptions about our place on Earth – as individuals, as societies, and as a species. At the Center for Climate Literacy we believe that education and stories are essential to help usher in an ecological civilization. And if this goal strikes you as ridiculously ambitious, consider this: even if we fail to reach every school and every teacher, this failure is still above everyone else’s success.

To learn more, or get involved, you can reach us at [climatelit@umn.edu](mailto:climatelit@umn.edu) or sign up for membership at [https://umn.qualtrics.com/jfe/form/SV\\_41tDaZ5b3EGhNA](https://umn.qualtrics.com/jfe/form/SV_41tDaZ5b3EGhNA).

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**Synthetic Sea**  
Kathryn Frund  
(40 x 36 inches; 2020)

From the artist: “Inspired by DADA, Abstract Expressionism and Feminist Art, my sculptures and installations generate dialogue around sustainable practices and human connectivity. My work explores the dichotomies of consumption and sustainability, rigidity and flow, and moderation and excessiveness. I am interested in the intersection of the material and spiritual, the altered and recombined, addressing the notions of transcendence and restitution. My work examines our tenuous connections to the environment and the expanding amounts of artificial matter in our daily lives. This exploration aims to bring awareness to themes of stewardship, fluidity, excess and integration.”

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



A Responsive Dance  
Kathryn Frund  
(36 x 40 inches; 2014)

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



Gulf Stream  
Kathryn Frund

From the artist: “‘Gulf Stream’ is a painting from a series of work dealing with the Atlantic Meridional Overturning Circulation.”

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>

# Knowing more and acknowledging others

Kenneth Shockley

Kenneth is the Holmes Rolston III Chair in Environmental Ethics and Philosophy at Colorado State University in the USA.

The essay focuses on the interwoven nature of the epistemic and the ethical. While it is well known that there is an epistemic advantage to approaching a shared concern from multiple points of view, and that basic norms of respect require acknowledging the legitimacy of other points of view, there is an important connection between the two that should be emphasized: only through respecting those other points of view as legitimate is that epistemic advantage fully available. Other points of view, human and nonhuman, need to be acknowledged as legitimate in their own right. This acknowledgement requires a form of humility, a recognition of the limitations of one's own point of view, and has great pedagogical potential. As students share new experiences with one another, particularly as they discover new places whose meanings are collaboratively constructed, this humility becomes an invaluable pedagogical tool. Once students understand the importance of points of view far removed from their own, a lesson common in environmental literature and reinforced through shared experience of place, it is easier to acknowledge the legitimacy of more-than-human points of view, and, accordingly, accept what it means to be a citizen in an ecological community.

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*Somehow, the fact of being food for others had not seemed real, not in the way it did now, as I stood in my canoe in the beating rain staring down into the beautiful, gold-flecked eyes of the crocodile. [...] Some events can completely change your life and your work, although sometimes the extent of this change is not evident until much later. They can lead you to see the world in a completely different way, and you can never again see it as you did before. (Plumwood, 2012: 10)*

*We reached the old wolf in time to watch a fierce green fire dying in her eyes. I realized then, and have known ever since, that there was something new to me in those eyes – something known only to her and to the mountain. (Leopold, 1949: 130)*

In sharing an experience we often come to a better understanding. Perhaps that much seems obvious. Gaining insight from different points of view is a familiar phenomenon. From the ‘wisdom of crowds’ literature we also know that under certain conditions we are smarter together (Surowiecki, 2005). But we don’t always gain this collective epistemic benefit: not all sharing gives us a different point of view, and so not all sharing provides us with the wisdom of crowds. The other viewpoints must be distinct; merely absorbing data or insights from others into one’s own point of view or framework will not provide the full epistemic benefit. We need to acknowledge and respect those other points of view, not merely as a means to our own epistemic ends – knowing more – but as representing a respect-worthy member of a common community.

This essay explores the relation between respecting others and the epistemic advantage provided by different points of view. While the epistemic advantage is well studied (Page, 2019; Aminpour *et al.*, 2020, 2021), and the need to respect the views of others is often thought to be an ethical requirement, the intimate connection between the two isn’t recognized as often as it should be. One can see the value of respecting other points of view through shared experiences of place – meaningful locations – as well as through the connections formed through the transformational experiences with the more-than-human world that shapes much of environmental literature. That literature reminds us that these other points of view are not always human. The pedagogical possibilities provided by sharing place yield a means of showing the interwoven nature of respect and epistemic advantage, while also providing an entrée into more ecocentric framings of our own ecological communities.

The argument proceeds as follows. Accessing the epistemic benefit of collectives requires recognizing the value of different perspectives, which, in turn, requires acknowledging the limitations of one’s own perspective. Acknowledging these limitations amounts to an acceptance of other perspectives as being epistemically legitimate, and requires humility. The legitimacy of another point of view provides a claim for moral respect. Respect for the other as an equal member of epistemic community follows under most conditions.

I will conclude, first, that only by acknowledging other points of view as legitimate do we gain the full epistemic benefit of those points of view. Second, acknowledging the value of other points of view in the human context, through shared experiences, provides a constructive pedagogical path to help students understand their membership in more-than-human communities.

### The value of shifting points of view

Many of us can relate to the transformational power of experiences, where a shift in perspective leads to a fundamental change in our understanding of the world, and perhaps in our understanding of who we are. Kurt Fausch provides one poignant example. He writes,

*I found that my life had changed the first time I crossed the reflective boundary to look beneath the surface of a stream. [...] [T]he view was of a place much*

*deeper and more complex than I had imagined from above. [...] Every new vantage point revealed more members of an intricate underwater community. [...] These fish looked so different from the same creatures that flopped awkwardly in my hands. (Fausch, 2015: 7–8)*

Dropping below the waterline requires reframing one's understanding of the world and our place in it.

Environmental writing is awash with examples of the transformational power of seeing the world differently, of acknowledging different voices by acknowledging other points of view: from Leopold's famous encounter with a wolf, where he learned something deep and profound as he watched the green fire in her eyes fade, to Val Plumwood's famous encounter with a crocodile, an encounter that vividly made apparent what it is to be prey.

Leopold and Plumwood invite us to supplement our limited points of view by acknowledging the legitimacy of what might have seemed to be an alien perspective. The wolf was no longer just a predator, a competitor to hunters and a hazard for ranchers. It was a part of a larger system, a community that we shared. The crocodile was not a killing machine, a monster from our nightmares waiting in lagoons to prey on innocents. The crocodile was playing a role that fit into a larger systemic whole, one where human beings also had a role, even if that role was not entirely the one they expected or desired. Thinking of the wolf as a threat or the crocodile as a monster results from over-emphasizing a single point of view. We can, and often do, do better. The single point of view represented by the wolf differed from that of the hunter, rancher, ecologist or even the mountain itself. Leopold's "thinking like a mountain" requires taking on board a more inclusive perspective that embraces all of hunter, rancher, ecologist, mountain ... and wolf. It requires accepting the viewpoint of the wolf as legitimate.

A caveat is in order: to recognize another perspective as legitimate does not require endorsing that perspective; nor must one acquiesce to it. Rather, such a recognition points to the irreducible and inaccessible epistemic capacities of another. Further, we can fail to respect not only by treating that perspective entirely as a means to our own epistemic ends, but also by absorbing that perspective, by colonizing it. Two-eyed seeing (Reid *et al.*, 2021) provides a helpful way of addressing concerns about the legitimacy of different points of view; both perspectives are valid. But what of the toxic or morally problematic points of views of other humans, for example. Are they legitimate? Such views may undermine our collective intelligence. That is possible, and it may be difficult in practice to sort the helpful from the detrimental. But even in such cases, it is likely that in understanding the errors of such positions we can adapt, collectively (Almaatouq *et al.*, 2020). There are no guarantees. But from an epistemic point of view, we fail to recognize them at our own peril. To acknowledge as legitimate is not to endorse. And to respect, as Darwall (1977) reminds us, is not to endorse. The possibility of error, epistemic or moral, should not lead to exclusion. The lesson of two-eyed seeing is that so long as we are focused on a shared understanding it is counterproductive, and

disrespectful, to conflate recognition of legitimacy with endorsing the framework of the other.

Of course I may not be able to access the crocodile's view fully, but one can learn, as Plumwood does, the importance of acknowledging that the picture of the world is beyond one's own perspective, that framing the world from the point of view of a predator that would prefer to eat me, provides me with a more complete understanding of the natural world. The crocodile is just doing its part as a member of a community when it treats me as prey. Even as Plumwood resists the crocodile she recognized a larger community, one shaped by respect. And shaped not only by epistemic respect, but also moral respect, respect for that other as being a member of a common community. The strength of the argument comes from recognizing that our own view is limited and that others are just as legitimate, epistemically, as our own. We need not adopt the crocodile's view. I can recognize the perspective, the narrative of the crocodile, as legitimate, even as I resist that crocodile.

There are different paths to respectful engagement. Sometimes engaging with other points of view is shaped more by empathy and less by alterity. Shared experiences may provide this sort of opening. Sometimes this engagement involves recognition of the other as different. Plumwood's encounter is one such example; less empathy, more alterity. Leopold, Plumwood and perhaps Fausch focus on shocking alterity for the lessons of humility and acknowledgement of the epistemic legitimacy of the point of view of others. But there are other ways, some with great epistemic and pedagogical potential. Through the sharing of an experience, for example, we may recognize the other as having a claim to a shared community perspective and an independent point of view.

I am reminded of this every summer. Towards the middle of a field course in environmental ethics I take students to a small scree field, where the shattered wreckage of an old World War II bomber remains, its torn and bent aluminium still bright after almost 80 years. Some students understand this place to be a sacred spot, a testament to the sacrifice and lost lives of those who served. Others take it to be a reality check on the illusion of wilderness; for thousands of years humans have lived and passed through this landscape, no matter what might be mistakenly inferred from its designation as a 'wilderness' area. Still others pass over the history altogether, and lose themselves in the view, northeast over the foothills of the Rockies to the plains beyond.

The discussions that result from their individual perspectives are powerful and provide a great opportunity for students to see this place from the point of view of one another, and subsequently develop a shared understanding. This understanding only comes from their recognition of different views on a common experience. These students bring to this place a remarkable diversity of perspectives and backgrounds, both academic and personal. In sharing experiences of this place with one another, we all see it in a new way. We see it from the point of view of others, or through the lens of history, or through a lens crafted by weeks away from our more urbanized landscapes. Through our exposure to those different perspectives we see the limitations of our own perspectives, and we are presented with possibilities we hadn't imagined.

Sharing place can be just as transformative as the experiences shared by Fausch, Leopold and Plumwood. I think, and hope, this is the case for my students. I know it is the case for me.

## Humility and respect

Recognizing the limitations of our own point of view leads to acknowledging there are other points of view, equally limited but equally legitimate; that recognition requires respect. Humility and respect make an ethical demand on us. We need to listen, to really listen not just to the voices we expect and anticipate, but to voices we hadn't noticed before. We only get the epistemic advantage of shared meaning through respecting others. And who those others are, even *what* they are, is an increasingly expansive group. The gold-flecked eye of Plumwood's crocodile serves as a reminder of this. That eye also serves as a reminder of the need for humility and the dangers of species hubris. The points of view we need to respect are not limited to the human.

We cannot just assimilate those different voices. In order to actually gain the benefit, the epistemic advantage of different points of view, we need to acknowledge the legitimacy of those other points of view. This is a general requirement: the wisdom of crowds literature points out that the epistemic advantage comes from discrete points of view (Almaatouq *et al.*, 2020; Aminpour *et al.*, 2021). Subsuming different points of view under one framework reduces or even eliminates the benefit. And the 'cannot' has an ethical dimension as well. Acknowledging other points of view requires humility and respect: the humility to acknowledge the incomplete nature of our own perspective and the epistemic limitations that come with it, and the respect that comes with accepting the legitimacy of other points of view. Again, we need to really listen.

Plumwood and Leopold both offer models for what this acceptance looks like. Leopold extols us to develop an ecological conscience, to break out of our individual points of view, and adopt a larger perspective that encompasses the ecological systems in which we are situated. Plumwood invites us to see ourselves as part of that ecological community in a more intimate way, to feel like food. We need to see ourselves as embedded and embodied beings, not as creatures apart. We need to acknowledge the legitimacy of the perspective that sees us as prey. And we see this perspective not as one to be denigrated, but as one to be respected, acknowledged to be as legitimate as our own. One of the central lessons provided by experiential education is the use of shared experiences to bring about transformation through recognizing other points of view. Plumwood describes this as recognizing the narratives – both that of which one is author and that in which one plays the role of prey. Leopold asks us to take a longer and wider point of view, and let our conscience expand accordingly. Fausch invites us to see the world below the waterline, to literally immerse ourselves in our object of study, and accordingly gain both respect and knowledge. To gain one fully requires the other.

Here is the point to be taken from Fausch, Plumwood and Leopold: the epistemic benefit of collectives is available in the more-than-human world. We need only respect those diverse perspectives appropriately. I suggest that this

provides the unsung corollary of Leopold's Land Ethic: *Any epistemic advantage of community membership is limited without ethical acknowledgement*. To be part of an ecological community is to recognize and acknowledge the limitations of our own point of view and the legitimacy of others.

Dramatic experiences in remote places are not necessary for either the epistemic benefit of shared meaning or the transformational power of seeing the world from the view of another. Walking together, experiencing our shared landscape, is enough, wherever that landscape might be. Empathic connection through shared experience provides a pedagogical opening for recognizing the legitimacy of the other and the epistemic value of their perspective. Whether walking urban streets, the green spaces between, or an old, remote crash site, we have the opportunity to gain understanding by sharing. Sharing these experiences and perspectives contributes to a more expansive, more complete understanding of our places.

### From acknowledgement to knowing more

There is precedent for Leopold's corollary in the idea of 'making kin' (Kimmerer, 2014, 2017; Haraway, 2015, 2016; see also Ferkany and Whyte, 2012; Whyte, 2020). Getting past treating the other as a mere object to be exploited, whether for epistemic possibilities or otherwise, to a position of respect and acknowledgement – this was the wisdom in the eye of Leopold's wolf and one of the lessons provided by Plumwood's crocodile. There is a form of relationship formed through this respect of the other, one of acknowledgment of the legitimacy of its perspective. This respect entails an acceptance of the narrative with the crocodile as narrator and me as prey. There is a humility required by such an acknowledgement, one found in the idea of kinship, one that requires the limitations of one's own point of view and the deep value of recognizing the legitimacy of the views of others. This is the source of recognizing one's ecological community.

Humility and respect for the more-than-human world, required for the epistemic advantage of diverse viewpoints and essential for kinship, are constitutive of an ecocentric understanding of community. Through shared experience we can provide one another the opportunity for a more ecocentric understanding of our community, our places and our world. Through humility, respect and the primacy of relationship, through a more ecocentric perspective, we can better see Fausch's world below the waterline, Leopold's perspective of the mountain, and Plumwood's challenge to balance the narrative we author and that in which we are prey.

Taking on board a different point of view changes not only how much of the world we see, with all of the epistemic advantages and shared intelligence we might get from that view, it can also change the meaning of the thing experienced. For Fausch, the river changed; for Leopold, the Mountain, and all that it represented; for Plumwood, everything. The transformative power of experience arises from these changes in meaning.

We can come to a recognition of the epistemic and ethical significance of the other, recognizing their point of view, in two ways (of course there may well be

others). First, encounters with other beings can simultaneously require the acknowledgement that our own perspective is limited (and bring with that acknowledgement humility) and that other perspectives, different from our human point of view, provide a complementary perspective. Second, sharing experiences can inspire the recognition of the limits of one's own perspective and the distinctness, and epistemic significance, of others. In both cases recognizing one's own limitations is necessary to accept the other point of view as providing a distinct epistemic perspective. With this acceptance comes humility and acknowledgement of shared community, ethically, and the conditions required for the benefit of collectives, epistemically.

Without the humility of recognizing our own limited point of view, and the corresponding respect for the points of view others, we will not gain the benefits of our collective intelligence, whether we understand that 'our' to be a matter of our friends, our species, our ecological community, or our world.

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# Enchanted minds, empowered hands: Reflections from an urban food garden

Deborah Dutta

Deborah is a researcher and a gardener. She enjoys collecting and sharing stories, seeds and recipes.

**Reflecting on a terrace-farming project facilitated in an urban school, how students encountered moments of ‘enchantment’ through sensory interactions with the plants is explored. Illustrative examples are used to show the primacy of unmediated, direct experiences in natural surroundings as a core part of nurturing an ecocentric sensitivity.**

**Keywords:** agriculture; education

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The students were gingerly touching the tendrils of the gourd creepers that had flourished in the rain. It had been two months since I had begun a terrace farming project to grow edible plants in a school, along with a class of eighth graders.<sup>1</sup> The school is located in Mumbai, a metropolitan Indian city with a population of nearly 23 million. Land is thus a premium commodity, encouraging innovative uses of apartment spaces, terraces and balconies. I had managed to convince the school principal to use the school terrace for growing edible plants. Observing their engagement with the space reminded me of the incredulity with which the students embarked on the project. “How are we going to grow plants here?!” a student had exclaimed, echoing the sentiments of many of her peers who rushed to the school roof top, curious and apprehensive. The roof was completely barren and offered a good view of a city landfill that could be mistaken for a hill, with a decent green cover during the rainy season if not for the unmistakable odour giving it away. Most students in the school had grown up in cities and had fairly limited ideas about growing plants. Some had a few ornamental plants at home, but the idea that edible plants and vegetables could be grown in a small area was new for most of them. Students were allowed to explore, observe and play while participating in various activities. As a result, students had varied perspectives and motivations that evolved organically alongside the garden itself. Some students were initially unwilling to get their hands into ‘dirt’ and



A view of the school terrace after a year of the project. The landfill can be seen at a distance.

preferred observing others, while others were intrigued by the novelty of the project.

### Knowledge beyond the textbook

Starting from a barren terrace, the students soon realized the patience, effort and skills involved in growing plants, almost none of which could ever be covered in their school textbooks. While half of seeds sown germinated, the fragile joy experienced by the students was short lived. Soon after, unexpectedly heavy rains damaged many of the delicate seedlings. The few that survived were getting eaten by pests.<sup>2</sup> Many students would observe their plants closely, ask for solutions and even began researching on the internet for ways to save their seedlings. They realized that in terms of practical knowledge, the school support staff knew more than the teachers, and would flock to the gardeners for advice. Their care and concern eventually paid off when a couple of seedlings grew into healthy plants and bore them *bhindi* (okra) a few weeks later. None of their experiences could be found in a textbook, as evident in a student's simple but profound statement – “*the book doesn't explain anything*”.

The explanation here is not just about the information; rather, it is about appreciating and respecting the complexity of engaging with meaningful contexts that seem of consequence to *them*. Interestingly, the teachers involved in the project also found themselves more comfortable as co-learners rather than authoritative figures needing to have ‘correct’ answers. The literal and educational openness provided by the rooftop farm allowed both students and teachers to explore questions and concerns that can rarely occur in classroom spaces. Questions like “Why is my bhindi plant getting infected?”, “Why are



Mixed cropping in a planter created by the students.

farmers paid so little for so much work?”, “Why is it important to save seeds?” naturally cropped up in sessions as their engagement helped them to pay attention to things that had previously gone unnoticed. Their shift in perception was evident in comments such as, “*we never even touched plants this way earlier. I mean we play on the grass, but not this way. To take care [...] this time we learnt how to grow the plant.*”

### Rooting for sensorial encounters

Sensory participation was central to students’ experience of the terrace farm. The visceral sensations of tasting the plants, digging the soil, stroking the leaves, gingerly handling the seedlings, feeling the movement of insects on their fingers, hearing the buzz of bees, smelling the composted soil and countless other encounters, ‘invited’ students to participate in an evolving, reciprocal relationship with the farm environment. As Bai (2009) argues, this sort of sensuous perception arouses a participatory consciousness, and nurtures an emotional relationship to the surroundings, as opposed to the vision-based tendency to engage in discursive categorization. This process was seen at the school terrace farm, and it encouraged students to taste other plants too – such as *shepu* (dill), *lal math* (red amaranth) – that they hadn’t previously seen or tasted. Bai (2009) further describes this development of intimate, embodied relationships as a process of animating the world, thereby building reciprocity and respect into relationships (as opposed to transactional interactions). Engaging in different modalities of perception facilitated what Abrams (2012) described as a shift from description ‘about’ to correspondence

‘with’ – that is, students were *responding to* the plants rather than *studying* them.

At the farm, the plants were not objects of scrutiny, rather through their growth and other changes, the plants became active participants in expanding students’ relationship with their surroundings. Students gained an implicit notion of interdependence, as they harvested the fruits of the plant they had sown a few months ago. They began identifying plants based on sensory interactions, such as “waxy leaves”, “thick leaves”, “minty taste”, “sour taste”, “sharp leaves” and so on. The experiences were sometimes even unpleasant and unexpected, though students seemed to take it in their stride as an educative experience. Here, a student describes the sharp edge of lemongrass leaves:

*“I was not very very familiar with this lemon grass; ya I knew it is used for some tea and all but just last three and four classes back, I understood that it can cut skin also because its leaves are so sharp, I experienced it!” [laughter]*

Using the body as an “organising core of experience” accentuates the immediacy of experience, along with a growing sensitivity to anticipated changes in the surroundings (Shusterman, 2004: 51). The continuously evolving landscape of the terrace, through the growth of plants, turned into a motivation for students to explore the surroundings in a somatically grounded fashion. As a student later commented,

*“Because even in gardens you see so many types of plants, but to me they were just all green, just green, a patch of green. But now I can actually like sort of at least remotely recognize that this plant is this, that plant is that and all those things.”*

A ‘patch of green’ gaining its unique features, arising from a homogenous backdrop, forms the basis for further engagement and understanding of one’s environment. Iared and coworkers (2016) assert that eco/soma/esthetic perception stimulate ontologically rich ways of relating to nature, which otherwise remain untapped or unacknowledged in discursive modes of knowledge acquisition.

### Building on moments of enchantment

This expansion in turn allowed students to attend to wider experiences, and develop greater sensitivity towards the farm space. Termed here as moments of ‘enchantment’ (Bennet, 2010), students’ heightened awareness towards the farm activities allowed the usually ignored ‘background’ to present itself in novel, wonder-inspiring ways. Enchantment is a moment when the familiar is suspended from usual categorizations and can appear surreal, thereby allowing for subversive views to open up. It nurtures ways of exploration and imagination that are not amenable to language-based discourses. As a highly affectual encounter, moments of enchantment open ways of meaningful engagement with one’s material environment. These need not always be



Students observing some tomato plants.

pleasant experiences (as finding shreds of plastic in the compost, or a plant under severe pest attack) but are powerful in terms of disrupting disengaged modes of interacting with one's environment.

For instance, once aware of the millipedes in the soil, students could see them everywhere, journeying through perilous spaces between soil planters. Observing their routes led students to notice the slime trail of snails and slugs which could be hiding under the flap of a cardboard box. They would lift the damp flap to see it dotted with tiny fungal structures... but, hold on, the fungi almost seem like flag posts for the hordes of ants passing the cardboard flap! Follow their trail back into the soil where the millipedes were first seen... one can see the 'worlds' students could have traversed through their sensory receptivity of the surroundings. Bennet (2010: 4) comments that "To be enchanted is to be struck and shaken by the extraordinary that lives amid the familiar and the everyday". These experiences suspend control and predictability, in order to make space for awe and fascination. Bennet (2010: 13) further argues that valuing such moments "enhances the prospect of ethical engagement". Various episodes at the farm indicated students' increasing sensitivity towards the creatures and plants on the farm. They would rescue the 'wayward' millipedes straying too far from the soil, concerned that they might die in the heat or become prey for the crows. They would fuss endlessly around plants that were afflicted with pests. Barren soil would be carefully covered with mulch to keep the soil "happy and moist".

Honing one's attention towards such particular aspects of the environment generated instances of 'response-ability' (Haraway, 2013; Kayumova, McGuire

and Cardello, 2019), wherein individuals could respond to, and partake in, a shared sense of well-being. Their attribution of emotional states to the creatures and plants could be argued as ways of empathizing with these living beings as responsive and deserving of care. Postma (2006) argues for the centrality of a care-based relationship in engendering environmental sensibilities, stating that these can't be derived from abstract principles of responsibility or justice. He writes, "In our caring, we express a recognition of something that fulfils us in a particular way, and invites the response: 'When the other's reality becomes a possibility for me, I care'" (Postma, 2006: 156).

### The task of educating in a disenchanting world

The fact that we are living in the midst of ecological crises is all too evident through the nearly steady stream of news, findings and plethora of information. Terms like 'global warming', 'climate change', 'ocean acidification' and so on, have been assimilated into everyday vocabulary, yet the increased information doesn't seem to translate into impactful or sustained actions. On the contrary, there is a tendency to disengage from the clichéd doomsday scenarios that appear too far, too big or too abstract to make sense of, let alone act upon. As George Monbiot (2017) comments, "The environment' is [...] an empty word that creates no pictures in the mind". There are no specific connections to build, no memories to recall and no emotions to feel invested enough. Educators today need to translate the sterile information of 'environment' into stories and narratives of the 'natural world'. The nearby landfill and the barren terrace had been a part of the students' environment without providing them any opportunity to reflect and act on the implicit connections and possibilities. Growing food in that space allowed them to develop 'kithship' (Haupt, 2021) or an intimacy with the surroundings, as creatures and materials caught their attention with newfound relevance: leaf litter as potential compost, discarded boxes as planters, seeds in the kitchen as potential seedlings, empty balcony spaces as future mini-gardens, and so on.

These ontological shifts are not trivial because environmental education, at its core, engages with the question of why and how to care for the natural world, of which we are a part. It is not enough to be literate about ecological problems and short-term solutions. Rather, education needs to generate actions and values that shape people's way of being in the world (Chawla, 2009). Being requires *becoming*, through an openness to encounters that foregrounds experience over knowledge. Episodes of enchantment strengthen temporal and spatial relationships, and care for one's immediate environment gets built into the process. Bai (2009) exhorts us to snap out of the 'spell of the discursive' that lays claims on our perception by imposing an abstract, symbolic and logical view of the world. Instead, one must be willing to participate in, be affected by, and care for the relations existing within the environment.

Education has to squarely confront the fact that the way many humans currently exist on the planet needs changing, that this change is required at the cultural level. Motivation for these changes can be nurtured through

pedagogies that are actively aimed towards telling new stories of a world in which all beings can flourish. This would mean stepping out beyond the boundaries of a classroom, and accepting the unpredictable outcomes of looking outside a window to watch birds, climbing up a rooftop to grow a garden or cleaning a local lake. Rather than simply learning from these contexts, students need to have the freedom to learn with and through them as well. Initially, the science teacher saw the rooftop garden as a relevant space to teach students about plant anatomy. However, students were already observing much more than just the plant structure. They revelled at the sight of fungus growing overnight, the ants lining up along mysterious routes in the garden or seeing a tomato ripen on the plant. They were partaking in the relations and inter-dependencies constituting the garden itself. As co-teachers we need to acknowledge the moments when students attend to nature meaningfully. In these moments, nature is offering something beyond our ability to rationalize or teach. And when these encounters arise, we need to provide time and space for the lessons to run their course. These radical shifts require an overhaul and rethinking of how we conceive of the natural world.

Moving away from human-dominated narratives demands that we develop the capacities, skills and empathy to listen to more-than-human beings. We are fortunate, then, to have nature as a willing and patient teacher. During one of the sessions at the rooftop garden, students gathered to observe some soil layered with compost. Staring at it for a while, a student remarked, “*the soil looks alive! Everything is moving there!*” pointing to all the creatures, ants and earthworms wriggling in it. The recognition of something as living struck me as a profound statement, and one that we are prone to forgetting so easily. Yet, now is the time for remembering, and affirming the possibilities of resilience, resistance and restoration. An ontology of respectful co-existence lies forever within our reach, if we can step outside our narrow cognitive confines to accept the invitation.

## Notes

- 1 I have explored this at greater length in Dutta and Chandrasekharan (2019), and in Dutta (2019a; 2019b).
- 2 The idea of ‘pest’ was interesting, as it evolved into questions and concepts of an ecosystem, pest–predator relationships, and the constraints of working in an urban context. The students had to grapple with ways of obtaining a harvest without resorting to spraying chemicals, and thus trying to find natural ways to maintain some balance. For instance, during the rains, they were excited to spot some snails, and even kept one as a class pet, until the snails began to overrun the farm and eat most of the plants. The students read about it and realized it was an invasive species of snail that did not have natural predators in India and thus had become a pest. In farming, monocultures and indiscriminate use of chemicals give rise to ‘pests’ and ‘weeds’ that are really phenomena of our own making. While all the nuances of the concept could not be explored, the experience gave some first-hand ideas to the students.

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### Hedge Hoardings murals (series) Hermione Spriggs

From the artist: “For thousands of years hedgerow has been planted and maintained as a human boundary-marker, demarcating parish boundaries, privately owned fields and common land. The area of North Cambridge, now known as Kings Hedges, took its name from a royal hunting ground where hedges were planted to guide the movement of wild animals, making them easier to catch. In contemporary Kings Hedges, a small remaining area of ancient hedgerow provides a haven for the city’s wild animals, also hosting a rich biodiversity of edible plant species for the human forager.

“‘People’s Hedge’ is a project commissioned by Resonance Cambridge. This public art commission involves planting a new multispecies hedge in Kings Hedges. The project draws from research into the social history and ecology of hedges in England. It also involves collaboration with local school children who have been learning to track wild animals, investigating local plant lore, and creating camouflage ghillie suits that enable them to blend seamlessly with the hedgerow. The Hedge Hoardings murals shown here are assembled from documentation of a camouflage workshop with Grove Primary School. They are installed on the hoarding boards of the Campkin Rd development site.”

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>





# End the insanity: For nuclear disarmament and global demilitarization

Eileen Crist, Judith Lipton and David Barash

**Eileen** has written and co-edited numerous papers and books, with her work focusing on biodiversity loss and destruction of wild places, along with pathways to halt these trends. **Judith** is a retired psychiatrist and a Distinguished Life Fellow of the American Psychiatric Association, whose real work has always been the prevention of nuclear war. **David** is professor of psychology emeritus at the University of Washington, a Fellow of the American Association for the Advancement of Science and a long-time antinuclear trouble-maker.

**While the perils of climate breakdown and Artificial Intelligence garner and even monopolize attention today, humanity and its leaders neglect addressing other formidable dangers – notably, nuclear war and militarism more broadly. Not only is the existential threat of nuclear war real and pressing, but, at this historical juncture of multiple planetary crises, humanity cannot afford investing in any aspect of the military machine. Here, the authors press for the collective recognition of the imperative of nuclear disarmament and of the abolition of all war and its material and ideational infrastructures.**

**Keywords:** demilitarization; nuclear disarmament

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*Dedicated to Daniel Ellsberg, in loving memory.<sup>1</sup>*

**N**o one believed Katrina would happen before Katrina happened. No one believed Fukushima would happen before Fukushima happened. Virtually no one believes a nuclear war will happen before it happens. But a nuclear war happening is not a disaster: it is a holocaust. Nuclear war must be averted, and most countries have already taken steps to opt out of nuclear madness. However, nine nation-states cling to their nuclear arsenals, throwing the planet and all its beings into devastation's way.

In 1946, Albert Einstein wrote that “the unleashed power of the atom has changed everything save our modes of thinking and we thus drift toward unparalleled catastrophe”. What dysfunctional modes of thinking are most pertinent in this regard? First, denial that nuclear war is possible. Second, the

wishful thinking that since a nuclear war has not yet happened, it will continue to not happen in the future. Third, blaming the foe – Americans, Russians, Chinese, Islamists, and so forth – who ‘force’ us (whoever ‘us’ is) to need weapons of mass destruction. Fourth, that nuclear weapons keep us safe. Finally, there’s the specious notion that a limited nuclear war is feasible and ‘life will go on’ after it’s over. Routing out these murky assumptions, humanity must unite to pre-empt nuclear war today through the wisdom of foresight, the clear understanding of its consequences and a realistic expectation of our own agency.

### Existential threats

It is in the nature of humans to think in alignment with others, be it one’s in-group or cultural trends at large. We tend to conform to social grooves of thought and concern, streaming our own voices into pre-set channels. Perhaps no concern has a bigger grip on lay citizens and scientists alike than global heating. With solid reason: anyone paying attention to climate change science and weather-related upheavals sees the writing on the wall. The planet’s energy balance is skewing catastrophically and the climate is changing too rapidly for nonhumans and humans to have time to adjust (Ripple *et al.*, 2020).

Despite a real climate emergency, a distortion of vision occurs when all eyes focus on one existential threat. Climate breakdown is narrowly framed as *the* problem, bypassing its root cause, which is driving equally grave yet regularly side-lined emergencies. The root cause of today’s polycrisis is the relentless growth of the human enterprise (Steffen *et al.*, 2015). Human expansionism has bulldozed the Earth through economic overproduction and consumerism, human population growth, the explosive rise of the *über*-wealthy and the global middle class, ecosystem takeover for food production, skyrocketing ‘livestock’ numbers, all manner of contaminants and the sprawl of the technosphere that now weighs more than all living things. Earth’s climate and biodiversity systems are shattering while the world is increasingly contaminated from this multiscale onslaught.

The fixation on climate breakdown as *the* problem skirts scrutinizing its root cause and marginalizes equally formidable crises. Four existential threats (that we know about with certainty) menace life: global heating, biodiversity collapse, worldwide toxification and nuclear war. While the breakdown of climate, biodiversity, and planetary health are occurring rapidly on a geological timescale, all three would be trumped by a nuclear confrontation that can start on a morning and be over by the afternoon (Hughes, 2023). Nuclear war (and militarism, to widen the focus) is the existential threat *par excellence*.

Groupthink also distorts vision by inclining people to jump on bandwagons of collective fixations. We are witnessing this with Artificial Intelligence (AI), heralded variously as a benevolent technological tool, usher of the Singularity, harbinger of unimaginable calamities and even a portal through which God’s Adversary will reign (Ribeiro, 2022; McKibben, 2019; Kingsnorth, 2023). Two commentators, keen to underscore the unprecedented dangers posed by this latest technological juggernaut, compare AI to nuclear weapons: “Nukes don’t

make stronger nukes,” they state. “But AIs make stronger AIs” (Harris and Raskin, 2023). This exemplifies how fixating on the unknowns of cutting-edge technologies can blindside us to perils of more familiar ones. The comparison between AI and nuclear weapons – as a device to foreground AI’s astronomical power – is misleading. Nukes do not need to be capable of making stronger nukes: Detonating just a fraction of the currently existing global arsenal would be endgame.

The point of resisting the tendency to circle the wagons around single issues (like climate change or AI) is that we become distracted from other fateful things that are emotionally repellent or less sci-fi worthy: for example, the consequences of deteriorating planetary health from massive pollution by fertilizers, herbicides, biocides, garbage, e-waste, sewage, factory-farm sludge, mining tailings, pharmaceutical waste, plastic, lost fishing gear and industrial chemicals. The degradation of Earth’s epidemiological environment is brewing disease conditions for all beings, including boosting human chronic and infectious illness. Is the collapse of planetary health less ominous than the unfurling of AI – or just less glamorous?

### The threat of nuclear war

Our specific intention is to highlight how focus on singular issues may be diverting us from pondering *war*, and nuclear war in particular. Aside from select news outlets and activist groups, this existential threat is not yet in collective view. There are indications this may be changing, a salutary turn we seek to reinforce (*e.g.* Krieger, 2018; International Physicians for the Prevention of Nuclear War, 2023).

Nuclear war has had its sci-fi heyday of (by now) hackneyed narratives of billowing mushroom clouds always on some distant horizon. The blockbuster movie *Oppenheimer* has kept the chattering classes busy, while avoiding explicit images of the horrors unleashed at Hiroshima and Nagasaki. If contemplating nuclear war generates ‘pre-traumatic stress disorder’, we seem to cope with our fears by projecting them onto fictions and movies, combined with selective inattention.

Unless one is in it, conventional warfare appears as a quotidian affair – a reality-TV spectacle of battles, bombings, villains, heroes, intrigues and the like. War is what few want to think about deeply or contest. “Give Peace a Chance” sounds dated if not sentimental. We gaze upon war with jaded eyes, with a shiver down the spine or a shrug of the shoulders at ‘incorrigible human nature’. Regarding *nuclear war*, if we think about it at all, we are prone to cross our fingers and hope that reason will prevail.

But if reason is failing to address climate change (where reason should patently carry the day) and is also failing to slow down and regulate AI (urgently called for), then why do we think that human reason will succeed at preventing nuclear war? And why do we think that reason is necessarily relevant? Just as likely as some ‘level-headed’ decision-maker setting off doomsday (to pre-empt a first strike or in deluded hopes of winning), nuclear war could be triggered by *no* decision-maker (computer error or

false alarm) or by a madman capable of crossing the Rubicon that should never be crossed.

The moment this event occurs would be when all other existential woes (and delights) become moot. Without further ado, a nuclear holocaust will break the climate, cause mass extinction and induce global radioactive toxification for the long haul (Turco *et al.*, 1983; Robock and Toon, 2012; Scouras *et al.*, 2023). People who remain alive after nuclear immolation will be agonizing over survival and completely uninterested in what Artificial Intelligence might have to say on the topic of nihilism.

Bottom line: no matter how jaded we are about war and how much we hope it will not happen (or happen only on our news feed), we must put our collective thinking cap on and think wide-awake about war – the whole kit and caboodle.

The dismissal of nuclear war, and billions of people sleepwalking toward annihilation, is not only the product of unexamined assumptions but also of governmental propaganda falling on receptive ears. Human beings can only imagine limited amounts of horror. We believe in the tenacity of our everyday worlds and slip our fears into nightmares we forget upon awakening. It is unbearably painful to think of the deaths of loved ones, but it is also searing to contemplate mass fatalities; as a result, many people simply avoid doing so.

The planet has come terrifyingly close to nuclear war at least 33 times since 1950, due to computer errors, human malfeasance or carelessness, and failed communication, all of which have been documented (see <https://is.gd/l9xc3e>). Some of us recall the Cuban Missile Crisis of 1962, probably the closest humanity has come to nuclear conflict. One of the results was the Atmospheric Test Ban Treaty signed in Moscow in 1963, which has benefited all Earthlings (Alvarez and Mangano, 2023). Yet the non-visibility of nukes has also given a sinister spin to the adage ‘out of sight, out of mind’, fostering an illusory surety about the absence of threat. The atmospheric test by the United States on 17 July 1962 was the last time people could watch a nuclear explosion in the atmosphere.

The pro-nuclear political and military establishment holds that, however dire the consequences of their potential use, nuclear weapons deter adversaries and that their deterrence utility has been demonstrated. To be sure, all out nuclear war has not happened: this could well be because there was no issue sufficiently grave to trigger it, no leader foolish enough to instigate it or simply due to luck, as former US Secretary of Defense Robert MacNamara believed (Blight and Lang, 2017). More pointedly, logic suggests a problem in congratulating nuclear weapons for the fact that we have not blown ourselves up with them: Had we done so, we wouldn’t be around to thank them. The logic that nuclear weapons provide deterrence parallels the sick joke of the person falling from the Empire State Building, exulting en route “So far, so good!”. The clearest perspective on nuclear policy rationalizations was offered by Daniel Ellsberg: “What is missing is the recognition that what is being discussed is dizzyingly insane and immoral” (quoted in Hughes, 2023).

What is striking is the number and kind of wars that nuclear deterrence has *failed* to prevent. Nuclear-armed states have engaged in numerous wars with

conventionally armed countries; in many cases, the latter have won. Moreover, states lacking nuclear weapons have not been deterred from attacking nuclear-armed opponents: for example, China's incursion against US forces in Korea in 1950, Argentina's attack on the Falkland Islands / Malvinas in 1982, and Iraq's lobbing missiles against Israel in 1991. In short, the myth of nuclear deterrence conveys great risk and no benefit (Barash, 2020).

## The insanity of the military machine

During the last decade, global military investments have been eerily on the rise, including military budgets, arms production, expansion of autonomous weapons systems and nuclear warhead upgrades. According to the latest publication of the Stockholm International Peace Research Institute, the world's nuclear-armed states "continue to modernize their nuclear arsenals and several deployed new nuclear-armed or nuclear-capable weapons systems in 2022". Their press release headline warns: "States invest in nuclear arsenals as geopolitical relations deteriorate" (Stockholm International Peace Research Institute, 2023). It's a sentence not to gloss over.

Why is the world – especially academic, media, political, environmental and spiritual leaders – paying virtually no attention? Do we feel so impotent before the military machine that we are unwilling to even think about it, let alone push for its abolition?

The military machine enjoys two dominant frames that serve it brilliantly: invisibility and normalization. As long as warfare is not conspicuous in the global arena (and wars are often made invisible if they occur 'peripherally'), all of warfare's prerequisites (budgets, corporate contracts, research, conscriptions, etc.) are not deemed knowledge-worthy developments. The military machine gets partially unveiled when a newsworthy war breaks out (as in Ukraine and Gaza), at which point war becomes normalized. In other words, when the military machine is unveiled (through war), it is immediately re-veiled by being processed for consumers through 'normal' and even exciting streams of reports on battles, strategies and other machinations.

We call for ending the conventional invisibility and normalization of the military machine. Organized warfare has always been irrational: No person in their right mind wants to die prematurely or to kill without grave cause. Warfare, moreover, has always been unjust: outsourced to *dispensable people* enrolled by force, enticed by pay or bullied by propaganda. War has also been unjust to uncountable and unmourned nonhumans forced into the terrors of battle – horses, dogs, elephants – or suffering and dying as bystanders (Nibert, 2013).

While historically war has been irrational and unjust, today it is full-blown insanity. For example, the price tag of the US military budget (the world's largest) is in the ballpark of one trillion US dollars a year. Yet not only should the United States come to terms with its dire national deficit, but a bill of one trillion dollars must be judged against the urgent demands and costs of climate breakdown, public healthcare, refugee crises, species extinctions, as well as education, pensions, family planning and other social services. Humanity must

loudly deplore the dissonance of allotting exorbitant resources to death technologies in this time of reckoning.

We can no longer afford the pseudo-normality of the military machine and its inevitable wars, nor find solace in nuclear deterrence. There are eight billion people on the planet, bustling to make ends meet amidst climate disasters and nature destruction. The basic resources humans need – arable land and freshwater – are maximally exploited and polluted. In this world-historical situation of looming scarcities, nation-states contend – with ludicrously bad manners – cheek to jowl as they have parcelled Earth up like a cookie-cutter. Hundreds of millions of people will be dislocated in this century by mega-fires, droughts, floods, sea-level rise, conflicts and other threats. Present circumstances have humanity, along with all Earthlings, perched on a pyre. A spark from any direction – the Middle East, South Asia, Russian borders, China, the Koreas, or elsewhere – can set off an inferno. It is therefore utterly irrational to maintain the military machine, never mind escalating it. The machine itself cannot perceive the spurious nature of its quest for ‘security’. The rest of us, however, know that our safety and well-being, and the lives of our nonhuman kin and future generations, are on the line.

Given that every large-scale Earth system is in crisis, how dare the global political military machine chug along with its demonic research, obscene budgets, armament trading, modernization of nuclear weapons and patriotic drivel? The immense waste of lives and resources, malfeasance in allotting taxpayer money, and Orwellian rhetoric of homeland security, motherland or fatherland glory, and global empire building, is a travesty. Life is imperilled. Humanity must look to what is *real* – the splendour and joy of living – which is being defiled under our jaundiced watch.

There’s never been a better time than now to jettison the military machine. The extreme precarity forecast by socio-ecological upheavals (Miller and Heinberg, 2023) offers the clearest backdrop of war’s obsolescence: We simply can no longer afford any war or preparation for war, even discounting World War III. We call for the global recognition of this slim historical window to abolish the military machine.

We understand that this sounds like a pipedream. But the abolition of slavery – an institution as ancient as militarism and deeply entangled with it – also once sounded like a pipedream. Ditto for the divine right of kings, duelling and apartheid. We are profoundly capable of recreating ourselves when human conscience lights up with understanding and an unambiguous mandate. War is neither a social nor a biological necessity – it is a millennia-old historical custom that prevailed through conquest and imitation. It can no longer continue without endless bloodshed, ruination of nature, perpetual cycles of trauma and hatred, and ultimately holocaust.

We must eliminate the military machine. The convoluted equation of the 21st century will be difficult enough to solve without it. We know that what is coming – regardless of sociocultural identity or economic status – is coming for all of us. We need to gather together to keep each other and all Earth’s

beings safe. That will be impossible so long as we tolerate the military machine and shelter it in invisibility and normalization.

### Call to Action

We who love this planet, love life, and are astonished at the splendour of existence, rise against the military machine.

We call for immediate military de-escalation. All nations' military investments can be slashed by half for starters (Klein, 2019). Nations can, moreover, choose the path of complete demilitarization (Lipton and Barash, 2018). Freed resources must be repurposed toward education, family planning, healthcare, preventative medicine, law enforcement against child trafficking, child marriage, and child labour, enforcement against wildlife poaching and trafficking, universal basic income, meaningful employment, pensions, protected areas of nature, conservation projects, ecological restoration and regenerative agriculture. These endeavours will catch human and nonhuman worlds in safety nets, avert a mass extinction event, soften the blows of climate upheaval and start to undo Earth's contamination by agrochemical and industrial pollutants.

We celebrate the UN Treaty on the Prohibition of Nuclear Weapons, signed by nearly half the world's countries in 2021, and urge all countries to join. Knowledge of this treaty should become widespread and act as a thorn in the side of the nuclear-armed states. Most especially, we single out the Big Three, the wannabe empires. Big Three, you should know what you look like from out here in the bleachers. You look like the Three Stooges auditioning for a Game of Thrones: neither funny nor entertaining, but preposterously unreal. The international community and its leaders (environmental, scientific, political, business, religious, academic) can join their voices to compel global nuclear disarmament. Research into modernizing nuclear weapons – and upgrading them with AI – must stop (see <https://is.gd/430pSL>).

We appeal to news media to break frame with business-as-usual journalism: cease reporting on war in the guise of 'dry facts', as spectacle, and in pseudo-moral idioms of 'bad guys' versus 'good guys'. Also cease the pseudo-morality of decrying 'war crimes' – as if war is not *the* crime and as if war is not the cause of war crimes. Free your thought and recognize the ringleaders of war – most especially the nuclear-armed ones – as forces holding us captive and threatening all life.

We call on conscientious objectors worldwide to refuse military summons. It's a question for all of us: which reality do we choose – ephemeral nationalistic divisions, illusions of security and power or timeless Earth unity? We should all jump ship from a system whose core identity has been conquest and militarism – for see, now, where it is taking us.

The advocacy movements for ecological sustainability, social justice and world peace need to unite for the realization of our common aim: to chart a new human history through substantially downscaling the human enterprise and reorienting it in harmony with Earth (Rees, 2023; Krieger, 2018; Hickel, 2021). Such a coalition for peace refuses all weapons: weapons of war, weapons of hate, weapons against plants, forests, and animals, and the weaponized

extraction of energy sources from Earth's crust and seabed. We call for a broad, grassroots Peace Movement that gathers to safeguard humanity, nonhumans and nature's places from the hardships here and coming.

## Notes

<sup>1</sup> On Daniel Ellsberg's remarkable life, see Falk (2023).

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# Light on the Dark Mountain: An essay–review

Patrick Curry

Patrick is a writer and scholar based in London, UK.

**In this essay-review, the author considers the *Dark Mountain manifesto* and the movement it inspired, including both the later work of Paul Kingsnorth and especially that of Dougald Hine in his book *At Work Among the Ruins*. He then goes on to examine related recent work: a chapter by Maggie Nelson and, at more length, *An Inconvenient Apocalypse* by Wes Jackson and Robert Jensen. His sympathetic exegesis co-exists with noting a serious omission in all this work, the lack of an overtly ecocentric dimension.**

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**U**ncivilisation. The *Dark Mountain manifesto* was published in 2009 (see <https://is.gd/JE5hUw>). Co-authored by Paul Kingsnorth and Dougald Hine, it started a notable cultural movement including festivals, a series of books and a stream of articles and blogs. My concern here is partly to evaluate that movement but more to understand its significance. What was the impulse behind it? And how has that continued to play out? To that end, I shall start with the manifesto before turning to the recent book by one of its two co-authors, Dougald Hine: *At Work in the Ruins* (2023). Then we shall consider two other recent works on the same subjects: one a chapter in Maggie Nelson’s *On Freedom* (2021) and the second *An Inconvenient Apocalypse* by Wes Jackson and Robert Jensen (2022).

Both the original impetus of *Uncivilisation* and many of its effects were strongly literary, so let’s begin by considering them in that perspective, starting with the metaphor of the Dark Mountain itself. It comes from a brooding and vatic poem by Robinson Jeffers, “Rearmament”, which finds “a tragic beauty” in “the dance of the / Dream-led masses down the dark mountain”. Yet the image invoked by *Uncivilisation* is of an ascent. Now a manifesto isn’t a tract, but it’s curious. (What were the masses doing up there, anyway? And why would we want to replace them?)

The manifesto is nonetheless a fine piece of rhetoric which effectively conveys some important insights. One is that both individually and collectively, it is a good idea from time to time to pause and take stock, to look behind and

'down' rather than compulsively onward and upward. It is also deeply salutary to acknowledge the extent to which 'Western' (now global) civilization, whatever its achievements, is the principal driver of ecocide and is therefore unsustainable as such. *Uncivilisation* bravely calls out our ruling denialism. Finally, its authors realised early on, and disavowed, the corporate and managerial takeover of much of the environmental movement, bringing with it a dismaying complicity with business-as-usual.<sup>1</sup>

Alongside these signal virtues are some problematic issues. One is the strange lack of acknowledgement, required not by pedantry but honesty, of predecessors and elders (too many to name). The path up the Dark Mountain is not a broad highway but neither is it anything like as lonely and untraveled as the authors make it out to be, which makes one suspect a pose of lonely originality.

Part of that omission is the absence of philosophers. This matters only because *Uncivilisation* would have benefitted from more (as William James once defined metaphysics) of "the obstinate effort to think clearly" (James, 1890: 145). For example, its authors invoke Jeffers's 'inhumanism' as, approximately, the rootedness of humans in nature as a whole. But in Jeffers's own case, that sometimes slipped into a deep misanthropy (something which, reading his war poems, it is impossible to doubt). Perhaps what is meant, then, involves the 'non-human', referring to all the vast world of nature which is not specifically human. But that could set up a pernicious opposition between the two, when humans are clearly human animals. So maybe it should be supplemented with David Abram's (1997) important term, the 'more-than-human': that which non-human nature and humanity share, although the former in vastly greater measure.

I am not trying to sort out these tangled threads here. I only want to point out that such ideas matter, because they don't all take you to the same place; plus, not doing so may make it easier for someone else to take them in a direction you don't like. And I wonder if one reason for the tangle is tacit anti-intellectualism. I hope not, because it is absurd to conflate hyper-intellectual analysis with thinking, when the latter is as natural as feeling, breathing or walking. So too with the related prejudice against the metropolitan, whether populace or mindset; the rural is just as often a mare's nest of ignorance, brutality and bigotry.

But the deepest problem with *Uncivilisation* is that its occasional swipes at "human centrality" look like tokenism, given the fact that it is almost entirely concerned with human well-being or otherwise. In practice, ecocentrism is peripheral here where it should be central, leaving untouched anthropocentrism – an exclusive concern for humans, attended by chronic self-involvement.

The paths of Kingsnorth and Hine have subsequently diverged. I want to concentrate on Hine but first a few words about Kingsnorth. Almost ten years ago he embarked on a career of experimental fiction, but running alongside this he maintains a stream of online essays and blogs, still very much in the mode of the journalism from which he and Hine describe themselves as recovering.

Not long ago Kingsnorth publicly converted to Orthodox Christianity with the same acute sense of dramatic timing as his repudiation of environmentalism; for Kingsnorth not only presents the collective as personal, but the reverse. He recently identified AI ChatGBT as the anti-Christ or Satan (not Stan, as I just typed). I myself am on record (Curry, 2013) as an advocate of animism, understood as a principled habit of acknowledging agency and subjectivity wherever they show up and regardless of whether the other party is technically alive or not. So why not this time? Because it seems to me that Kingsnorth is not practising animistic encounter or ontological openness but enlisting the technology demon as an actor in a pre-determined narrative of eschatology which comprises one of the most deranged parts of Christianity.

Perhaps an age gets the metaphoric monster it deserves. Now it's AI; in the 1980s it was 'the selfish gene', something which (as Mary Midgley tirelessly pointed out) is incapable of being either selfish or unselfish, or of feeling, desiring or thinking, strictly speaking, any more than is a machine. Also, haven't human beings already demonstrated beyond any doubt that they are capable of royally screwing things up without any supernatural help? So it seems unnecessary, and probably unhelpful, to introduce the latter into the picture. Fear gets ramped up alright, but hardly clarity. And it too easily lets the humans who are responsible for it off the hook ('Satanic AI made me do it').

Dougald Hine has taken the Dark Mountain project in a very different direction, and I turn now to his *At Work in the Ruins* (2023). While this rich and complex work can be taken to represent the continuing life of that project, it stands firmly on its own two feet.

Integral to Hine's stance is a move from being someone who, for fifteen years, was best known for talking about climate change, to someone who has now rejected that role. The reasons are well worth noting. One was Hine's experience of the pandemic in Sweden, which resisted much of the tendentially authoritarian governmental reaction to public panic elsewhere, and contributed to his scepticism about science extended beyond its proper bounds. (This point is not a denial of the reality or seriousness of the virus but an openness to questions about how it was handled.) Part of the lesson to be learned is to refrain from equating questions about our knowledge of a virus that only emerged in 2020 with rejecting the decades of painstaking collaborative work that have gone into climate science.

Another major reason for Hine's change of heart is the way science itself has evolved and mutated, so to speak. The potential value of much scientific research is not in dispute. Furthermore, as Hine points out, in "certain branches of science, especially those which take place outdoors, there is a tenderness of attention to places and creatures which [...] it's hard not to call love" (2023: 73). Yet as he adds, once the observations pass through the mill of the production of scientific knowledge, what remains becomes something else not without potential value and importance, but of a very different kind. Often it is then taken to confirm what Max Weber called the chief engine of disenchantment, with nature no less than ourselves: the belief "that one can, in principle, master all things by calculation" (1991: 139). This is disastrous

because enchantment, properly so-called, is not a delusional spell but rather a truthful apprehension of the other's intrinsic value; but for this, modernity and its project of mastery has literally no use.

Another part of the problem is that science is increasingly expected to supply answers to questions – notably political and ethical – for which it is constitutionally unsuited. It can only do so by claiming an authority in matters which are unsusceptible to scientific analysis, and disguising as objective description what are actually public interventions. The resulting scientism is an ideology, not itself scientific, which attempts to replace the “exercise of judgement” (Hine, 2023: 42). And we know from the work of Michael Polanyi that in practice, science itself cannot avoid judgement.

As Weber (1991: 143) pointed out a century ago, science “presupposes that what is yielded by scientific work is important in the sense that it is worth being known [... But] this presupposition cannot be proved by scientific means. It can only be interpreted with reference to its ultimate meaning, which we must reject or accept according to our ultimate position towards life”. Thus, to quote Hine (2023: 86), “science doesn't tell us what to do, it gives us information on the basis of which [partly, I would add] judgements have to be made”.

This truth has been voiced by, among many others, Mary Midgley (2001: 49) – “Asking for more science and less of something else is itself a social and political move” – and Paul Feyerabend (1987: 31) – “the choice of science over other forms of life is not a scientific choice”. Its abuse in recent years by right-wing populists does not make it any less true. But it also remains largely ignored by those claiming the mandate of liberal democracy and objectivity. As Hine (2023: 46) says, the “promise of replacing the messy exercise of judgement with the cleanliness of calculation comes back in new forms”.

Hine's disillusionment with science as policy has another, more proximate cause. Climate change, as it is represented, lends itself readily to quantitative measurement and instrumental calculation in a way that cuts off its moral/ethical dimension at the knees. Thus it has come to be framed by a techno-science which is compliant with the demands of capital whose interest is not ecological sustainability – the ultimately determining condition – but its own financial sustainability. Bringing this point home, he mentions being contacted by someone with a background in policy and economic development, then moved onto start-ups “with a health-care focus”, and was now “looking to pivot to climate change (with a hybrid policy and entrepreneurial bent)” (2023: 22). (This language left me feeling nauseous.)

Hine sees two paths from where we are. One is the big path of large-scale efforts of management, control, surveillance and innovation, oriented to sustaining existing trajectories of technological progress, economic growth and development; it combines elements of Brussels, Silicon Valley, Wall Street and the City, and the White House, together with elements of the equally anthropocentric Promethean Left, and now ‘ecomodernists’. (The last frankly strike me as particularly questionable in a crowded field, not to mention Orwellian. The term makes as much sense as ‘blackwhite’ or ‘squarecircle’.)

In the chilling words of the recent UN ‘Stockholm+50’ Declaration, which Hine quotes, we must move “toward the establishment of a governance system to effectively manage human interactions with the Earth System” (<https://is.gd/9DhgH8>). Note the appropriation and instrumental redirection of systems theory, as is already well underway in the form of ‘ecosystem services’; the evidence-free assumption that human beings are capable of managing themselves, let alone the Earth; and the icy Foucauldian language of impersonal governmentality. The logic seems to be the same as for ‘sustainable growth’: since the alternative doesn’t bear contemplating, it must be true. Next up, as things worsen, the ultimate doomed gamble: geoengineering. Anything but stop, learn and change course, abandoning delusions of control for humility, admitting the reality of limits, letting go, slowing down and downsizing in all possible ways.

This path is the urge to use the ecological crisis it has helped create “to turn our planetary home and all those share it with [...] into an object of global management and control, and all in the name of ‘saving the world’” (2023: 101) Hine’s insight here is impeccable. (That includes his intelligent recourse to the earlier path-finding work of Ivan Illich, among others.)

Hine’s small path is very different, comprising not one but many, “made by those who seek to build resilience closer to the ground, nurturing capacities and relationships”, for a future that may look constrained now but is still worth living and retains unsuspected possibilities (2023: 19). As Jan Zwicky (2023: 95) puts it, “We are left to attempt meaningful moral gestures as individuals and small communities rather than as voting members of large national polities” – which includes, I would add, working with local non-human communities. The political value involved is thus not an unrealistic quasi-universalist unity, resulting in a false and potentially coercive pretence, but principled, practical and non-anthropocentric solidarity.

These small paths reject the destructive logic of the market and extractive industrialism, whether economic, cultural or otherwise. By the same token, they are not about making something happen but helping to create the conditions in which what needs to happen can do so of itself, as it were, and can therefore be trusted. It is about “salvaging what we can [...] while learning what we can from the many other ways humans have made life work”, not least indigenous wisdom (Hine, 2023: 107). I am reminded of the late lamented Teresa Brennan (2003: 165): in the course of a passionate and intelligent prescription to return to local and nonspecialized economies, “To say that we need to ‘go back, slow down’ will be portrayed as anti-progress. But progress lies in straining the human imagination to its limits in cleaning up the mess – while retaining the information that mess has yielded”.

It is impossible to evade the fragility of hope. In a provocatively-entitled chapter towards the end of his book, Hine talks about ‘How to Give Up’ as a necessary precondition for the sober realism that is now needed. We have already lost so much. As he says, “To wake up to the world as we find it is to wake into grief” (2023: 194; cf. Buhner, 2022). This is a thread from the original Dark Mountain manifesto that has proved its continuing worth.

Hine (2023: 32) cites John Michael Greer's helpful distinction between a problem and a predicament. And modern mainstream culture has a huge investment in seeing only problems with solutions, even in such obviously inappropriate cases as death. Hine rightly finds our fear of "the quiet fact of our mortality" (2023: 28), and the attempt to convert it into a fixable problem, deeply implicated in our skewed approach to the natural world (including ourselves as natural beings), especially given that all life depends and feeds on death. What this predicament requires is to live lives worthy of others' sacrifice – not as industrial commodity, but as bio-existentially unavoidable – which "is not just a moral aspiration [...] but a practical necessity for any culture that wants to stick around" (2023: 35). Pivot to that!

Now I want to extend the picture by considering two other recent works which tackle the same subjects. There is striking common ground with that of Hine, which I take to be an encouraging sign of something distinctive and real that is compelling the attention of such varied observers and similarly shaping their conclusions.

The first book is Maggie Nelson's *On Freedom* (2021), although I am only going to address her discussion of climate change. Whatever the merits of her book in general, this chapter stands out. She recognizes that the climate issue is uniquely inexorable and sweeping, such that mitigation and adaptation – both – are all that is rationally left to do; and that looming not far behind is the possibility of self-caused human extinction. But she also rightly avers that nonetheless, "catastrophizing about the unknowable future is not a very productive or happy-making activity, and does surprisingly little to strengthen our capacity to cope" (2021: 200).

I commend Nelson's chapter for its effort to reconfigure freedom, in the light of climate change, by "ceasing to conceptualize it as the defying of limits, and reimagining it as the practice of negotiating with the various material constraints that give our lives shape and possibility" (2021: 183). Although what about the lives of all the others? And surely moral constraints, distinct from material ones but inextricably entangled with them, are just as important?

Nelson also puts her finger on a point whose pain is inseparable from any possible healing: "What we fear is coming for our planet or species" – or other species, who have equal claim to this planet – "is what we already know is coming for us and everyone we love. That's hard" (2021: 207). It is. For me it impels the reflection that the unchecked fear of death, and the resulting attempt to avoid it at all costs, leads to blaming life itself – ecological, embodied, messy and personally finite – and thence to the attempt to destroy life and replace with something else, something shiny, supposedly invulnerable and even immortal. We can already see this in the psychotic fantasies of the tech billionaires and their transhumanist epigones, as well as the trans-activist attempt to destroy the reality of biological sex (cf. Curry, 2020, 2024; Stock, 2021). All emerge from the same insane stable of our times: boilerplate anthropocentrism, will-to-power and biophobia linked with blind faith in technology.

In their book *An Inconvenient Apocalypse* (2022), Wes Jackson and Robert Jensen engage in a refreshingly calm and careful analysis of (as the subtitle

says) *Environmental collapse, climate crisis, and the fate of humanity*. They are painfully aware of their position as middle-aged white professional male Americans, but we can leave it to the new police to check their identities and proceed to what they have to say.

Their starting-point is that “we take seriously the biophysical limits of the ecosphere and human limits” (2022: 4); that is, the genetic constitution of the human animal. (How refreshing to find an intelligent affirmation of the fact of human nature, after the academy threw out that baby with the essentialist bathwater.) Such a premise is as promising as it is unpopular, and they stick to it, unfolding all the important implications as they go. We live in a time of fervid denial of limits, shared more-or-less equally by the Right and what’s left of the Left, and it is invariably accompanied by “a fundamentalist faith in technological solutions” (2022: 22) – ‘faith’ being the operative word. But as Jackson and Jensen say, wishing something “to be possible, simply because the alternatives are difficult to imagine – let alone achieve – does not make it possible” (2022: 23).

It is also encouraging to find listed ten “catastrophic risks” (2022: 10) requiring urgent attention, of which anthropogenic climate chaos is only one. Jackson and Jensen rightly recognize that no matter how important it is, the last must not be allowed to monopolize the agenda at the expense of egregious human overpopulation (another victim of denialism even, shamefully, among many environmentalists), collapsing biodiversity and mass extinctions, chemical pollution and other threats. These are all effects of the underlying problem, runaway human overshoot: “too many people consuming too much stuff in the aggregate” (2022: 51).

Let me add that because of its apparent calculability and fungibility, carbon as the currency of climate change lends itself all too readily to appropriation by global business-as-usual. And that is exactly what we can no longer afford. But as the authors also point out, “Human degradation of ecosystems predates capitalism and will continue after capitalism, unless we develop a deeper understanding of the crisis”, an understanding based on what they call “human-carbon nature” (2022: 19), illuminating the way these two analytically distinct phenomena are entangled in lived practice.

In the authors’ powerfully precise words, “Attempts to keep the existing systems going” – including existing numbers of people at existing levels of consumption – “will simply accelerate the movement toward collapse and leave future generations with fewer options” (2022: 112). I don’t know who is listening but this is one of the most important points which needs to be heard. Ignoring it will only intensify the scale and speed of ecocide and its effects, thus making our survival, let alone future flourishing, even less likely, and – although it goes unmentioned here – that of so many nonhuman others. And the point must be made in the teeth of some who we might otherwise think of as allies, such as ecomodernists like George Monbiot, who use rewilding to justify an ever-increasing intensification of urban human life precisely in order to keep existing systems going.

The overwhelmingly likely human prospect is thus fewer people living with less stuff on less energy. We can choose a path or paths (which will be far from

perfect) or we can be dragged there (which will be dire). To say so is, of course, almost universally politically unacceptable; but to bow to that contingency when attempting to come to terms with biophysical realities, as the authors say, “guarantees collective failure” (2022: 47).

Finally, the authors advise us that “we should take care not to undermine other species’ capacity to thrive. It turns out that is self-preservation as well, because when we treat other species with respect we dramatically increase our ability to continue to thrive ourselves” (2022: 120) True, of course, but there is a trap concealed in this point, because it doesn’t work if that is *why* we are trying to treat other species well. We will inevitably draw the charmed circle too narrowly, and too precariously when self-interest seems to dictate acting otherwise.

As I hope is clear, the works I have been discussing are thoughtful, passionate and critical. In a way, that makes it the more worrying that something literally vital is missing from all of them. That omission certainly does not invalidate what they do say, but it has to be named nonetheless, and it is this: the entire vast, deep and delicate web of more-than-human life, which includes but so exceeds human beings, receives only passing nods, the barest acknowledgement.

The authors might perhaps respond: Well, we were assuming that. If so, I would say: *Please don’t*. It is far too important to take for granted, not to mention gifting the apparatchiks of ecocide with its absence from the conversation. Nor can the authors be allowed the argument that of course the web of life is important, because it supports *us*. This is precisely the instrumental logic used to justify the exploitation and extermination of any life-forms – not excluding human – that are deemed to be useless for ‘our’ survival, an impediment to progress, and so on. And historically, without for a moment diminishing the seriousness of all the terrible intra-human crimes – genocide, including that of indigenous peoples, slavery, the Shoah, femicide – crimes by humans against the Earth, its non-human peoples and its wild places are at least comparable in both substance and scale, despite being less commonly recognized and acknowledged. So where is the outrage?

Let me put it this way. If you can countenance without shame and rage the fact that humans and their domesticated animals now comprise more than ninety-five per cent of global mammalian biomass, leaving less than five per cent for all wild mammals; and if you can contemplate with equanimity the hundreds of millions of those domesticates that are slaughtered every single day, such that we humans are, for them, ‘an eternal Treblinka’ (Isaac Bashevis Singer, quoted in Patterson 2002); and if you can know that forests great and small the world over are being cut down or burned without feeling it as you would if the great Gothic cathedrals were being shattered and sacked; and if you aren’t deeply dismayed by the anthropocentric – not to say narcissistic – self-involvement of so many human collectives, starting with governments’ puerile machismo in competing to be a Great Power, tending towards the ultimate insanity of war (*cf.* Crist and co-workers, in this issue of *The Ecological*

*Citizen*) – then you don't get it. And if you don't really get it, your analysis too will ultimately fail; and with it, your actions will also fall short by that much more.

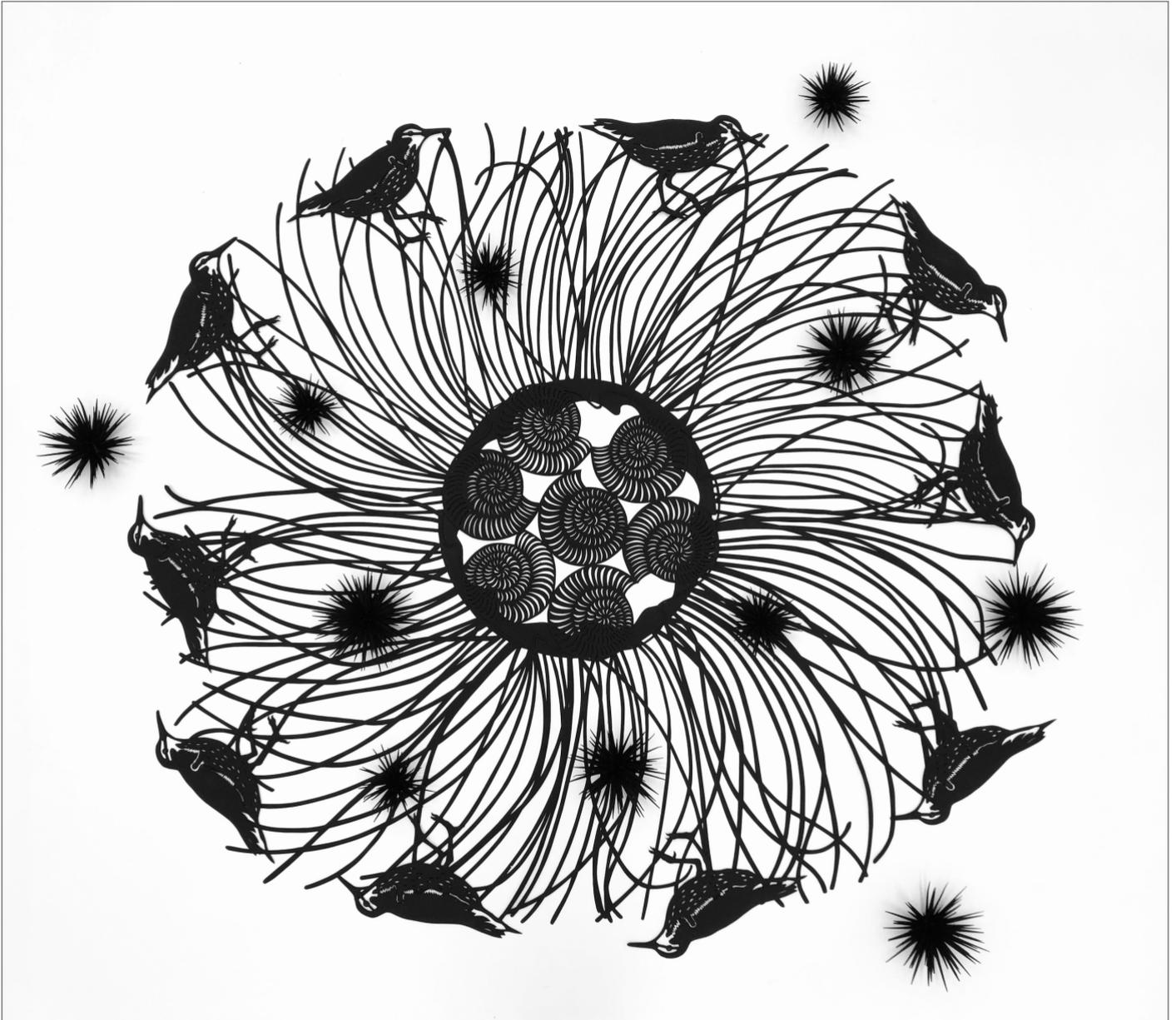
Again, someone might respond: Oh, but I do get it! In that case, say it. Loud and clear. Now is the time.

## Note

- 1 See *Bright Green Lies: How the environmental movement lost its way and what we can do about it* (Jensen et al., 2020).

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**Seagrass Besieged**  
Ann Chadwick Reid

Hand-cut paper and map pins (59 x 54 x 4 inches).

From the artist: “I create hand-cut paper artwork that addresses threatened habitats in the Pacific Northwest, USA, including Garry oak savannahs, San Juan Island marine lagoons, Salish Sea eelgrass beds and tidal marshlands.”

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



### Butterfly Bombogenesis

Ann Chadwick Reid

Hand-cut paper and map pins (84 x 40 x 8 inches).

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



Plume

Ann Chadwick Reid

Hand-cut paper and map pins (48 x 63 inches).

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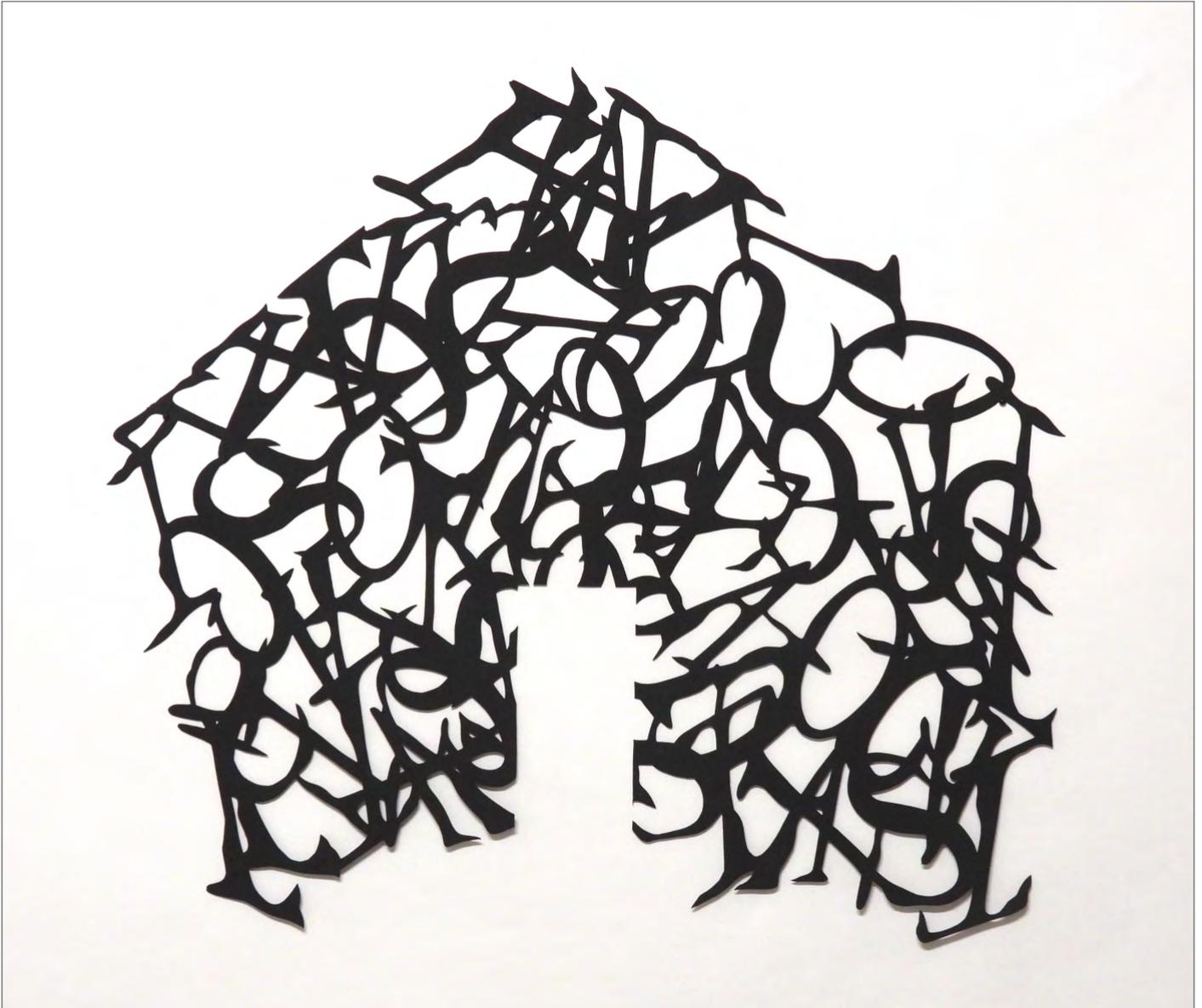


## Tideflat Plunder

Ann Chadwick Reid

Hand-cut paper, map pins and quilted fabric (68 x 72 x 4 inches).

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



**Solastalgia**  
Ann Chadwick Reid  
Hand-cut paper (21 x 24 inches).

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**Tree Gone**

Ann Chadwick Reid

Hand-cut paper (22 x 26 inches).

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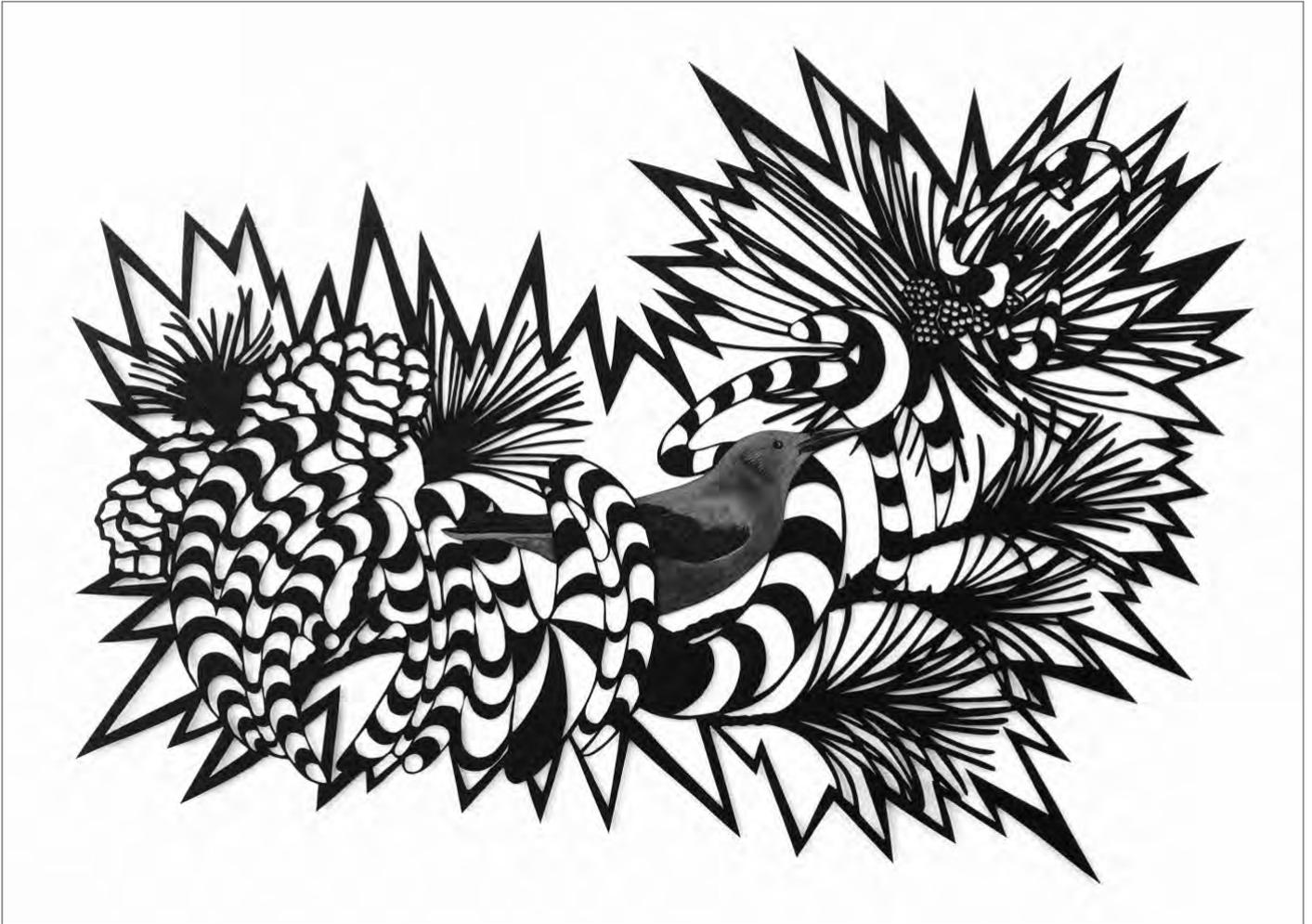


## Turbulence

Ann Chadwick Reid

Hand-cut paper and map pins (68 x 79 x 5 inches).

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>



**Vanished**

Ann Chadwick Reid

Hand-cut paper (27 x 19 inches).

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>

# Covenant with the wild: A critique of the ‘right to roam’ movement

Simon Leadbeater

Simon lives off-grid on the edge of a plantation wood in southern England. As well as caring for his woodland, he runs a small farm animal sanctuary and is a trustee of the British Association of Nature Conservationists.

**The right to roam for whom? Creating a secure enclosure – ‘the pen’ – within the wood Simon Leadbeater calls home, led to a serendipitous if gentle epiphany, in which the needs and desires of the wood’s nonhuman denizens became progressively apparent. They maintain a cautious distance but behave naturally, compared to being put to flight whenever the author steps into the main part of the wood. The woodland outside of the pen now belongs to the wild, with whom Simon has established a personal accord, a covenant, which he only transgresses through necessity, so that wild animals may enjoy mostly undisturbed lives. People need to find ways of peacefully coexisting with animals by not intruding into their homes. This creates an ethical challenge for those demanding a right to roam, who, by conceptualizing nature abstractly largely advance human interests, overlooking nonhumans’ need to roam and live without fear.**

**Keywords:** animal ethics; conservation; human-wildlife coexistence

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*The naïve assumption that the natural world is there to be possessed and used by humans for their advantage in an unlimited manner cannot be accepted. [...] In this context each individual being is supported by every other being in the Earth community. In turn, each being contributes to the well-being of every other being in the community. Justice would consist in carrying out this complex of creative relationships. (Berry, 1999)*

**T**he egregious violation across the face of the Earth of wild animals’ right to roam is why I felt compelled to write; a fundamental freedom stolen from once free-roaming animals by the exercise of human supremacy, our wholesale domination of the planet. Little wonder wild animals flee from us; for those who love them, we grieve to be so feared.

This essay concerns a perhaps peculiarly English rift between landowners and landless campaigners, or so the dialectic is mostly framed. Reimagined from a different standpoint, however, the self-styled ‘right to roam’ (R2R) movement aims, with callous irony, to extend human conquest and further constrict animals’ rights to freely move (or stay), broadening oppression’s reach, deepening the oppressed’s distress. Campaigners’ demands for additional rights have universal implications, raising important questions about our relationship with nature. My essay invites deeper reflection on the implications of expanding R2R by focusing on nonhuman animals. By borrowing something old and making new I also set out how we might change for the better.

The R2R campaign is making progress. The UK Green Party aims to introduce something similar to the Scottish Outdoor Access Code (<https://is.gd/HwjNZ1>) to England. Green Party MP Caroline Lucas’s *Countryside and Rights of Way Act 2000* (Amendment) Bill contains two principal clauses. First, it aims to “extend the right of public access to the countryside, including grasslands, woodlands, the Green Belt and waters” and, secondly, “any person may camp on access land” (<https://is.gd/SJ5tAV>). The UK High Court’s January 2023 ruling that there was no right to wild camp on Dartmoor without permission from the landowner (even as later overturned at appeal [<https://is.gd/B017Gn>]) seemed to convince the Labour Party to also replace the “default of exclusion [...] with the default of access” (Hansard, 2023).

## Suffering of the wild

*Recreational activity can lead to disturbance, which is the equivalent to reducing habitat area (Hambler and Canney, 2013).*

My partner Toni and I live on the edge of a plantation wood in southern England, and we would feel the consequences of R2R immediately. Dog walkers, instead of adhering to public footpaths (even if their dogs already don’t) would make entering our wood part of their regular routine. All wild animals presently provided some refuge would suddenly have to escape both humans and their dogs. Our woodland as sanctuary would be annihilated in one stroke of legislative change. A longer term inadvertent outcome would be to undo my central conservation aim of transforming our plantation into natural woodland, requiring the accumulation of deadwood. Up to half a natural wood should contain dead or dying trees; many species require them for their homes (Hambler, 2010: 64). In May 2023 I was thrilled to watch a Blue Tit family setting-up residence in a dead Birch, which happened to be dangling from an Oak branch. Earlier that month I had paid nearly £900 for public liability insurance, having been told a year earlier that public access would double our premium. There comes a tipping point when insurance becomes unaffordable, but the far greater cost would lie in removing dozens of unsafe dead or dying trees, wholly at odds with what I am trying to achieve. If wildcampers began to use deadwood as fuel the imperative to douse their fires would be irresistible, inevitably leading to conflict. A combination of such pressures would make selling inevitable. I expressed such fears to Caroline Lucas and both Green



Blue tits made a home in a dead birch branch hanging from a mature oak tree.

Party peers, receiving no answer to questions posed in letters dating from July 2022 to March 2023 (see <https://is.gd/SFDfL5>).

My parochial concerns, together with Jo Cartmell's observations concerning the impact of dogs on water vole habitats (Cartmell, 2022), led us to assemble evidence from across the world, demonstrating that public access invariably has a deleterious impact on wildlife (<https://is.gd/2Uevyu>). In years to come the impact of recreation may increasingly become an important concern for professional conservationists.

### Would a R2R support nature's recovery?

*[W]e must [...] truly transform our relationship with nature (Caroline Lucas MP, Debate in the House of Commons, 18 May 2023).*

Across the world nature is in free fall. Lucas argues that changing English private property laws preventing the public from accessing some rural land is required to change our relationship with nature, the *sine qua non* to tackling the ecological emergency (Hansard, 2023). But if a strained relationship is to improve, such as between individuals in a failing marriage, at least one of the partners has to change. Let's try to illustrate this point through the travails of an old-fashioned marriage between Caelus and Gaia. After a stressful day at work Caelus habitually went to the pub weekday evenings and played golf with colleagues on Saturdays, thereby contributing next to nothing to home life. Frustrated Gaia demanded a crisis summit, during which she told Caelus how selfish he was being. Caelus loved Gaia, so he decided to give up his old ways and to become a solicitous husband. Thus, the relationship was transformed, because of love, better understanding, but most of all because Caelus changed. In Greek and Roman mythology Caelus was both the husband of Gaia, Goddess



A photo taken by Jo Cartmell while quietly observing the comings and goings of her beloved water voles

of the Earth, and her son. We too are the Earth's progeny, but have evolved into an abusive, exploitative, and murderous partner. In order to improve our relationship, the key would be for Caelus to treat Gaia better, out of love.

R2R campaigners talk about 'nature' a great deal but do not define what they mean. In the May 2023 House of Commons debate concerning public access, 'nature' was mentioned 158 times and 'natural' 67 times whereas Lucas specifically mentioned 'wildlife' only twice and overall wild 'animals' were perhaps cited three times (Hansard, 2023). I posit that nature comprises a 'complex of creative relationships in which each individual being is supported by other beings' (Berry, 1999: 61-2). This balance has come to be violently out of sync, but the constant refrain that 'we need to change our relationship with nature' is much the same as saying we want a change in the relationship with our marriage, whereas what we should want is an improvement in the relationship with our spouse. The repetitive use of the term 'nature' diverts us from what we need to focus on, namely our relationship with other beings, especially nonhuman animals.

### Taking the animal standpoint

*[T]aking the perspective of animal standpoint(s)... move[s]... animals into the center of our moral concern... and afford[s] animals their subjectivity (Heister, 2022).*

My partner and I now mostly inhabit a cage. Or so this must appear to the other denizens of the woodland we call home. Within our confines deer above all seem to accept us with a wary tolerance. Sometimes we come across a small

gathering of individuals undetected, their wagging tails expressing their contentment. No matter how often I see them my heart always skips a beat. It provides me with quiet joy to reflect that we provide refuge, a safe area where they can be at ease.

For most woodland managers, deer are just pests, but one in particular became my muse. I loved to look out for a white (leucistic) doe on winter afternoons in the gathering crepuscular gloom, as she floated amongst the trees radiating an eerie luminescence, in contrast to her sisters, barely shadows in the fading light. She has now sadly become what she once seemed, having died in January 2022.

I miss and am indebted to 'my' (part of her enchantment lay in belonging to no one but herself) white doe. I would often, during one of my daily walks within the 'pen', catch, out of the corner of my eye, a glimpse of white, revealing her repose, somewhere in the middle distance, only for me to realize later that she had remained in the very same place for eight and more hours. Occasionally I have to venture into the deer's domain, mainly to tend the young trees I have planted over the years. As soon as they sense me outside of our usual fenced confinement, heads swivel round as one; alarms barked, they gallop from one part of the wood to another, to be anywhere I am not. While fretting about the deer I always start when hares bolt from their forms or, in winter, woodcocks explode from under my feet. As Keggie Carew (2023: 8) remarks, "Wild things flee from us".

One day, walking purposefully rather than observantly along a track edging the wood, I suddenly experienced a commotion and a flash of white. I glanced up, and there was my doe looking at me reproachfully, alert, ready to dash off at the slightest intimation of further encroachment. In that moment I realized the woodland did not belong to me at all, but to her and all the other wildlife. I might say we had joint ownership, as Toni and I lived there too, but while we can share the same 52 acre wood, we could not share the same space. And so, I gave a little bow, walked backwards some way, slowly turned around, then retraced my steps. A fortnight hence I ventured off the same path curious at the sudden appearance of a blanket of pale something lying beneath nearby briars and bracken. My white doe lay in almost exactly the same spot she had stood when reproaching me two weeks earlier. Initially I let her be, save for collecting some of her silvery hair before it became scattered and dispersed beyond recall. That October I interred all that remained beneath a little Yew in a sunny spot near where I found her.

### In memoriam: invoking the spirit of Jean-Jacques Rousseau

*The natural man lives for himself; he is the unit, the whole, dependent only on himself and on his like. The citizen is but the numerator of a fraction, whose value depends on its denominator; his value depends upon the whole, that is, on the community. (Rousseau, 1762: Bk 1)*

When I studied Rousseau as an undergraduate I didn't know that in 1754, in the Preface to his *Discourse on the Origin and the Foundations of Inequality Among*

Men, he had written that

*if I am obliged not to do any harm to my fellow man, that is not so much because he is a reasonable being but because he is a sentient creature, a quality which, being common to animals and man, should at least confer on one the right not be mistreated for no purpose by the other.*

This was written more than 30 years before Bentham’s famous dictum about nonhuman animals: “the question is not, Can they *reason*? nor, Can they *talk*? but, Can they *suffer*?” (Bentham, 1789: ch. 17, §4n). In Part One of that same *Discourse*, Rousseau also wrote that “Every animal has ideas, because it has senses; it even combines its ideas up to a certain point, and man is no different from animals in this respect except in degree” – well over a century before Charles Darwin’s *The Descent of Man* evidenced that “the difference [...] between man and the higher animals [...] is certainly one of degree and not of kind” (Darwin, 1871: 105).

Instead, the Rousseau I was taught wrote *The Social Contract* (1762), in which all community members make decisions that they are then enjoined to comply with, so that the law becomes a universalized expression of the citizens’ will. This is what Rousseau meant by the *general will*, “the Will to treat the good of others as equally important with our own good” (Plamenatz, 1963: 408). I see this as an articulation of the famous Golden Rule – in Mary Midgley’s formulation, “treat others as you would wish them to treat you” (Midgley, 1983: 91; see also Narlikar, 2023). Rousseau strove to create a mechanism in which society enshrined this outcome in our relations with one another.

Also unbeknown to me, Rousseau encouraged children to engage with nature in *Émile, Or On Education* (1762), and in his final (posthumously published) work *Reveries of the Solitary Walker* (1782) he emphasized how the “great pageant of creation” enabled him to see God in all his Works, and the “unity of all things”. “I feel”, Rousseau wrote in that last work, “transports of joy and inexpressible raptures in becoming fused [...] with the great system of beings and identifying myself with the whole of nature” (quoted by French, 2005: 1429).

Rousseau explained how such ‘joy and rapture’ can change us. As PD Jimack writes in his Introduction to the Everyman edition of *Émile*, “[t]he young *Émile* will spend most of his time out of doors, running about thinly clad and barefoot, leading to the vigorous, natural and free life of a young animal” allowing the boy to be truly himself (in Rousseau, 1974: xv). However, his ‘second birth’ at the onset of puberty is when he must learn to see and feel for the other (Ytre Arne, 2023: 4). Ytre Arne (2023) explains how Rousseau’s study of plants in *Reveries* emphasized *learning to see well*, by which he meant observing the other with loving disinterest to understand its individual particularities. Such ‘seeing well’ was, Rousseau argued, crucial to encourage moral behaviour between human beings (French, 2005). If Rousseau were writing now, with his astonishing prescience concerning contemporary thinking about animals, he would surely have extended his gaze beyond botany.

The discipline of ethology could almost be defined as learning to see animals well. Jane Goodall saw for the first time that animals deploy tools; Marc Bekoff realized animals lead rich emotional lives (Goodall, 1971; Bekoff, 2007). Carl Safina, in *Becoming Wild*, “in one deep, clear look into things that are difficult to see” explains that animals share cultures (Safina, 2020: xiii). How should learning about animal particularities alter our behaviour? I shall call what I am developing here *Covenant with the Wild*, which would have upheld the Golden Rule for my white doe, and aims to do so for her wild kin going forward.

### Covenant with the wild

This Covenant – an ethical accord or framework – has two interlocking principles. The first is the need to incorporate animals within a social contract process, such as that articulated in *Wild Democracy* (2023) by Helen Kopnina and her co-authors, to adopt conduct ensuring “the well-being of every other being in the community” (Berry, 1999: 61), and conversely, to discourage behaviour that would transgress or otherwise hamper the ability of animals to flourish. In adhering to this Covenant the aims of society would change to achieve Golden Rule outcomes for *all* citizens, not just human ones. Our growing population reinforces the exigency for such a Covenant in which we explore sharing landscapes – in marked contrast to the R2R campaign advancing a ubiquitous human presence.

The second principle is the moral obligation to commit ourselves to cultivating the *art of ethological citizenship*. I suggest that the reason some of us may feel ‘nature deprived’ has less to do with our capacity to access nature, and more because we don’t know how to look upon nature. Unwittingly I began my ethological citizenship apprenticeship when I started to see animal behaviour for the first time from our ‘pen’ – especially that of my white doe. And in observing, coming to know her particularities, I came to love, eschewing all ingression of her home.

Agreeing, or as I prefer, pledging ourselves to the Covenant with the Wild is simultaneously to embrace a wild covenant, promising never-ending discoveries of the nonhuman world and of ourselves, changing and helping us transition towards behaving morally with regard to animals from the current position in which we emphatically do not.

Instead of making the case to improve our conduct in relation to nonhuman beings, the R2R campaign argues that if access to nature is widened, then this will improve our relationship with nature, which will in turn assist nature’s recovery. However, the ecological emergency in Britain and elsewhere is unrelated to the public’s access to nature and instead can mostly be laid at the door of industrial animal agriculture (*e.g.* Rigal *et al.*, 2023).

The real focus of the R2R campaign, I believe, concerns intraspecies justice. Supporters of the campaign return again and again to the issues of concentrated landownership – ignoring small-scale landowners such as ourselves – conflating what they perceive as social equity with restoring nature. I acknowledge the legitimate (in some respects) resentment towards traditional elites inheriting vast tracts of land, particularly when this privilege

far from championing social or environmental enrichment either just benefits families to the manor born, or extends the persecution of nonhuman life through various expressions of hunting. However, such a portrayal, whatever its merits on its own terms, cannot invalidate scientifically-based studies demonstrating that greater human intrusion into wild habitats causes harm to their nonhuman denizens. Evidence overwhelmingly points to recreation forming an additional pressure on already beleaguered free-roaming animals. A right to roam would thus represent a further *interspecies* injustice, the spectre of which has inspired this vision for a covenant with other beings, to bring them within the protective community of equal moral concern.

### With this ring, I thee wed

In the year 2000 I married my partner Toni. At our ceremony in Norfolk, the clergyman officiating suggested a reading from Kahlil Gibran's *The Prophet* (1923: 20):

*And stand together yet not too near together:  
For the pillars of the temple stand apart,  
And the oak tree and the cypress grow not in each other's shadow.*

At the time I was unsure of this reading, but can now attest its wisdom. At our wedding we also signed a covenant of sorts and exchanged rings. Ours were made of gold, but the first wedding rings were crafted from natural materials such as hemp or reeds. Marriage is not for everyone; some end in heartbreak. It seems to me that people do not need to be solely wed to human partners, nor do we necessarily require human partners at all. But, we all do need to be wed to something.

There is a glade in our woodland where a mature Hornbeam leans at an alarming angle. Sometimes I kneel, gazing up at vaulted limbs, her beauty filling me with inconsolable loss conflicting with resolve – ‘how could I ever contemplate leaving you?’ Then, I remind myself that I am not wed to an individual tree or place, but to the more-than-human wild for whom I cared enough to buy a woodland and for whom I now live to uphold the Golden Rule. I cannot help but wonder: who would join me here, to seal this Covenant with a ring, braided from different strands of willow symbolizing our love and belief in justice for life's creative relationships? *With this ring, I thee pledge ...*

### Acknowledgements

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# The end

## Derrick Jensen

Derrick is the author of *Endgame*, *The Culture of Make Believe*, *A Language Older than Words*, *Bright Green Lies* and many other books. He was named one of Utne Reader's "50 Visionaries Who Are Changing Your World" and won the Eric Hoffer Award in 2008.

**Keywords:** conservation movement; societal change

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*This is an excerpt from Derrick's forthcoming book, **The Boy in the Box**.*

I've been thinking a lot about how to end this book. Most books on social or ecological problems end one or more of four ways, each of which has its own problems.

The first is to end the book by suggesting that the solution to the problems described in the book is simply to limit one's personal participation in the destructive system, either by reducing one's consumption or walking away.

I'm not a huge fan of this approach, primarily since it does essentially nothing to stop the horrors. One can certainly feel better about oneself for having stopped or slowed one's participation, and there are some cases where for purely moral reasons one shouldn't participate (I don't, for example, visit zoos, and I don't use pornography). But reduction of participation, or even withdrawal, does not create social change. I'm under no illusions, for example, that me not going to zoos is going to shut down that multi-billion dollar entertainment industry, and I'm under no illusions that me not using porn is going to shut down that hundred-billion dollar industry.

And honestly, it boggles my mind that so many books and essays conclude by suggesting 'simple living' as a solution to planetary murder. That response is incommensurate with the threat. If aliens came from outer space and were vacuuming up the oceans, heating up the planet, bathing the world in endocrine disruptors – murdering the planet – I'd hope our response would be more than to reduce, re-use and recycle. I mean, does anyone really think that bicycling to work or composting would have stopped Hitler, or ended chattel slavery in the United States? And similarly, although one individual male not raping or beating women is a good thing, I can't imagine anyone thinking that that alone will stop men's violence against women. We have to do more.

There are no personal solutions to social problems.

Another way books on social and especially ecological problems sometimes end is by suggesting a form of acceptance of, or accommodation to, the horror

of it all, as we work our way through Elizabeth Kübler-Ross's famous stages of grief and acceptance – so we can maintain a sort of inner peace as the world crumbles around us. I've even seen books that present the murder of the planet as an opportunity for spiritual growth and enlightenment.

But any sort of spiritual growth that doesn't lead us to fight for life on this planet and to fight for the end of rape isn't spiritual growth. It's simply yet another excuse for inaction. It's simply using the tragedy as a resource, in this case a spiritual resource.

And again, there are no personal solutions to social problems.

A third option is to provide a checklist of actions for readers to do to solve the problems – things like call a representative, vote, donate to or volunteer at this or that organization, be nice to people, and so on.

My response to this one's a bit more complicated. My work is about sparking a resistance movement to stop this culture from killing the planet, and to stop it from committing atrocities against women. And that resistance movement doesn't happen on its own. We need to work to help bring it into being. And we all know there is more than enough work to be done. So yes, I want for people to act and I want to make a call to action.

My concern is two-fold. The first is that the suggestions made in so many books and essays and especially movies are still nearly always incommensurate with the threats. A great example is Al Gore's *An Inconvenient Truth*. For 90 minutes he discussed how dangerous global warming is (and, it ends up, way understated it). Then his solutions? Inflate your tires, change your light bulbs. Nothing about questioning corporate power (of course). Nothing about questioning a growth economy. Nothing about power at all. Likewise with *Food, Inc.* They did a great job of exposing corporate control of our food supply, and then one of their solutions was to buy organic yogurt produced by a major corporation and sold at Walmart.

Really?

So I'd want for my suggestions to be more meaningful than consumer and personal choices.

Yet again, there are no personal solutions to social problems.

And I always hesitate to make specific suggestions to people I don't know, precisely because I don't know them. How do I know what another person's strengths are, or weaknesses? How do I know what that person loves to do?

When people I don't know ask what they should do to protect the Earth, I always respond by asking them a series of questions.

First, what do you love? Whatever it is, it's under assault. Defend it. Do you remember my dear friend Charlotte Watson, the woman who asks every man she sees what it will take for men to stop beating on women? It would be arrogant and absurd for me to suggest she stop that work and instead try to defend salmon, or prairie dogs. She's defending what she loves. That is sufficient. It's more than sufficient. It's wonderful.

Everyone loves some place or some creature. Everyone has some atrocity they yearn and burn to end. So do it.

The good thing about everything being so messed up is that no matter where you look there's good work to be done.

So I don't think I should end by telling people to work on rape crisis hot lines or file timber sale appeals or blow up dams or chain themselves to trees or kick rapists in the nuts (although I would encourage all of those). Each of these actions may be important, but I don't know where people's passions lie. I don't know what you, the reader, love enough to fight for.

The next question I ask is: What are your gifts, and how can you use them in the service of the land, of women, of other victims of this culture?

Over the years a fair number of people have said to me: "You've written all these books. Don't you think it's time you stopped writing and started organizing?"

These people have obviously never seen my workspace: I can't even organize my pens, much less a group of people. Most of my organizational schemas could charitably be described as 'geologic,' not only because stuff sits on the floor for a long time, but also because I can tell how long ago I piled something there by how many layers of other detritus are on top of it.

Also, organizers have to talk to people, and I'm an extreme introvert. Years ago I volunteered to help an environmental organization with a phone tree. We were supposed to call members of the organization to invite them to an upcoming dinner. I spent the entire evening sitting with a phone in my hand, dialling the first six digits of a phone number, before freezing and hanging up the phone. I was terrified. I cannot make cold calls, even to invite people to a free meal. Another day I volunteered to take information to neighbourhoods and hang packets on people's doorknobs. Three of us were in my group. I stood on the sidewalk while the other two walked to the doors. Again, I was terrified I might have to talk to a stranger.

On the other hand, I know people who can easily leaflet outside a Walmart, and who easily and joyfully talk to strangers.

I would be the world's worst organizer.

Another example: I mentioned above I write terrible press releases. I've written them, agonized hours over precise wording and handed them over to people at the organization who needed them. Their response was always the same: they'd smile weakly, thank me for trying, sit down at a computer and bang out a much better press release in ten minutes. Having me write terrible press releases is not the best use of my talents, whatever they may be.

The point is that I can't tell people what to do because I don't know what are their gifts. Some people have a gift for accounting, and I know for a fact that many small organizations are starved for accountants: they need someone to help them navigate the maze of 501(c)3 requirements. Some people have gifts for working with computers. These can be some of the most important members of organizations, even if the organizations are working on non-tech issues like giraffe preservation or stopping the trafficking in women.

So, the directive I would be comfortable giving is: find out what are your gifts, and then use them.

Another way to say all this is to ask: What are the largest, most pressing problems you can help to solve using the gifts that are unique to you in all the universe?

Whatever your gifts are, the struggle needs them.

Here's the third question I always ask people who want me to tell them what to do: What do you get off on doing?

I love the earthiness of the phrase "get off on doing" as opposed to "What do you love to do?" The latter leads to answers like, "I love long walks on the beach, moonlit nights in the forest, snuggles by the fireplace." But we're talking about creating a resistance movement, not a personals ad.

What do you get off on doing?

Several years ago I was hanging out with a wetlands specialist with whom I was trying to protect a piece of forest. He would dig in the soil, rub it between his fingertips, then compare the colour of the soil to a chart. Certain colours indicated wetlands, which have more legal protection than non-wetlands.

As he was doing this, I asked him, "Do you get off on doing this?"

He said, "Oh, yeah! This is my second favourite thing to do in the world, after playing with my dogs."

I said, "This is really great, since I wouldn't enjoy doing this."

Likewise I worked with an attorney to help protect that same forest. Her assistance came with the condition that I help her write some of the court documents.

It ends up I have no more talent at writing court documents than I do press releases.

I asked her if she likes writing this shit.

She laughed and said she loves it.

I don't get off on any of that. On the other hand, I do get off on trying to articulate the relationship between, for example, perceived entitlement, exploitation and atrocity.

I have condemned myself to a life of homework.

People sometimes ask how I keep from burning out. The answer for me is in these questions. When you are defending what or whom you love; when you are using the gifts that are unique to you in all the universe in the service of those you love; and when you get off on what you are doing, where does getting burned out enter the equation? That's like getting burned out on playing, or burned out on making love.

I shared this section with my friend the wonderful activist and writer Max Wilbert. He said, "Sometimes we just have to do the difficult work simply because no one else is going to do it. Sometimes activism is just plain hard work. We started trying to protect Thacker Pass in Nevada from a proposed lithium mine by occupying the land in the middle of the winter. It was cold and miserable, but someone had to do it, and we decided it would be us. Often we just do what needs to be done."

He's absolutely right.

The fourth typical ending I've seen in books on social or ecological problems – and I have to admit I'm more or less always guilty of all four of these – consists of, having spent the book describing in great detail the horrors we face, then expressing with as much optimism and sincerity as one can muster a vague hope that somehow good will triumph over evil, and that somehow this

culture won't kill the planet and that somehow rape culture will be stopped.

Note the passive voice.

But given that every biological indicator is going in the wrong direction, given that this culture has been able to pollute every part of the planet, given that it violates even the deepest folds of the oceans, given that both male and human supremacism are not only not going away but are in ascendancy, not only is a vague hope insufficient – especially given what's at stake – but I see no evidence it's warranted.

Things are bad. And they're going to get worse.

And after that they'll get a whole lot worse.

Unless it's stopped, this culture will kill everything on the planet. Unless they're stopped, men in patriarchy will violate their way to the end of all that is.

And neither simple living, spiritual enlightenment, discrete actions by themselves, nor vague hopes will stop 10,000 years of social momentum. The ending to this book needs, I think, to reflect all that.

I don't know if I can do it. Just like I don't know if we can stop the murder of the planet.

But I do know that, as Lierre Keith has often said, "If there is anyone alive in a hundred years, they're going to ask what the fuck was wrong with us that we didn't fight like hell when the world was going down."

I know that life on this beautiful wonderful planet is at stake, and it's time for us to fight harder than we ever thought possible. It's time for every last one of us to pick up whatever tools or weapons or gifts that we have, and to use them, and to keep using them till our very last breath on this planet we call home.



**Winter Night**  
Johanna Finnegan-Topitzer

Created with gouache, paper and ink, and collaged as separate elements onto a background.

From the artist: “I am an artist working in traditional media. My work focuses on biodiversity, highlighting animals and plants in their unique environments.”

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**Big Night**  
Johanna Finnegan-Topitzer

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**Calmer of the Tides**  
Johanna Finnegan-Topitzer

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**Flutey Song**  
Johanna Finnegan-Topitzer

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**Last Song of the Salt Marsh Sparrow**  
Johanna Finnegan-Topitzer

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**Shadows and Light**  
Johanna Finnegan-Topitzer

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## Poetry section

Edited by **Victor Postnikov**

Victor is a poet, essayist and translator whose home is in Kyiv, Ukraine.

Life far exceeds humans. For millennia, eco-poets have understood it as a far greater enterprise. In their poetry, we can hear the voices of those who came before us and those who live alongside us. Now, however, they face extinction and die in silence, deafened by the roar of civilization. The time has come to renew the old understanding that all life, including humanity, speaks a common language. Thus, the mission of ecocentric poetry, or ecopoetry, is to help us empathize with non-human entities, be they a whale, a tree or a mountain. For we are all kin. Through metaphor and imagery, it speaks directly to our hearts and genes. We begin to realize that we have evolved together and share a common fate.

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CLASSIC

### Reconciliation

Walt Whitman

*Word over all, beautiful as the sky!  
Beautiful that war, and all its deeds of carnage, must in  
time be utterly lost;  
That the hands of the sisters Death and Night, incessantly  
softly wash again, and ever again, this soil'd world:  
For my enemy is dead—a man divine as myself is dead;  
I look where he lies, white-faced and still, in the coffin—I  
draw near;  
I bend down and touch lightly with my lips the white face  
in the coffin.*

CONTEMPORARY

### The Great Dying

SC Flynn

*The predators are returning to the cities;  
their gleaming eyes flit through rubbish dumps  
and shine in the black depths of parks,  
the only things really alive under the moon.  
The golden lie still rings out,*

*but leafing through old books is no use now,  
nor are the latest discoveries  
of different ways of flying.  
Death has climbed in through the open window  
and the last of our fugitives  
will soon be tracked and caught,  
like tigers crushed by the coils of giant snakes.*

CONTEMPORARY

### What Does Water Become?

Adele Evershed

*a sea,  
a waterfall,  
a bay, a stream  
the relieving rush from a once dry tap  
or the yellow-eyed puddles at the bottom of a well  
it is summer rain and the tapping of a walking stick  
the drum beat of a monsoon wedding  
a splash made by a frog in the mind of an old man  
and a new universe found in a rock pool by a child  
it is the wake up call after a boozy night  
or the cooling touch in a fever dream  
it is the new shoot from a forgotten stump  
a silver rush of fish jumping like a rainbow's wish  
the bog thickened with bones of our ancestors or other cattle  
it is a blessing or a forgiveness or a popcorn style curse  
a roiling Saturday night or a tender first cup of tea  
feminine and masculine and the great in-between  
and it can be a drowning or a flood or a rageful God  
tears and spittle  
too much or not enough  
a poisoning and a protest  
the beginning and the end  
and one day  
it will be  
a war  
and then  
just a poem  
dripping  
words  
into a  
dead  
sea*

CONTEMPORARY

**pearl of polystyrene**

Michael Buckingham Gray

*between two bricks  
perfect as the day  
It was produced:  
white, round  
but soft enough  
to curl  
    into my  
dog's mouth.  
Pearl of polystyrene*

***filling the freeway***  
*workers laying  
a new ribbon  
of road*

*filling the freeway  
rain drifting  
a dozen  
different ways*

*filling the freeway  
a flood  
sending everything  
back to mud*

CONTEMPORARY

**Broken Owl**

Denisha Naidoo

*In the painting  
the owl  
shifts his head to the side  
perched on the bulldozer  
laying pipe  
where his home once stood  
I write,  
Broken Owl.*

CONTEMPORARY

## The Transcendence of Broken Owl

Denisha Naidoo

*"If you have conceived of it, it has already happened," Quantum Shaman says.*

*"Can it unhappen?" asks Broken Owl.*

*"It already has," replies Quantum Shaman. "Every moment repeats, even this one."*

*Broken Owl tilts his head.*

*"Find the Ripple Fox," Quantum Shaman says, "she will guide you."*

*The sun is electric. Dust and wind. Desert. Scorching.*

*Inside is cool. Broken Owl, eyes closed, searches the dreamscape for before. The trees*

*rustle, the breeze soothes. Everything is as it was, as the stories told. Ripple Fox is drinking from the stream.*

*Ripple Fox can feel the eyes on her body. She looks up and around. The sky is empty.*

*The trees whisper, the Owl awaits.*

*Quantum Shaman exists in the space between the nows, knowing Serpent Biting Tail is in*

*motion. Perpetual motion.*

*"I felt the Owl," Ripple Fox says to Quantum Shaman. "He was watching me."*

*"He is searching for before."*

*Ripple Fox nods. "If I take him, what happens to the now?"*

*"The now will always be."*

*"And Serpent Biting Tail?"*

*"Is strong, ready, in motion."*

*In her den, Ripple Fox closes her eyes to search for Broken Owl. She finds him in the*

*dust, wings splayed, he is almost gone. She takes him, softly in her mouth.*

*Quantum Shaman watches. Broken Owl is almost back to before. Ripple Fox takes his*

*body to complete his journey by the river.*

*Broken Owl is before, in one moment, eternally forever. He gives thanks to Ripple Fox,*

*feels Quantum Shaman surrounding him and the power of Serpent Biting Tail.*

CONTEMPORARY

## Waiting

Victor Postnikov

“Do you know how the devil tortures the souls in hell? He keeps them waiting.”  
– CG Jung

*We are all waiting for something.  
Waiting for the war to end.  
Waiting to be healed again.  
Waiting to be young again.  
(Waiting to be dead too?)  
Waiting for the world to fix itself  
And people are wiser, kinder.  
As if someone must come and  
Rectify our lives  
Paralised by goblins.*

*What’s that? Our common inadequacy as a species?*

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## About the poets

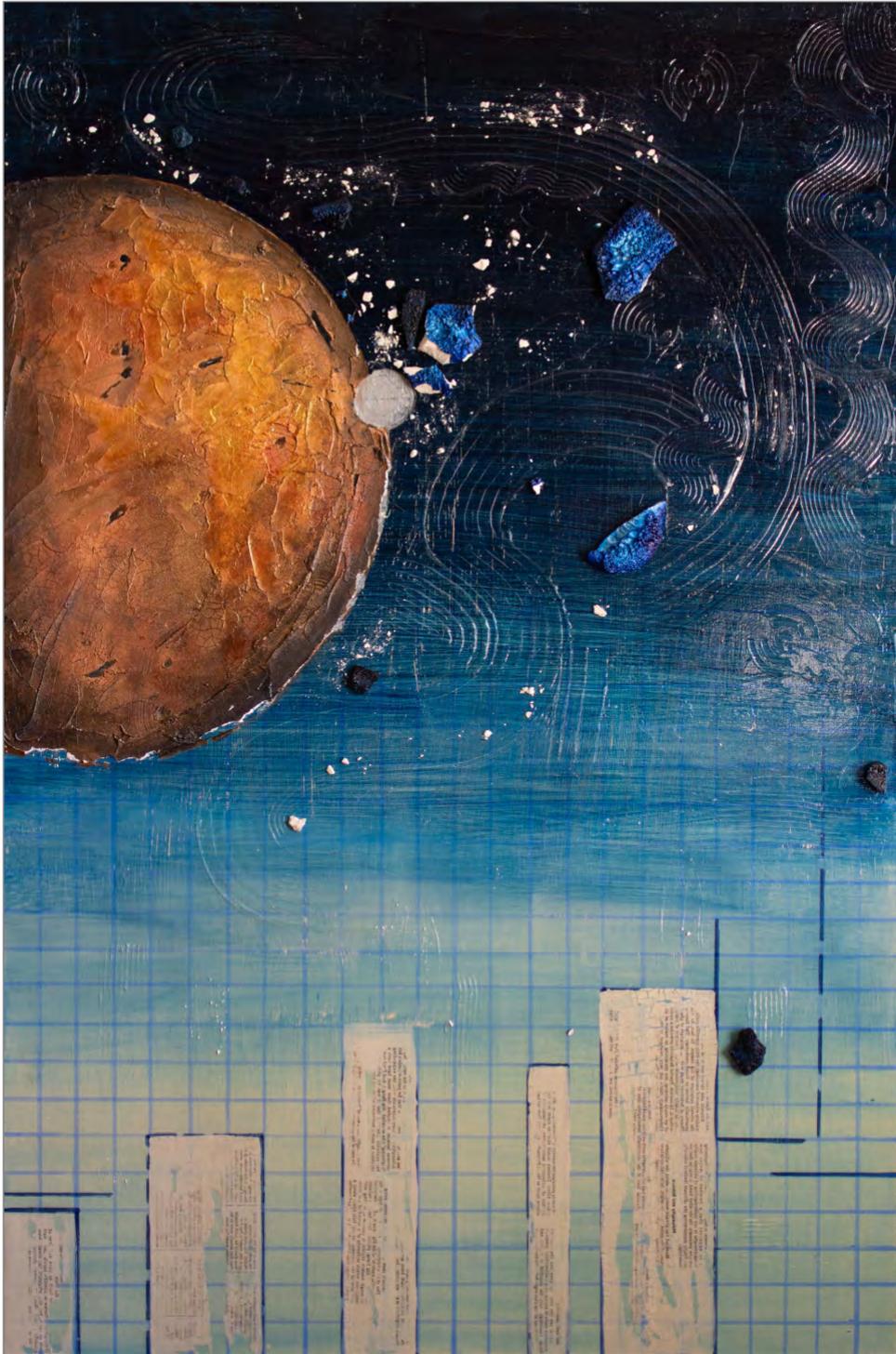
**Walt Whitman** (1819–92) was an American poet, essayist and journalist. He is considered one of the greatest poets in American history and was a staunch proponent of pantheism and pacifism.

**SC Flynn** was born in Australia of Irish and Scottish origin and now lives in Dublin, Ireland. His poetry has been published in more than ten countries.

**Adele Evershed** was born in Wales and has lived in Asia before settling in Connecticut. Her work has been published in over a hundred journals and anthologies such as *Every Day Fiction*, *Grey Sparrow Journal*, *Reflex Fiction* and *Shot Glass Journal*. Adele has been nominated for the Pushcart Prize and Best of the Net for poetry.

**Michael Buckingham Gray** is a poet, writer and creative writing tutor. He has won a ‘Distinctive Scribblings’ Award from *Eucalypt*, and received Best Microfiction and Best Small Fiction nominations.

**Denisha Naidoo** is a South African born Canadian BIPOC writer living in Canada, whose work has appeared in *Outpost Magazine*, *Ladies Briefs: An Anthology* and *Tree Talk*.

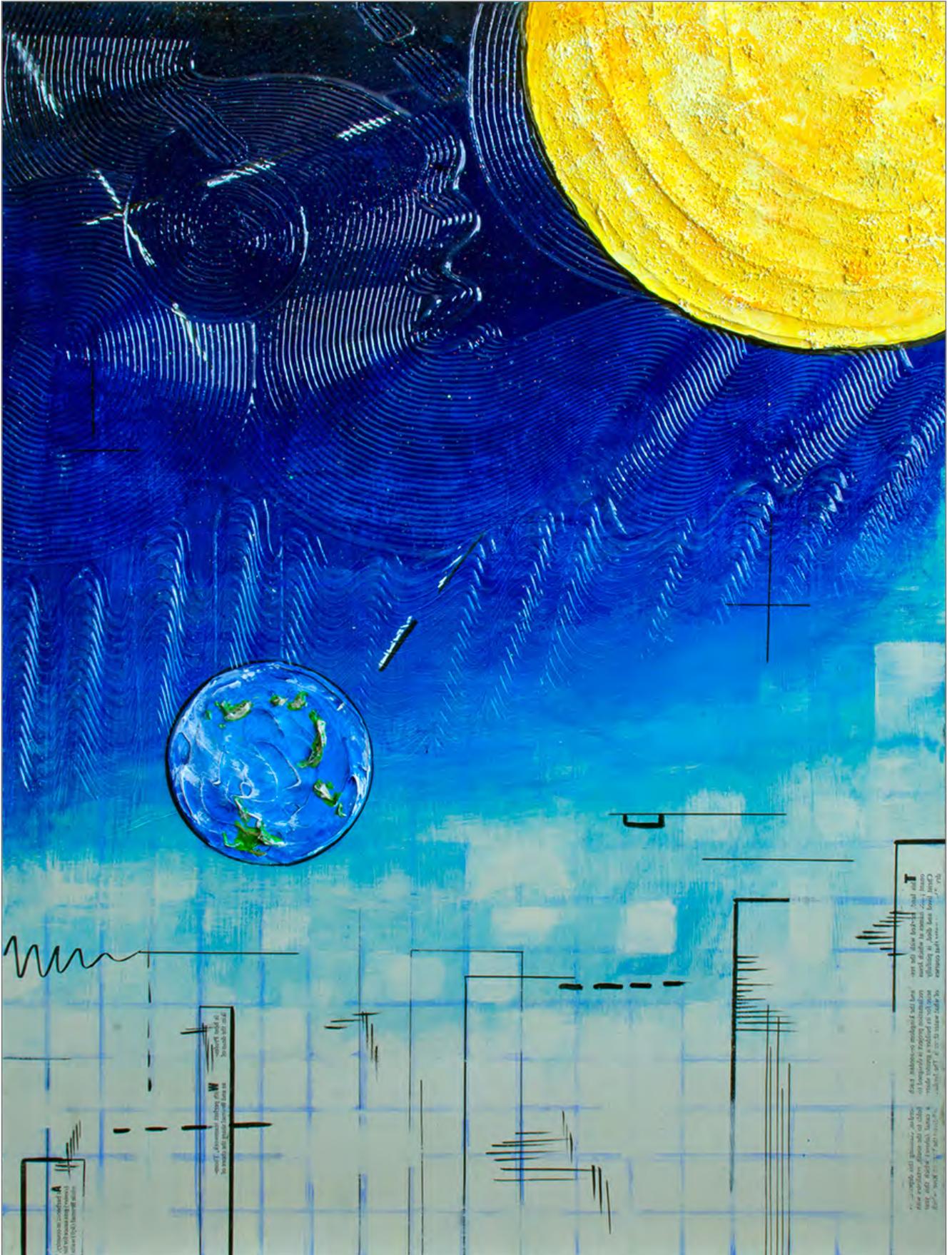


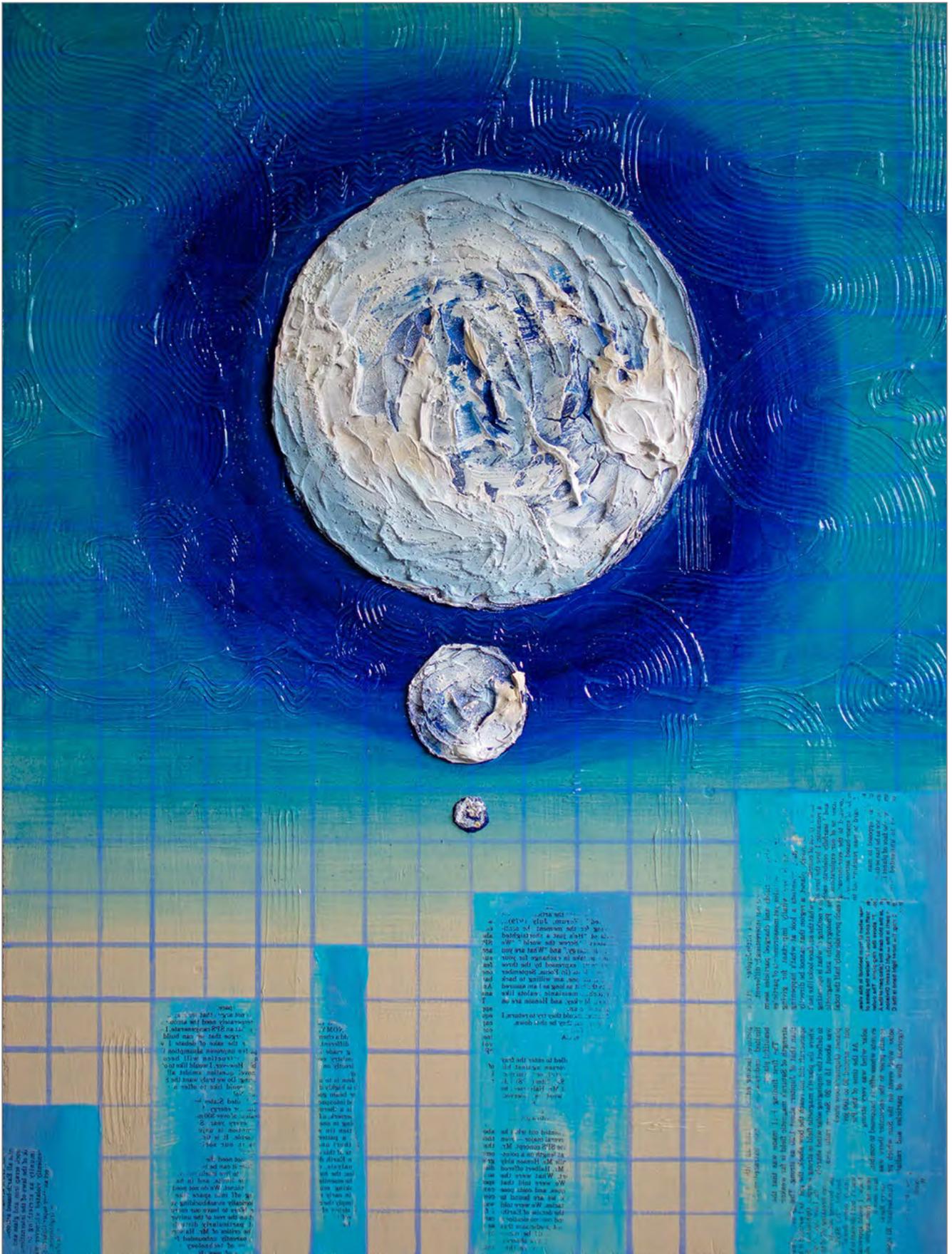
Space to Earth (series)  
Brittany Ellis

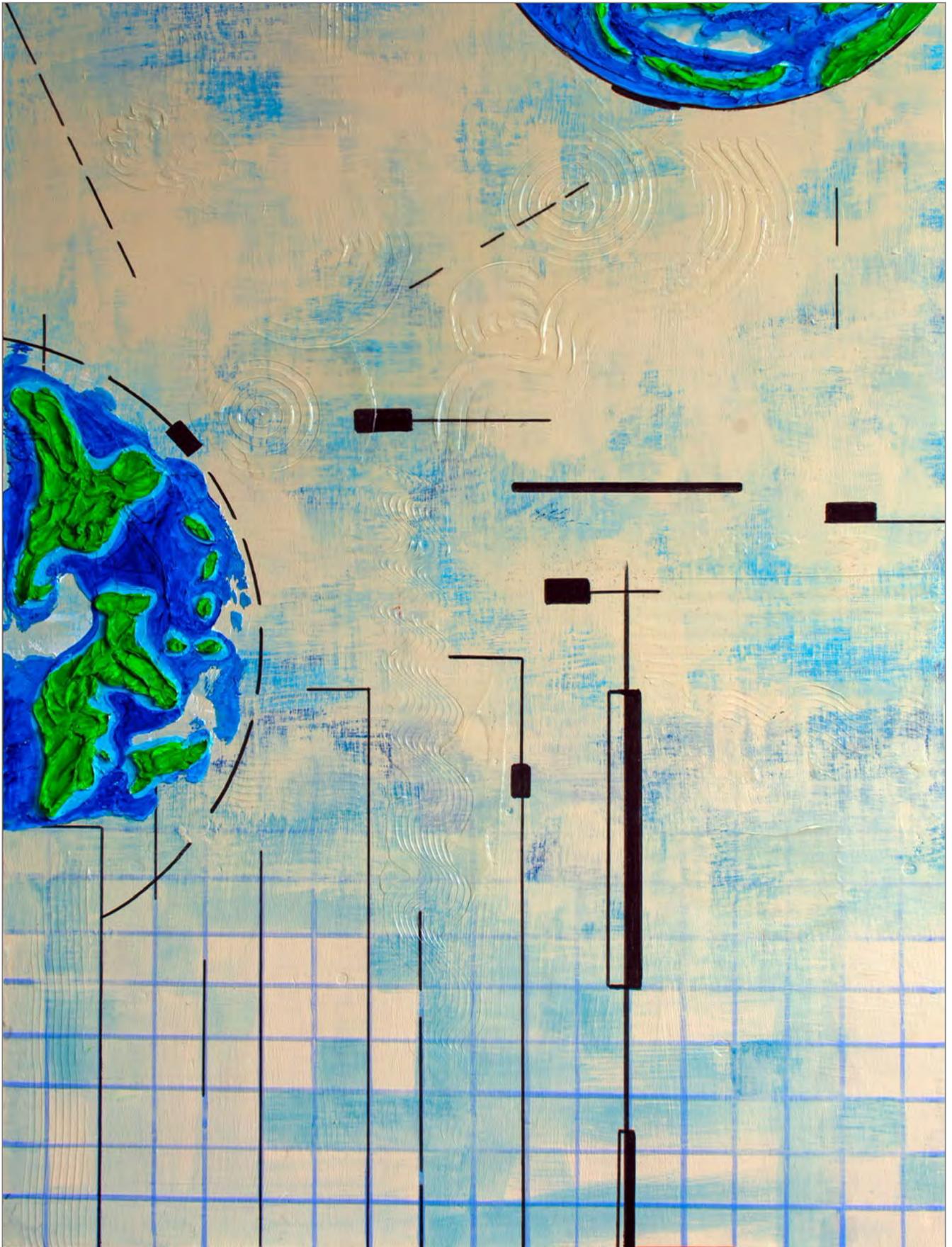
About the artworks: This series narrates the continental drift phases of Earth's history.  
Each piece is composed of pine wood, acrylic, ink, plaster and glitter.

Higher-quality versions of artwork from this issue: <https://www.ecologicalcitizen.net/artworks.php?v=7&n=1>









## Fiction section

Edited by **Joe Gray**

Joe is a field naturalist who lives on the island of Great Britain.

A year has passed without a suitable submission for this section, which says a lot more about my ineffectiveness in promoting its existence than for the potential of the literary sub-genre that is eco-fiction. In order to give the section some renewed visibility, I present here something of my own, written under the pen name that I use for my attempts at this discipline. I am not suggesting that the story has any particular merit, but I hope its inclusion shows, if nothing else, that the drama around which a tale turns need not be Earth-shaking.

At the risk of making self-indulgence a theme, I would also like to share an amusing sentence that I encountered recently and which I feel has some pertinence here. The writer of the sentence was Jack London, whose short story *Bâtard*, one first published in the early years of the twentieth century, was something I used back in the first instance of this section to exemplify how non-human concerns can be central to a piece of fiction. More recently, I have been reading his *Cruise of the Snark*, a real-life account of a voyage across the Pacific undertaken around the same time. In a chapter titled “The Nature Man”, he describes the time that he spent on Tahiti with an American proto-hippy named Ernest Darling. With reference to the subject’s literary tastes, London notes the following: “The Nature Man never wastes time on fiction” (London, 2003: 119). In using the present tense, London was perhaps hinting at an applicability of his observation beyond this one individual. But I hope that there are many nature lovers who do find value in fiction, and that this section can continue to develop.

For further information on submitting eco-fiction of your own, please visit:

<https://www.ecologicalcitizen.net/submitting-fiction.html>

London J (2003) *The Cruise of the Snark*. National Geographic Society, Washington, DC, USA.

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### Surgery

Dewey Dabbar

*Falls from trees can cause serious bodily harm (e.g. death).* I had read this warning back in my youth, posted in a park, and I had found it sufficiently amusing at the time to commit it to memory. The advice returns to me now, on a Sunday

afternoon in late autumn, as I shin up the off-straight trunk of the mature ash at my garden's edge. Up in the canopy, three feral parakeets alight in unison—their apple-green plumage contrasting with the charcoal sky as sharply as their tropical squawks defy the suburban calm. I hook my right arm around a branch in search of respite. The ticker, which is not nearly as supportive of my physical ambitions as it once was, marks time rapidly.

After catching my breath, I continue upwards, reassured by the fact that I had managed the same climb twelve months earlier. On that occasion, my purpose had been to tie the end of a thin piece of rope around the ash's bole. This time, I am ascending with extendable loppers hanging from a strap over my shoulder.

I soon reach the place on the trunk's surface where a roughly circular aperture opens into a cavity. The hole is just wide enough for the insertion of a forearm, should this be my inclination. And the cavity, I know, must be broader. My understanding of the tree's internal topography comes not from a previous tactile examination, however, but through having witnessed the local parakeets rear brood after brood within the chamber's confines. Before them, grey squirrels had done the same. And going back further in time, the hollow had been the home of great spotted woodpeckers—the original architects.

From this point on the trunk, I can look across more or less horizontally at my target, which is a series of spindly branches pointing out towards the ash's nearest fellow tree, a horse chestnut in the corner of the playing field that borders my small parcel of land. Like this conker-yielding giant, the ash is now bare. The palmate foliage of the former and the compound leaves of the latter have fallen and been raked into mixed piles in the garden's various nooks, where they offer shelter for insects and other creatures.

Between the tips of my target branches and the nearest shoots in the chestnut's own woody radiation, there is three feet of air. The gap is small enough to invite a leap.

"You want to be careful," says a voice from the ground. "George Bernard Shaw died by falling from a tree." This biographical detail has been offered up by my neighbour Bill. It is in keeping with his peculiar grasp of humour.

A witty reply eludes me. Instead, I utter a single syllable—"Thanks"—in a tone too close to a grunt to be considered civil. (Later, I contemplate how I might have responded with something like: "Didn't Shaw say that the optimist invents an aeroplane, and the pessimist a parachute?" But life never really gives second chances.)

"What are you doing up there anyway?" Bill continues. "Lost a kite?"

At this point, only the truth seems appropriate—or at least a slice of it—and so I reply: "A spot of pruning."

"Is it even your tree?" Bill presses. Here he has asked a question that I have pondered countless times before. The trunk's base is bisected by the imaginary line that runs between my garden and the council-owned pavement beyond it. The dividing hedge stops at the ash and continues on the other side; in other words, the tree forms part of the physical boundary. During previous deliberations on this matter, I have found some comfort in the ash's form, since the trunk deviates distinctly away from the perpendicular and into the

airspace above my lawn. I once read that fallen fruit is the property of the person in whose garden it lands (as much as it belongs to any human), even if the source tree is rooted in neighbouring soil. And this seems relevant in some way. As a minimum, it brings the dimension of altitude into jurisprudence's sphere.

I do not wish to encourage a lengthy debate on the matter, however, and so my response to the question on proprietorship is a two-syllable snort: "Not sure."

"Why the pruning?" Bill asks next, reprising his earlier line of investigation. I realize in this moment that there is a distinct downside to being up in the sky. Namely, it is not a position from which it is easy to dismiss a man who has his footing on terra firma. I have little choice, therefore, but to continue my participation in the interview.

So I give him another part of the truth: "I want to stop the squirrels using the spindly branches to jump across to the ash. My plan is to trim them off."

This information seems to have finally sated his inquisitiveness, and he begins to stroll away. "Buys some loppers and thinks he's a tree surgeon," I hear him mutter.

Now that I am free to resume the work, I inch myself along a sturdy branch that takes me away from the bole. For stability, I grasp the cordage that runs taut between the ash and the chestnut. *Might as well find a use for it*, I muse.

My progress is slow, but at last, with the loppers' telescopic handles now fully extended, I attain a position from which I can reach the base of the shoots that I intend to cut. I am close enough to study the sooty buds that emerge in opposite pairs along the length of each of the thin branches. I also notice the manifold brown growths that are dangling from these woody shoots. I have seen them from the ground *en masse*, but not until the present moment have I wondered what they might be. Each one looks like the head of a broccoli stem, except smaller and desiccated.

The presence of the growths sets off a train of ideas. I decide to contract the handles of my implement—its cutting blades unused—and then slide back along the branch to make my descent.

\* \* \*

It is nearing noon the next day, and I am setting off to visit a friend, who lives a couple of miles away, when I encounter Bill again. It is clear that he has been giving further thought to my arboreal activity. "You should have rented a cherry-picker," he offers. The suggestion does not surprise me: he is the kind of man who likes to turn a simple task into a pageant.

"I still don't get why you need to be up there pruning," he continues. The man's tenacious curiosity—in a world that indifference has permeated like a plague—is not something that I can fault. And I reward him with the rest of the truth, delivered in as friendly a manner as I can manage.

I begin by describing how I look out of my bedroom window each morning and see squirrels jumping between the canopies of the ash and the chestnut, always leaping from a comparatively sturdy branch but landing with paws

clinging to a seemingly fragile shoot. As a feat of acrobatic dexterity it is extraordinary. But the fear that the shoot will be ripped from the tree is not something that I can shake. This is because I have seen it happen. I had to dig a grave for that poor mammal. And while the autumn gales take care of some of the weaker branches, their filtering effect is imperfect.

Next, I explain that during the previous year I had fastened a rope to serve as a bridge between the two trees, but that the squirrels had still favoured their air-borne mode of passage (saying little for the universe's faith in my tautline hitch). I resolved, therefore, to remove any flimsy-looking appendages. Then, as a brief concluding point, I note how I have read enough on the subject to be reassured that a pruned tree should, with clean cuts, not suffer any ill health in the long term.

I am expecting Bill to dismiss my concerns with some belittling statement about these non-native mammals. He might, for instance, use an epithet that I have heard being spat from the lips of several other neighbours. The term to which I refer is *tree rat*. (This is akin to calling humans *land gibbons*: it is not so much the words, then, but the way in which they are said.)

Bill surprises me, though, with a more subtle form of ridicule. "When you're done with your garden," he boldly announces, "there are a few hundred more trees to keep you busy in the wood up the hill." The tone is too snarky for me to consider his statement as philosophy; yet I have to concede, internally at least, that his analysis has precipitated a rather knotty ethical conundrum.

My own intonation loses its warmth, and I bid Bill a curt farewell as I set off on foot for my friend's house. I am soon strolling along the edge of the playing field and struggling to formulate a clear differentiation between urban trees and woodland ones, as regards the applicability of my intervention. I did not plant the ash or the conker tree. In fact, these representatives of their species have been living in the place a lot longer than I have. But the gap between them lies in the airspace above my garden. And this seems to be important for some reason, even if I cannot articulate exactly what it might be.

I then begin to speculate how I might feel the same urge even if the jump was between trees wholly on neighbouring land. Is the vital element not, then, I wonder, that the leaping mammals are visible from my bedroom window? Terms like *guardian* and *caretaker* tumble in and out my stream of consciousness. Nothing seems to adequately describe who I am, either to the squirrels or within the world at large.

By the time I reach my friend's house, I have made a dangerous leap of my own—one that has taken me to another moral quandary. In denying squirrels their preferred aerial passage, would I not, I ask myself, be encouraging those who have set their heart on exploring the ash to descend to the ground in order to get there? And by doing so, might I be responsible for exposing them to the hazards of my lawn, chief among them being its popularity with domestic cats?

Knowing my intellectual acumen to be inadequate for the navigation of such rocky terrain, I am eager for a mental diversion as I rap the wood of my friend's front door using the dragonfly-shaped knocker. The man has natural historian written through him, as with a stick of rock.

\* \* \*

Galls. This, I have just learned from my friend, is what the little dried-up broccoli heads are. It seems that I had been slightly off with my choice of vegetable in the visual analogy, however.

“Most people,” he says, “among that rather small subset of the population that calls them anything at all, know them as cauliflower galls. The galls form through a localized cellular reprogramming, one caused by mites in this case. This particular kind is unique to ashes, as far as I’m aware.”

“And if I cut off the shoots they’re on?”

“If the mites are still developing, then I suppose it would be curtains for them.”

For the second time inside twenty-four hours, I recall a phrase that I encountered in my childhood. A favourite of my mother’s mother, it was this: *Life is complex*. Too true, Granny, too true. Nevertheless, at least I am now sure that I cannot go lopping off branches from the ash. There are other lives at stake.

Before long, we are eating sandwiches and sipping beers, and my friend offers some additional thoughts on the matter. “If it was koalas and not grey squirrels who’d become the established non-natives here,” he says with a smile, “you would be better off. They have that good sense so characteristic of Antipodeans to know better than to attempt a jump, no matter how appealing the foliage on the next tree.”

The refreshments have helped my own thinking too. If you cannot solve a problem from one end, I reason, then you can always try from the other; and I settle on a plan.

Tomorrow, I will get the loppers back out and climb the chestnut.

