

Light and shadows

the evolving relationship
between humans
and living systems

Postcards from the next normal:
From your companions in
strange-making,
Jigsaw Foresight, Spring 2022



Introduction

Welcome. Here's a selection of 'postcards' and an emerging 'bio' systems map, from what we're calling the **next normal**, curated from the ever evolving Jigsaw Foresight horizon scanning databases, channels and lively conversations. It's my (Victoria's) turn to pick and choose and I've combined two themes:

Return of the light. We move towards the spring equinox - where day and night, light and shadow are equally balanced and we look ahead to longer days. In a world agitated by layered anxieties - geopolitical, health, climate, the next normal of the workplace, where are the illuminations that lighten darker days? How can we seed bigger shifts by being willing to walk in and out of the shadows together, "staying with the trouble"? 🌱

The ethical and legal implications of **emerging changes in human nonhuman relations** in what we are calling the 'emerging bio-age'. This is part of a deep dive for a client, that will be reported out in March. [Get in touch](#) if you want to be in the know, or part of this big, exciting conversation.

For a little extra inspiration, our resident musicologist Dr. Peter Humphrey, has made a [Spotify playlist](#) to accompany your wondering and wandering through the following pages.

🌱 Donna Haraway 'Staying with the Trouble', Duke University Press 2016

Jigsaw Foresight: your companions in strangemaking

Our purpose is not to confirm but to confound, curating a broad range of signals and stimuli to invite collective reimagining in which to find our way forward with ambition. Questions we ask:

How is the **next normal** bubbling up and breaking through?

How might **the next normal shape us**?

How can we improve our chances of **shaping the next normal**?

Thank you for being here with us. Stay (or skip) to the end if you want to know more about who we are, what we're up to and how you can be involved.

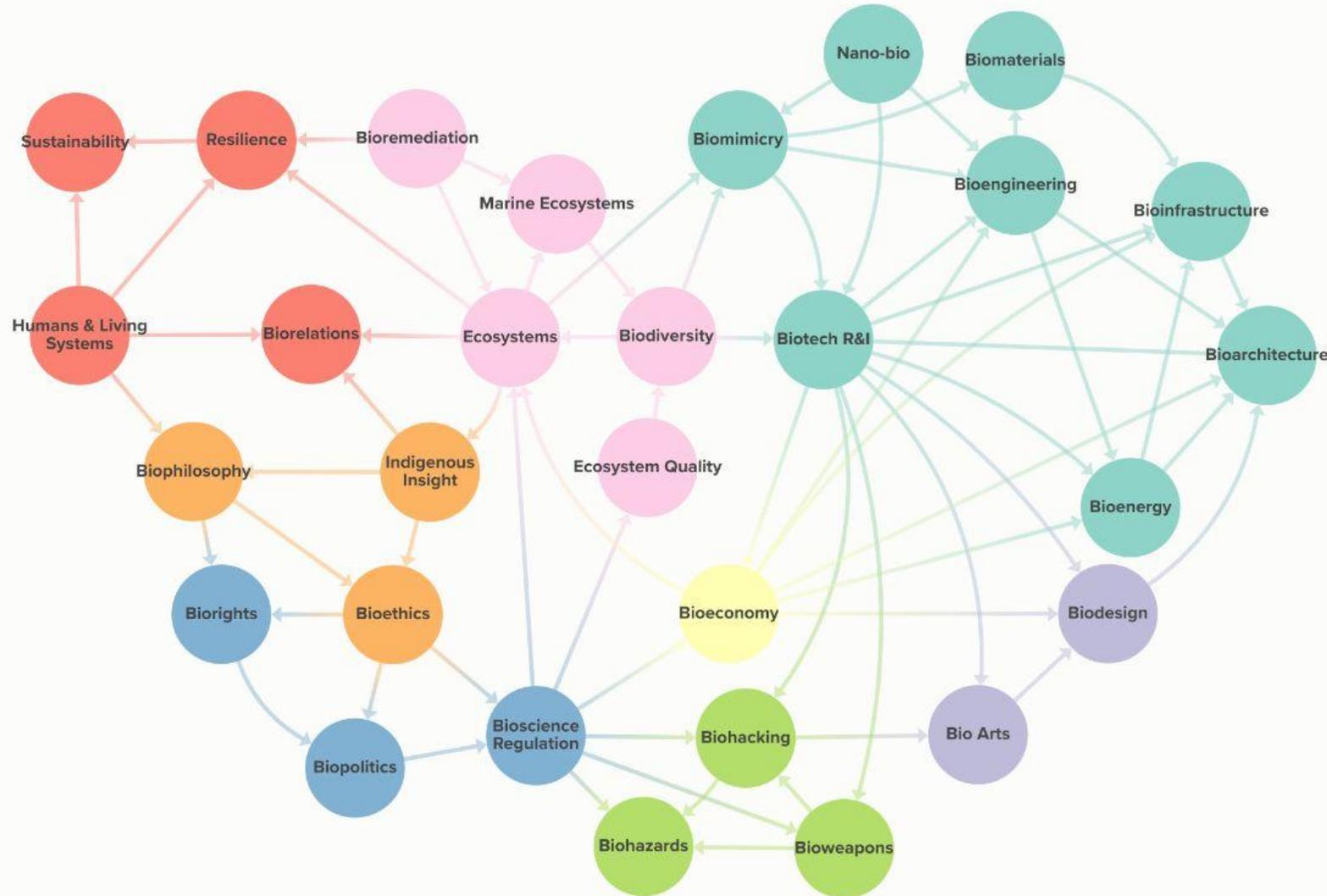
Victoria, on behalf of

Jigsaw Foresight & Fellow Travellers

Dr Wendy Schultz, Victoria Ward, Jim Scopes, Laura Humphrey, James Stevens, Dr Peter Humphrey, and Jigsaw Fellows Dr Caitlin McDonald and Dr Trish O'Flynn, together with contributions from Tara Chittenden of The Law Society, and Paolo Alvia Palavicino and Susanne Keesman from the Deep Transitions Futures Research project.

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Light and shadows in troubled times



Our relationship with our living planet

The onslaught of bad news and warning signals from the living systems of which we are a (small but influential) part casts shadows on our present activities and all our futures. If unchecked, our current pattern of resource exploitation, production, and consumption will exceed system limits and what are known as the nine planetary boundaries. Well known by some and unheard of by others, these boundaries were identified by a team of scientists in 2009 as “the nine processes that regulate the stability and resilience of the Earth system... within which humanity can continue to develop and thrive for generations to come.”

Working within and allying with the life around us

Both ancient wisdom and emerging capabilities offer rays of light for the continued viability of all life on the planet, including our own. New understandings highlight how critical biodiversity and ecosystem quality are to sustainability and resilience of human systems. The convergence of bioengineering discoveries like CRISPR genome editing with the cutting edge of nanotech is accelerating our ability to design new materials, products, and infrastructure that align with nature - but also opens the door to unrestrained biohacking and new biohazards, raising profound ethical and legal questions.

Selected next normal sightings

Advancing at speed

Biotech, bioinnovation, biohacking, computational power, exciting advances in human health and medicine, problem solving, growth & opportunity, it's complicated.

The rights of humans, nonhumans, and their protectors and guardians

Rights, equity, voices, outsiders, insiders, inbetweeners, 'invasive' species, language and translation, stewardship-not-ownership, timeline tensions.

The planetary boundary

Breaching the planetary boundaries, near no-return, global response needed, fragments of hope, emerging alliance, tipping points and social contagion.

Calling all bio-philosophers, barristers and interdisciplinary artists

The role of humanities and the arts, and of ethical (angry) individual and collective action and play in interdisciplinary activism, reconciliation, reimaginings, witnessing.

Postcards

February 2022

Advancing at speed

- [Chimerical ain't comical](#) - the thrills and spills of messing with the biome
- ['Lifted'](#) - building public trust around genomic science
- [The Prince, the Fish and the Gene Editor](#) - handling the conundrum of gene-editing choices
- [Gorse-tromony](#) - finding new ways to feed people
- [Game-changer](#) - sophisticated algorithm innovations crack a 50 year old problem
- [Make the future with fungus](#) - a new ecosystem of design
- [Growing our infrastructure - pooktre](#) - working in partnership with life to grow our 'built' environment
- [Biohazards, biohacking - bioweapons](#) - the dark side of manipulating living systems

The rights of humans, nonhumans, and their protectors and guardians

- [Elephant takes river to court](#) - what will happen when inter-entity court battles rage?
- [Tsuladxw versus the City of Seattle](#) - standing up for salmon in court
- [When two faiths go to war](#) - fighting for the future of the Nevada desert
- ['The obvious thing to do'](#) - returning land that was never, strictly, yours to start with
- [Foxed by the disappearing tundra](#) - what to do about disappearing ecosystem engineers
- [The call of the \(re\)wild](#) - wolves, rewilded, become lightning rods for other resentments
- [Plant snipers - alien species beware!](#) - pesticide paintballing controls invasive species
- [On a collision course](#) - intense heat drives brown beetles into Argentinian towns

The planetary boundary

- [It ain't 'woke', we need to fix it](#) - stakeholder capitalism has a powerful role to play in net-zero
- [Breaching the planetary boundary](#) - how to get humanity back inside the safe operating space
- [A river runs through it](#) - rethinking boundaries of water governance
- [Pouring cold water on the idea](#) - naturally cooled data centers: promising, problematic, both?
- [Social contagion, bird by bird](#) - the vital contagion of social change

Calling all bio-philosophers, barristers and interdisciplinary artists

- [Barrister for a Blue Planet](#) - a vital role for future generations of lawyers
- [Project Unsung](#) - storytelling to find novel reimagings of intractable problems

And from the Jigsaw Foresight archive

[The tech cult of youth](#)

[AI-designed food](#)

[What has the starfish ever done for us?](#)

[Bio-nnale](#)

[Leafy love letters](#)

[Farewell oldest friends](#)

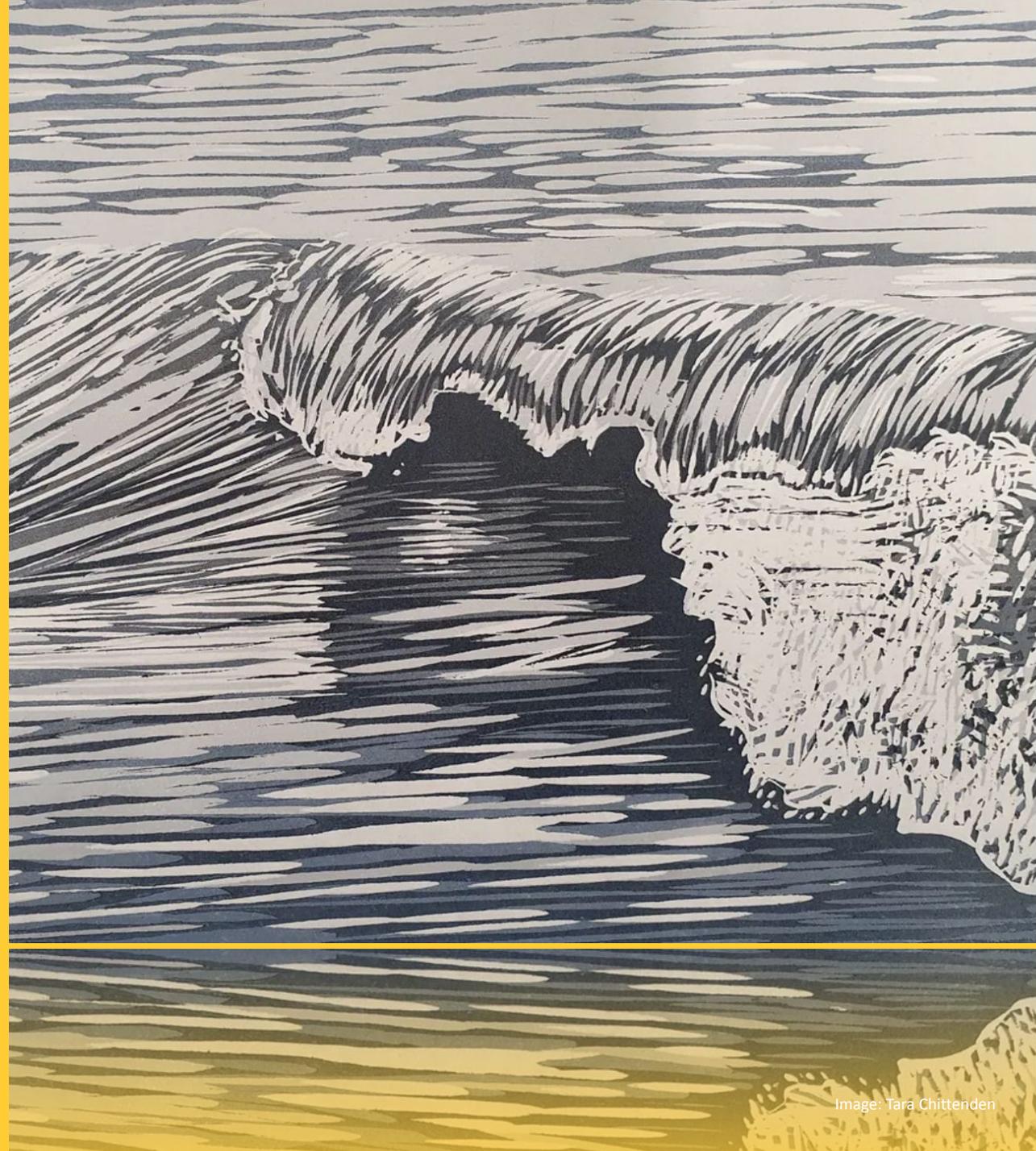
[Gratitude and grief in guardianship](#)



Advancing at speed

Biotech, bioinnovation, computational power, exciting advances in human health and medicine, problem solving, growth & opportunity, it's complicated.

- the thrills and spills of messing with the biome
- building public trust around genomic science
- handling the conundrum of gene-editing choices
- finding new ways to feed people
- sophisticated algorithm innovations crack a 50 year old problem
- a new ecosystem of design
- working in partnership with life to grow our 'built' environment
- the dark side of manipulating living systems





Chimerical ain't comical

The thrills and spills of messing with the biome.

Source(s)

[How are 3D printed hearts helping families with heart problems?](#)

[In first, US surgeons transplant pig heart into human](#)

[Time to rethink the law on part-human chimeras](#)

[International team create first chimeric human-monkey embryos](#)

“These breakthroughs have been met with excitement, [and] have also reignited long-running ethical debates... Unlike other forms of xenotransplantation, generating human organs inside of part-human chimeras ... raises difficult questions about the moral status of creatures that are neither fully animal nor fully human”.

Our take

“Chimerical” means “a hoped-for illusion” as well as “made up of multiple types of animal.” Like these mythical creatures, interspecies health interventions might bring new wonders that make our world more magical. But in Greek mythology the chimera is rightly feared - part lion, part goat, part fire breathing dragon. These are beings with unknown powers and possibilities of destabilization and disruption. How do we acknowledge and honour these tensions?

Technology and innovation are powering new health solutions in all kinds of ways. With that power comes responsibility and consequences we cannot easily foresee. If [“creating part-human chimeras falls within gaps in existing legislation”](#), how might legislation, policy makers and legal professionals start to set boundaries of ethical research and prevent inhumane experimentation with chimeras? What we know is that the moral imagination is not static. Our morals and values evolve and we are being called to evolve them now in the fields of ethics and medical science research.

Pairing notes

Read [Pig Heart Boy](#), written by Malorie Blackman in the 1990’s, and the [interview](#) on how she feels now about young adults’ sci-fi becoming reality.

#bioinnovation #xenotransplantation #publictrust

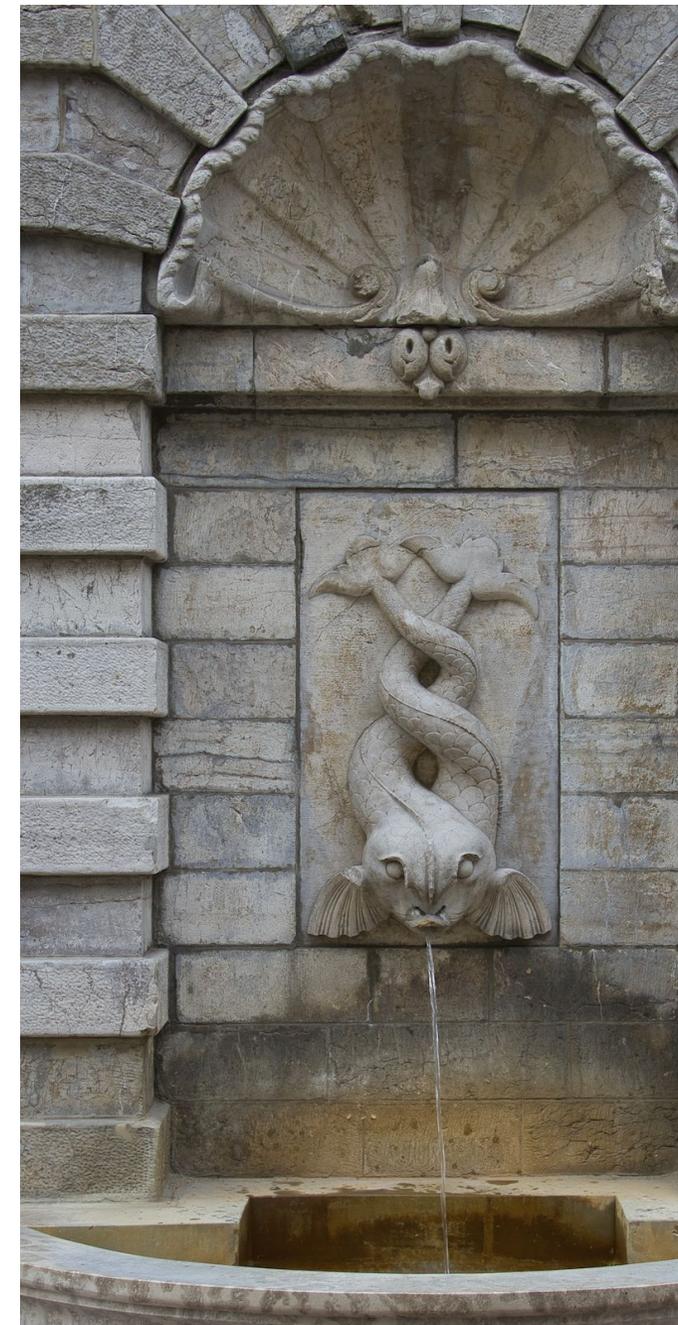


Photo: Christian Remand, Unsplash



'Lifted'

Building public trust and understanding around advances in genomic science.

Source(s)

[Genomics beyond health: preparing for a genomic future](#)

“Public trust in the use of genomic data for healthcare and research is vital, and such trust may be undermined if more dubious uses of genomic data are allowed to go unchecked. Unlike some other types of medical or sensitive data, an individual’s genomic data can potentially expose facts about their family members as well as themselves. What a person decides to do with their genomic data can have lifelong consequences, for them and for others.”

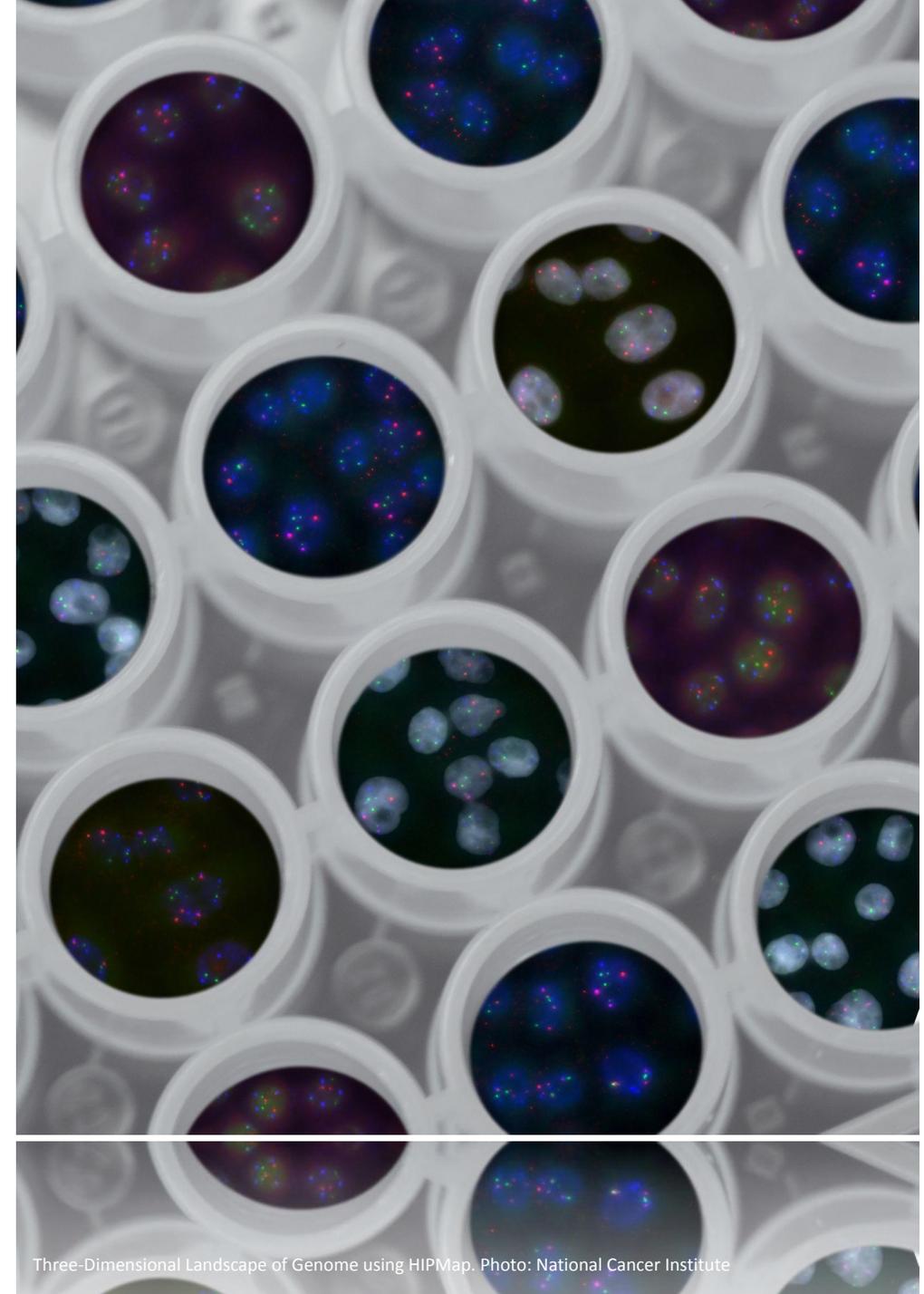
Our take

The UK government is particularly effective in using foresight to illuminate complex emerging change and convene around a call to action, so a special shout out to the UK Government Office for Science:

“This raises several important questions. How might this information be used? What could this mean for our society? And how might policy across departments need to adapt? Will we need more regulation? How will we manage the ethical questions raised, address the risk of discrimination, and the potential threats to privacy?”

Pairing notes

Read [Klara and the Sun](#) by Kazuo Ishiguro, science fiction which explores what happens when ‘lifting’ (genetic modification) leads to designer children, serious illness and exclusion of those who are not ‘lifted’, in a world where Klara, the AI, is the only character with capacity for selfless love. And enjoy what happens when scientists turn protein folds into music and back again in [this MIT article](#). If you’ve got an Android phone you can even download this [Amino Acid synthesiser](#).



Three-Dimensional Landscape of Genome using HiPMap. Photo: National Cancer Institute



Gorse-tromony

An invasive species historically used as animal fodder could feed millions.

Source(s)

[Gorse protein could easily feed the whole of Scotland, expert says](#)

[Invasive plants are a valuable alternative protein source and can contribute to meeting climate change targets](#)

“When we did the calculations, just from active removal from marginal lands, there is enough gorse protein to easily feed our population. Gorse and broom were fed to cattle at times when crops failed in the past, so we think protein from these types of plants could be used as animal food. If protein isolates are produced in the correct way, so to be safe, they could be considered as human food in the future. I’m not advocating that we’re ready to feed gorse to humans at this point, but it’s something that we can think about for the future.”

Our take

This is a joyful, yellow, and unexpected idea. A dense, prickly, marginal, invasive plant, reconsidered holds solutions. And its flowers taste a little bit coconutty, infused in alcohol. You’ll see from the pairing notes that foragers are already on board with the science. One ethical issue we don’t often talk about is “what are the harms of keeping the status quo?” By not choosing gorse, or other food innovations like incorporating insects into our modern Western diets, what harms in biodiversity, food poverty, etc are we allowing to continue?

Pairing notes

Try [this recipe](#) for gorse wine or listening to this lovely little song, actually called “[Gorse](#)” from ‘Spell Songs’ by Beth Porter “good luck trying to force your way through gorse...”

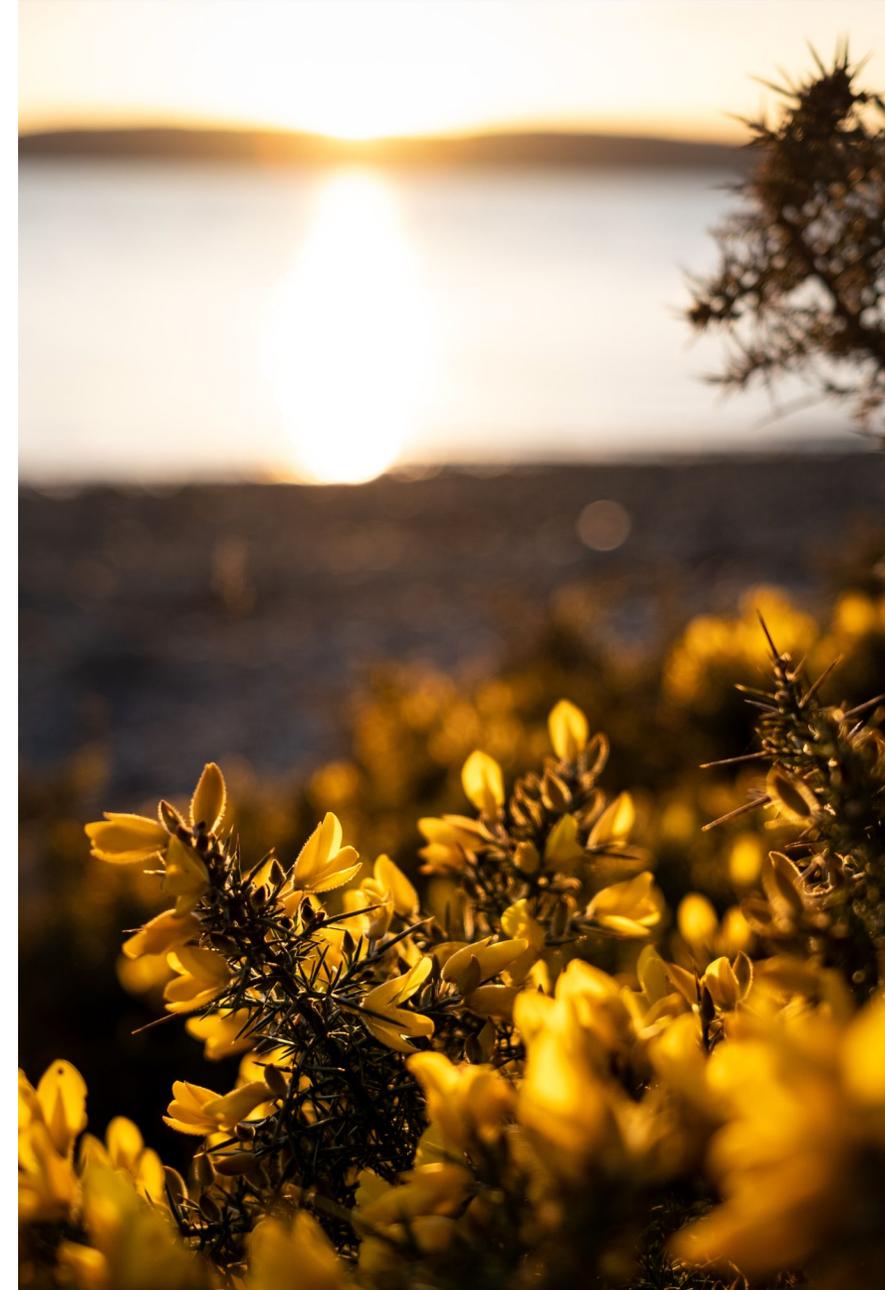


Image: Ben Wicks, Unsplash





The Prince, the Fish and the Gene Editor

A gift from Chicago to Prince Akihito of Japan in 1960 caused a decades-long ecological crisis that could be solved by CRISPR gene-editing technology...

Source(s)

[The prince, the major and the US fish that ate Japan](#)

[Is CRISPR-based gene drive a biocontrol silver bullet or global conservation threat?](#)

“Japanese geneticists are experimenting with the gene editing wizardry of CRISPR to sterilize the invasive bluegills. If the initiative succeeds, wildlife managers could use the same technique to rid the U.S. of damaging aquatic invasives such as the Asian carp. In Japan, the public is ambivalent about the bluegills and wary of genetic efforts to curtail them, and it’s easy to see why.”

Our take

As the article says, a cautionary tale about human intervention on all sides. We love cautionary tales because they create nuanced spaces in which to inhabit complex problems. This hidden invasion once made visible had no immediate solution - and when a solution (gene-editing) may now exist it ran headlong into ambivalence and indecision. In our work we must often navigate the translations between specialisms, the told and untold stories and many other implications of convening to understand the past, the possible futures and the best intervention now. Much of this navigation is centred around the dilemma we see in the tale of CRISPR and the Bluegill: who gets to be the decider and how are risk and benefit calculated, consequences measured?

Pairing notes

Cook up [some Bluegill](#) - although Bluegill sushi (chewy, deep-fried, marinated and chilli), and the Bluegill burger never caught on in Japan as it turned from celebrated to infamous.

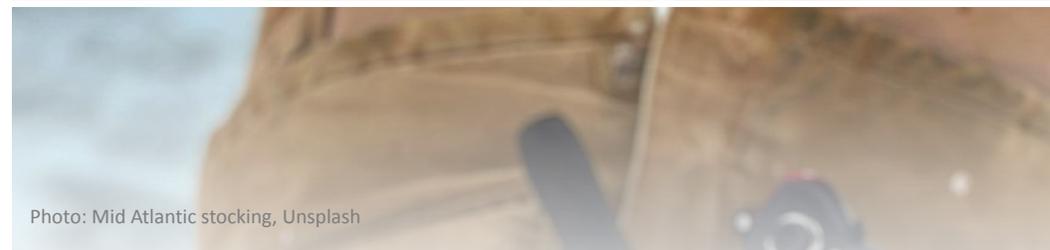


Photo: Mid Atlantic stocking, Unsplash





Game-changer

Five years of effort result in new sophisticated algorithmic innovations to crack the 50-year-old problem of protein folding.

Source(s)

[AlphaFold: a solution to a 50-year-old grand challenge in biology.](#)

[DeepMind cofounder: Gaming inspired AI breakthrough.](#)

[Protein folding and related problems remain unsolved despite AlphaFolds advance.](#)

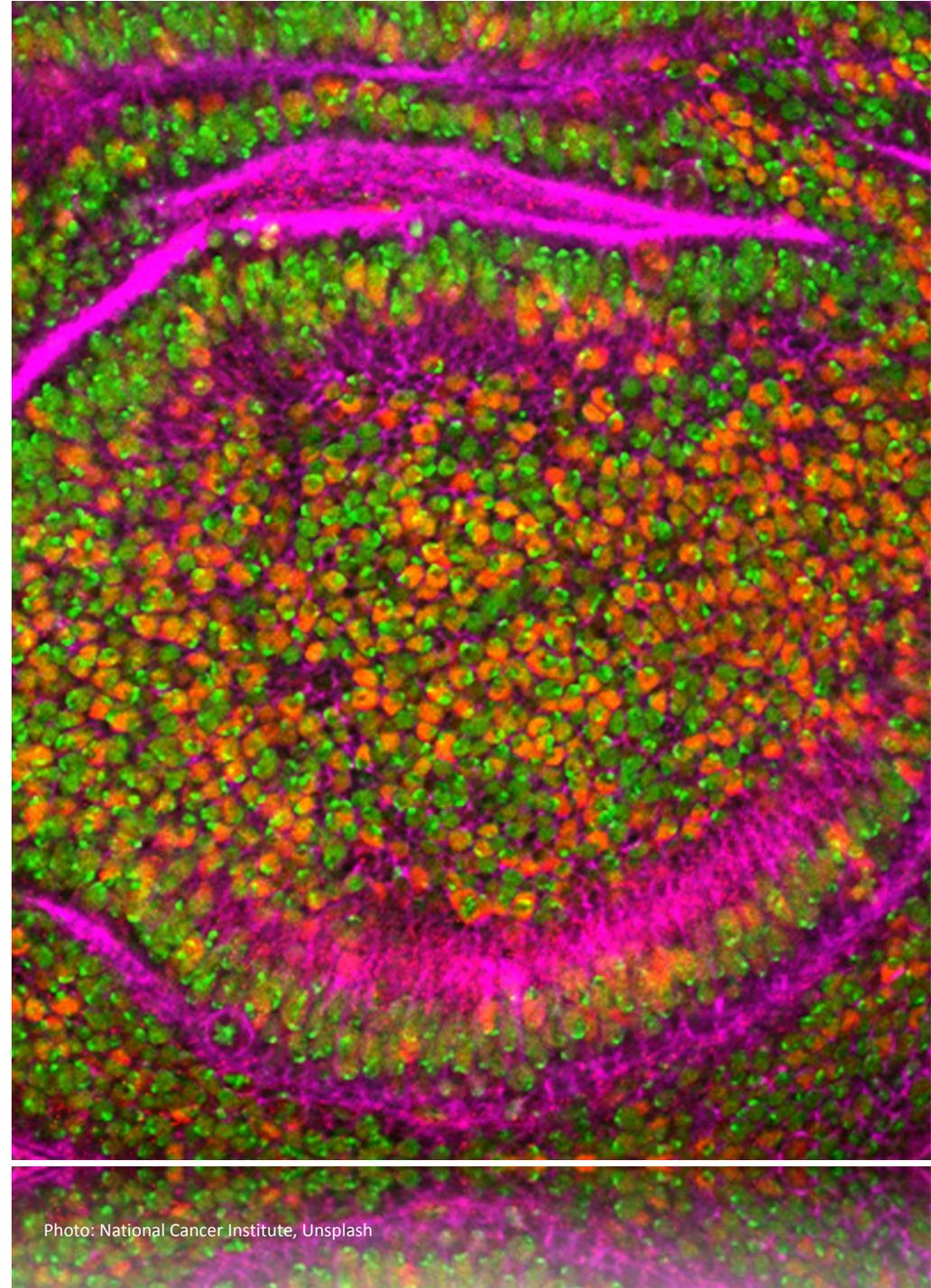
“It came back on my radar in about 2009, where there was this game called Foldit, where some people had created a puzzle game out of proteins. Firstly, it was a fascinating use of games in science - and games is another one of my interests. But secondly, it kind of suggested to me that somehow these gamers had trained their intuition and their pattern-matching capabilities so that somehow they were able to do what brute-force computer systems couldn't at the time - and actually come up with the right shapes. That made me think that AI could maybe try to mimic that intuitive capability that those gamers were demonstrating.”

Our take

AI can impact on scientific discovery and accelerate scientific progress, providing new solutions to longstanding challenges - like [unfolded or misfolded proteins](#). It's a delicious story of play powering scientific breakthrough. Do we need to encourage Gen M to stay on their Xboxes to power future breakthroughs? One of the reasons we champion futures and foresight is that those tools also work best in the hands of the playful and benefit from multidisciplinary. AlphaFold is based on self-directed machine learning. What the model does is always determined by the training data. So there are bigger legal and ethical questions, outside our immediate scope. Relevant here is [Stuart Russell's Human Compatible](#), compelling on the idea of the 'beneficial machine' and the need for unclear objectives.

Pairing notes

[Demis Hassabis](#), the cofounder of DeepMind, has a fascinating cv. Clues there. [“How to become a centaur”](#) by Nicky Chase is a terrific read: *“When you create a Human AI team, the hard part isn't the 'AI'. It isn't even the 'Human'. It's the '+'.”*



Make the future with fungus

A new ecosystem of design.

Source(s)

[Future construction: mushroom buildings](#)

[Ikea moves to mushroom packaging](#)

[Ecovative](#)

[Stella McCartney demos vegan leather handbag made from mushrooms](#)

"In the US alone, IKEA rakes in \$33 billion and it's become one of the fastest growing companies within a decade. Their decision to replace polystyrene with mushroom packaging could help set an industry standard of sustainable packaging."

Our take

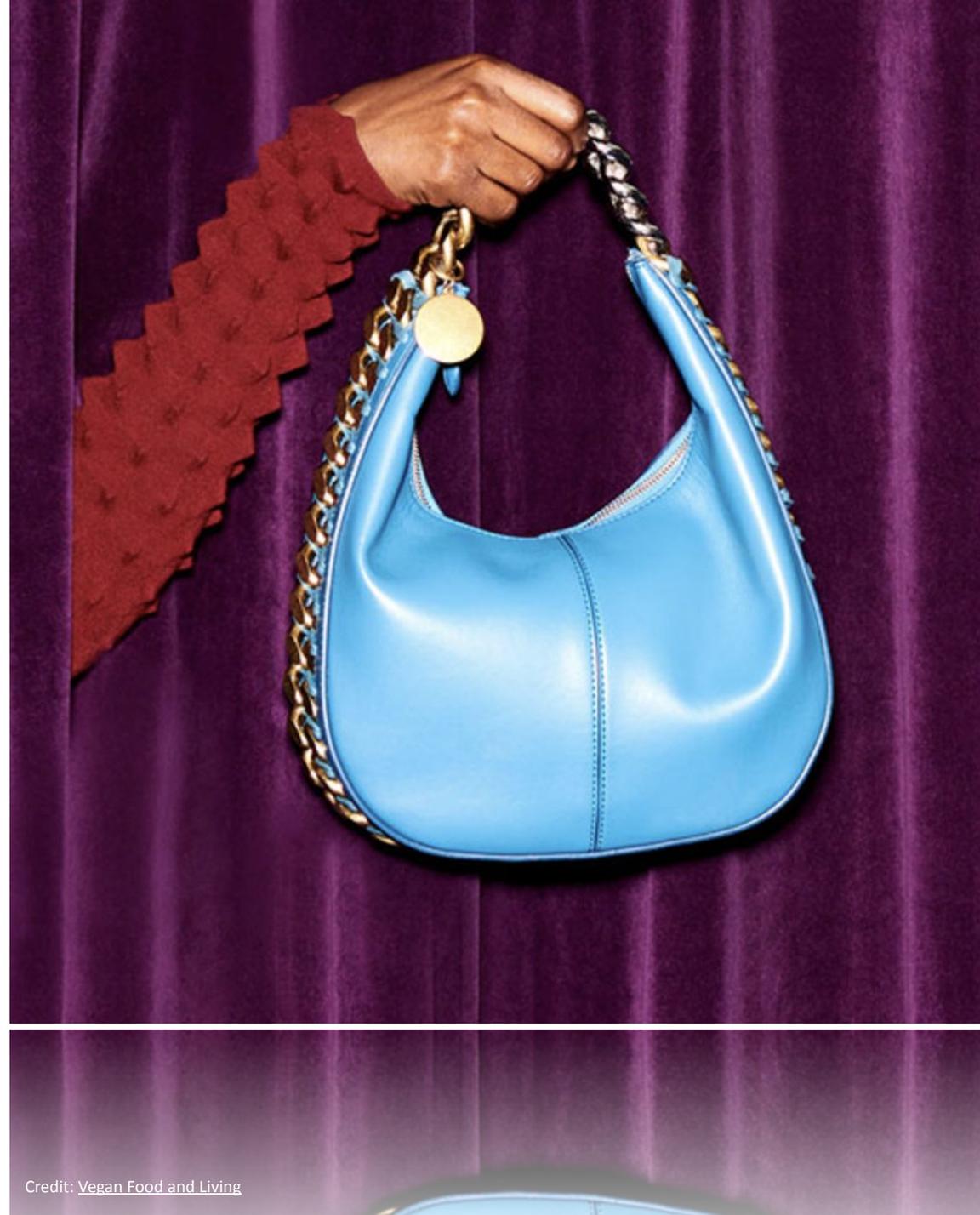
From leather to bricks, packaging to risotto, is there anything the mushroom can't do? We are excited by the creativity generated by self imposed constraints – whether it's Stella McCartney finding innovation in its promise never to use animal leather, or Ikea exploring its potential to set a new global standard of packaging. Complying with policy and regulation is one matter, but in the fast moving world of retail for example, privately owned companies are primed to drive change by redrawing their own parameters and seeing what innovation bursts through - fungal or otherwise. It's all too easy to imagine a resource restricted future of parsimony, where ethical = rationed and restricted. But perhaps we should all enjoy the opportunity to collectively ask, '[what else can I do](#)' and see how it moves whole sectors forward.

Pairings

Take a video tour of a [low tech mushroom farm](#) in the UK and then grow [your own oyster mushrooms](#) from your kitchen counter. Enjoy [Spores](#), where mycologist meets musician to make mushroom music. Wonder at Alison Pollack's gorgeous macro [mushroom photos](#).



JIGSAW FORESIGHT for The Law Society



Credit: [Vegan Food and Living](#)



Growing our infrastructure - pooktre

Pooktre, arborsculpture, bioarchitecture - from ancient indigenous practices that coax plants into useful shapes to bioengineering artifacts and buildings, people working alongside and with existing ecosystems can create resilient and beautiful local infrastructure out of life itself.

Source(s)

[Clip from The Green Planet, episode 5, Human Worlds - Living bridges](#)

[The Art of Tree Shaping](#)

[Pooktre - The Art of Growing Trees into Man-Made Forms](#)

[Solarpunk manifesto](#)

“The Khasi people [in the Northeast Indian state of Meghalaya] have learned how to use the remarkable properties of living fig trees to build unusually strong bridges. ...This unusual relationship has allowed the people here to thrive in an otherwise challenging landscape.”

“We are starved for visions of the future that will sustain us, and give us something to hope for, ideas of life beyond the rusted chrome of yestermorrow or nightmare realms of radiated men eating the flesh of other radiated men.”

Our take

We'll confess, we're in love with these bridges. For those of us who grew up watching *Hook*, we were frankly expecting the world to look a lot more like this. It also brought to mind the Solarpunk movement which envisions a technologically advanced world in which humans work in harmony with nature. We recently saw Sandra al-Badri share how she was inspired by the [Solarpunk movement](#), spurring her on to become CPO and founder of ethical investing platform Sagefund - showing us it's not just tangible infrastructures that the natural world can help us to grow, but financial, even musical.

Pairing notes

Dip into the [solarpunk reddit thread](#), listen to the singing plants at [Damanhur Garden](#), the [Plantwave Quartet](#) and maybe even preorder yourself a [Plantwave](#), a device that converts plant biorhythms into music (also [works with mushrooms](#)).



Credit: Arshiya Urveeja Bose - Flickr, CC BY 2.0



Biohazards, biohacking - bioweapons

The dark side of human capacity to manipulate life and living systems.

Source(s)

[Self-destructing mosquitoes and sterilized rodents: the promise of gene drives](#)

[Gene drives gaining speed](#)

[Engineered pathogens and Unnatural Biological Weapons](#)

[Meet the biohacker using CRISPR to teach everyone gene editing - see kits at Odin](#)

[Scientists breed glow-in-the-dark rabbits](#)

Quotes

"The final goal is to develop animals that act as barrier reactives to produce beneficial molecules in their milk that can be cheaply extracted...The rabbits are expected to have the same life span as their non-glowing counterparts, but Moisyadi said he understands people can object to this kind of experimentation involving live animals.

"To the people against, I say: think about, what are the benefits and what are the injuries?" Moisyadi said. "And if the benefits outweigh the injuries, let's go with the benefits."

Our take

Wouldn't we all enjoy a summer free from mosquitoes? Gene drives - genetic modifications that greatly increase the likelihood certain genes will pass on to the next generation - can spread sterility through mosquito populations. What other traits - and populations - might gene drives target in the future? What entirely novel pathogens might be created via synthetic biology? CRISPR-Cas9 gene editing kits - and the video instructions to use them - are now commercially available. What happens if your neighbour's teenager decides to biohack themselves, or the dog, or the roses, and inadvertently creates a proliferating biohazard? What uses of this godlike capacity to tailor-make life are philosophically and ethically justifiable, and how can we assess the costs and benefits? Will war and terror alike be entirely biologically based in the future? How safe could future artistic provocations that sculpt life itself be?

Pairing notes

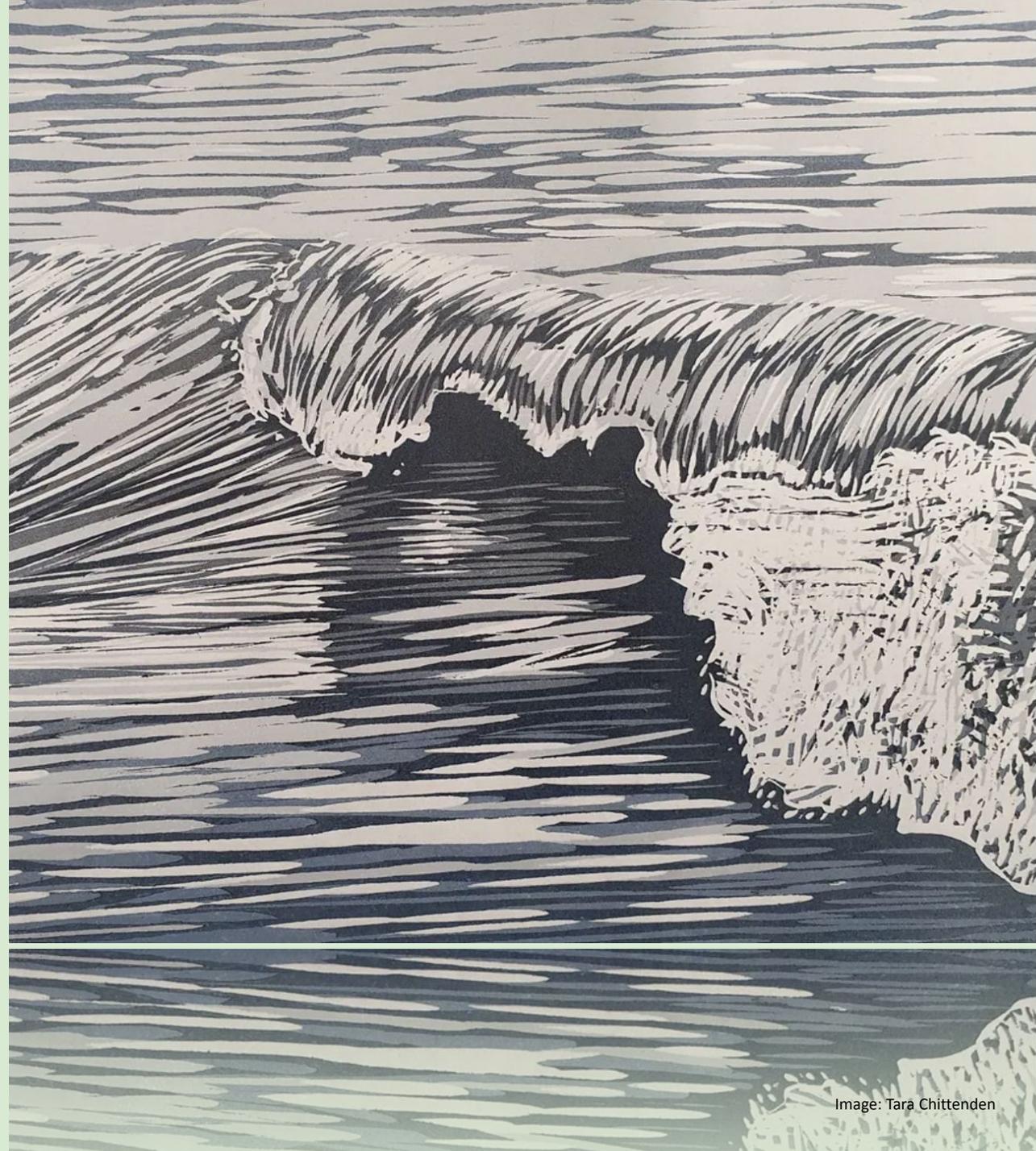
For a perspective from the lighter side of biohacking, enjoy the [March of the Bioengineers](#), or listen to the aesthetic stylings of [Your DNA Song - enjoy the first 60,000 base pairs of the human genome translated into music](#).



'The rights of humans, nonhumans, and their protectors and guardians'

Rights, equity, voices, outsiders, insiders, inbetweeners, 'invasive' species, language and translation, stewardship-not-ownership, timeline tensions

- what will happen when inter-entity court battles rage?
- standing up for salmon in court
- fighting for the future of the Nevada desert
- returning land that was never, strictly, yours to start with
- what to do about disappearing ecosystem engineers
- wolves, rewilded, become lightning rods for other resentments
- pesticide paintballing controls invasive species
- intense heat drives brown beetles into Argentinian towns



Elephant takes river to court

New nonhuman legal entities, and those representing them, are creating new collision courses in court.

Source(s)

[The nonhuman rights project](#)

[From human rights to sentient rights, the next generation of thinking](#)

[EHRA and the PEACE \(People Elephants Amicably Co-existing\) project](#)

[When rivers go to court.](#)

“The fight for nonhuman rights focuses on the fact that nonhuman animals have their own inherent interests, just as humans do, and calls for these interests to be protected.”

Our take

[Sentientism](#) as a moral philosophy based in compassion puts itself on a collision course with capitalism and with other faiths and philosophies. There’s a danger that competing rightness about rights ends up like the squabbling dinosaurs in Jurassic Park II and accelerating towards extinction. But at the same time the interests of humans and animals, and the interests of non-sentient entities like rivers are converging. If we are not to exceed the [planetary boundary](#), rebalancing rights, responsibilities and relationships between different entities and different timelines is inevitable. We are all in it together.

When an elephant, or a river, has the same rights as a person, at some point those rights will clash with each other, leading to protracted legal battles - elephants needing water take on a Namibian town fed up with having its water supply dug up. What happens when nonhuman legal entities start suing each other? Or when we start recruiting nonhuman legal entities to protect human legal entities?

Pairing notes

Listen to [“Water get no Enemy”](#) from Fela Kuti. It’s a song based on a Yoruba proverb about the power of nature and water.



Image: Geran de Klerk, Unsplash

Tsuladxw v. the City of Seattle

The Sauk-Suiattle Indian Tribe filed a lawsuit against the City of Seattle. The case was filed by the Tribe on its own behalf and on behalf of Tsuladxw (salmon in the Tribe's language).

Source(s)

Sauk-Suiattle Indian Tribe brings first 'rights of salmon' case.
Imagine Jair Bolsonaro Standing Trial for Ecocide at The Hague

"The Tribe seeks recognition that salmon have inherent rights to 'exist, flourish, regenerate...and restoration,' and that the Tribe possesses the duty to 'protect and save' salmon in the face of continued harm and decline, including from the City of Seattle's dams on the Skagit River."

Our take

We're seeing an increasing appetite of those groups and communities who have historically been excluded from power structures to take on established human systems and corporations in the interests of the planet. The archetype of guardian or protector is becoming a force to be reckoned with, willing to take on established instruments of power and authority and carrying forward ancestral commitments over a long time. If this case in the Sauk-Suiattle Tribal Court is successful it will create a duty for a non-government body (the Tribe) to protect salmon and by implication the river ecosystem. How far might that duty extend and where might it conflict with other human and nonhuman rights? What other non-government entities might follow suit? This is also a potential area of litigation internationally with a campaign to bring ecocide under the jurisdiction of the International Criminal Court. Imagine Jair Bolsonaro standing trial for Ecocide at The Hague. Imagine non-State actors, such as companies or tribes, being held culpable in a future more-than-human legal system.

Pairing notes

Gratitude and grief in guardianship, from the JF archive, talks about the model of stewardship-not-ownership and the presence of the sacred in such commitments.



The call of the (re)wild

Wolves, totemic symbols of wildness, become lightning rods for other contemporary resentments.

Source(s)

[With or without wolves: where next for rewilding?](#)

[Feral: searching for enchantment on the frontiers of rewilding. George Monbiot](#)

[Women Who Run With The Wolves](#)

“Ultimately, a wolf is no wilder than a blue tit. But wolves do make a place feel wilder. Wolves threaten to disturb our comfortable lives and challenge our dominion over the natural world. In ‘Feral’, George Monbiot admits how his enthusiasm for rewilding derives from ‘reasons scientific, economic, historic and hygienic, but none of those describe my motivation’. Rather than any predictable or quantifiable benefit, what really motivates him, and what continues to motivate so many others, is the thrilling capacity of wild animals – and especially wild predators – to enchant and surprise us.”

Our take

Conservationists have long struggled with defining conservation as the preservation of nature untrammelled by humans vs the development of nature for the benefit of humans—at least, in conservation theories of the ‘West/Global North.’ Viewing ‘human’ and ‘nature’ as essentially separate contributes to the ‘cuteness bias’ organizations like the World Wildlife Federation grapple with: there’s a reason their symbol is the panda, not the blobfish. (See also: [On a collision course.](#)) But there is increasing room in Western thinking for seeking ways of living from the global majority which integrate human and natural systems rather than seeing them as binary opposites. See also: [Pooktre/bioarchitecture](#), [Tsuladxw vs the City of Seattle.](#))

Pairings

To add to the more serious reading, here’s a [list of recommended books about wolves in fiction](#) to sink your teeth into. Julia Watson’s [Low-TEK: Design by Radical Indigeneism](#) is a guide to nature-based technologies.



Credit: M L, Unsplash

When two faiths go to war

The demand for lithium is on the rise in the clean energy transition. The extractive damage done by lithium mining in the Nevada desert goes beyond environmental damage, to spiritual, cultural and historical significance.

Source(s)

Lithium mine pits electric cars against sacred Indigenous land.

'Like putting a lithium mine on Arlington cemetery'

Earthworks

"I still think people think we're 'savages' in some way. We still use the land, we still care for it. They see that as weak, but we see that as strength."

Our take

Our JF scanning shows an emerging pattern of alliance in activism, bridge-builders who stand, like Earthworks, for "clean air, water and land, health communities and corporate accountability". We note that this, like other contested narratives and spaces would benefit from a deeper layer of understanding and meaning making, so what happens around the legal dialogue counts for as much as any legal action. And we also observe the power, in convening, of a third presence (in this case Earthworks) to shape the space in which change can be made possible.

Can protest make a difference in Nevada and other areas which will be important in the transition to clean energy and away from fossil fuels? How can the legal options play out pitting the sacred and the secular against each other, and in which the past as well as the present and the future all need to be understood.

Pairing notes

We power our future with the breast milk of volcanoes is an art project by The Unknown Fields Division, 'a nomadic design research studio that ventures out on expeditions to the ends of the earth to bear witness to alternative worlds, alien landscapes, industrial ecologies and precarious wilderness'.



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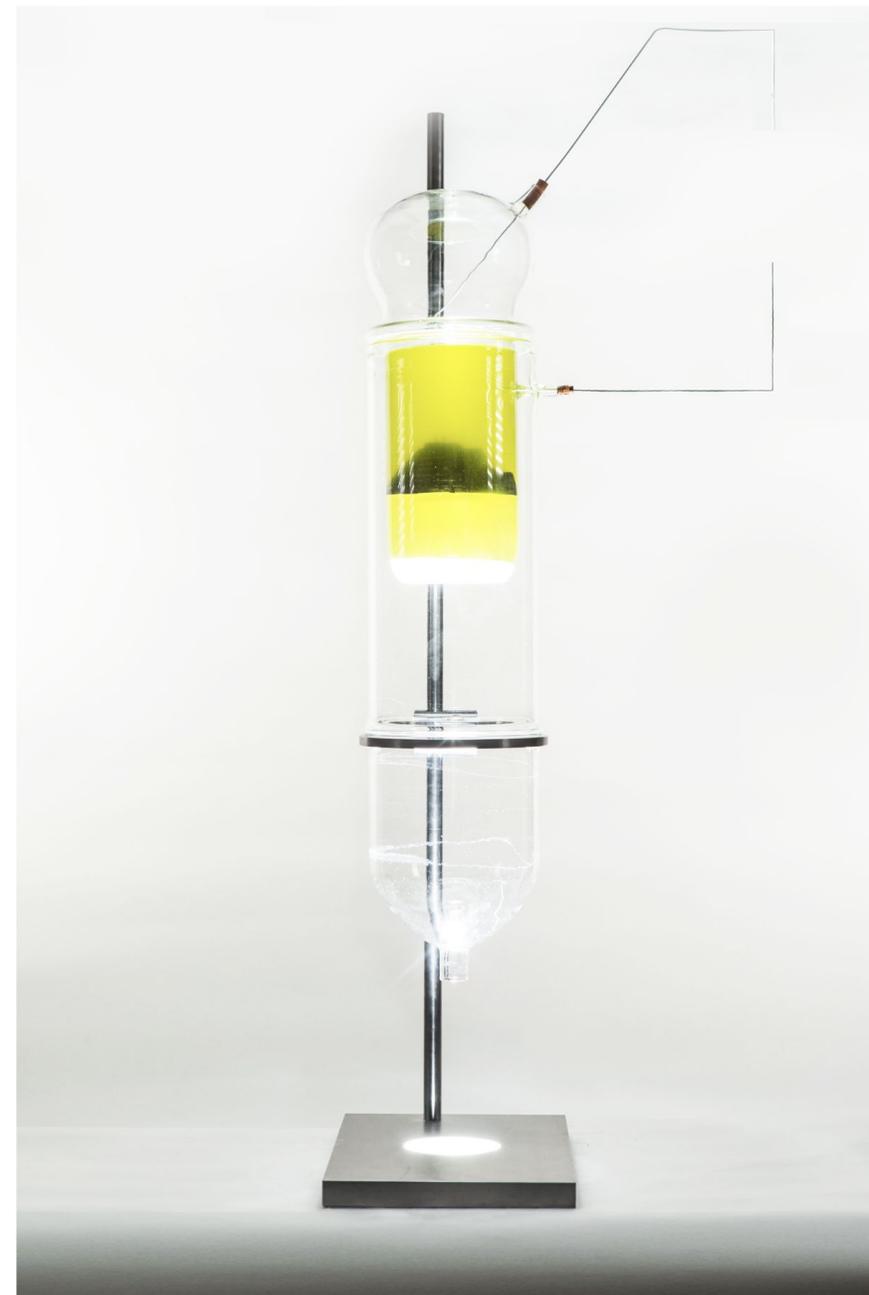


Image: Unknown Fields Department of Energy Mythologies. The volcano battery is fashioned from glass, graphite, aluminium, nickel and Lithium Brine.

'The obvious thing to do'

A Washington state lumber company has returned more than 1,000 acres of ancestral land near the southern Puget Sound to the Squaxin Island Tribe at no cost.

Source(s)

[Lumber company returns waterfront property to Native American tribe in Washington State at no cost.](#)

[Landback - a movement to get Indigenous Lands back into Indigenous hands](#)

[Redwood foresight in Northern California reclaimed by Native American tribes](#)

[US officials, Native American leaders, to meet on returning lands](#)

"Just an acknowledgment about the place would ring hollow if the only owner of record was still around, and the people it was stolen from were alive and well, and right up the street. The obvious thing to do was simply give it back".

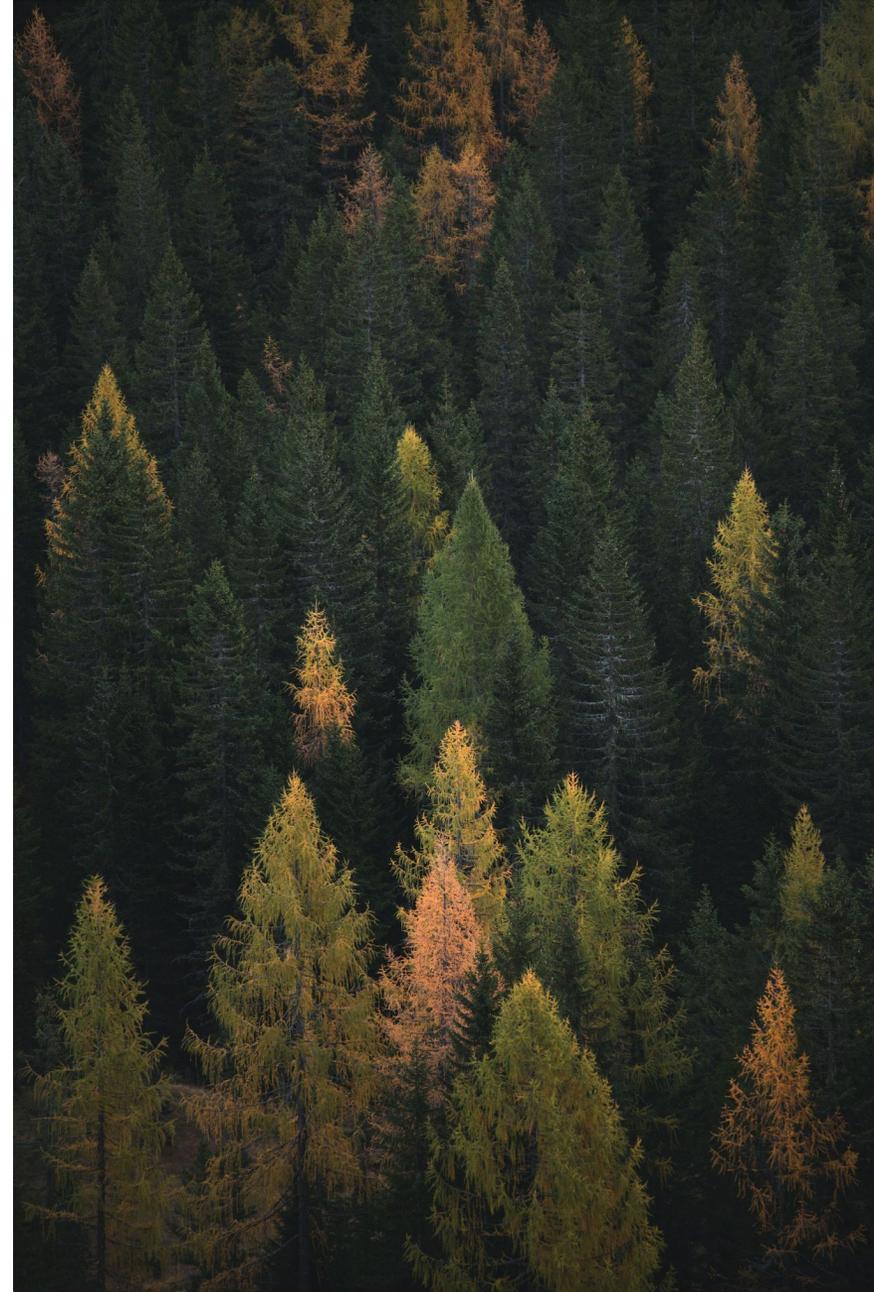
Our take

It's not that obvious though, is it? The fact that this is newsworthy tells us that the willing 'surrender' by landowners of 'their' property to Indigenous people it previously belonged to contrasts with other approaches. Reconciling the history of contended ownership also graciously recognises today's Tribe and is, itself, a spiritual act. It's a whole new way of tending to bio-human relationships.

Could there be a whole new breed of lawyers starting to specialise in gift exchange rather than, say, mergers and acquisitions? Federal officials meeting with Native American tribes to move ahead efforts to protect and restore tribal land is another initiation (we hope) of the 'obvious thing to do'. How will opposition to these moves express itself?

Pairing notes

Try listening to Daniel Lanois "[Death of a Train](#)" for the things we have to leave behind to make room for the next thing. Read [Braiding Sweetgrass](#) by Robin Wall Kimmerer for more on reciprocity, gratitude, indigeneity and reconciliation.



Foxed by the disappearing tundra

Arctic foxes are 'ecosystem engineers' who use their dens across generations, and create a garden of sorts on the tundra. Climate change is reducing their habitat and they are losing ground to the red fox too.

Source(s)

['Ecosystem engineers': Arctic foxes build gardens on tundra, biologists say.](#)

[In the frigid arctic, these foxes build their own gardens](#)

[Arctic foxes 'grow' their own gardens](#)

[Charisma](#) - a blog by Jamie Lorimer from 'The Multispecies Salon'

"We tend to think of gardening as a truly human endeavor, but other animals may also do it — though they may not necessarily realize it. All predators provide ecosystem services such as nutrient cycling when they hunt other creatures, but in the case of Arctic foxes, the effect is more pronounced."

Our take

The arctic fox is very cute to us humans. It's a "charismatic species" (Lorimer) doing interesting things. Are we too easily bowled over by charm in choosing which species we root for? Climate change means arctic foxes are losing territory to red foxes. Should we care more about uncharismatic and 'invasive' species? Is 'invasive' too loaded a word for us to go on using it as shorthand?

Do we protect the arctic fox, or accept that climate changes means that species are on the move. What are the legal implications of the way we approach different species and nonhuman animals in the human-made species hierarchy?

Pairing notes

For a take on 'invasive species' you could always (re)read Bram Stoker's [Dracula \(1896\)](#) who many believe was writing against 'invasion' by Eastern European immigrants. This OUP version has an excellent set of essays at the end which explore the intersection of different changes that went into the melting pot of influences.



Plant snipers - alien species beware!

Miconia, introduced into Hawai'i by humans as a decorative garden plant, spreads fast and destroys native ecosystems, often in hard-to-reach places. Plant snipers use pesticide paint-balls for precision miconia suppression.

Source(s)

[Clip from The Green Planet, episode 5, Human Worlds - Controlling invasive species with a paintball gun](#)
[Hawai'ian Invasive Species Council: Entry on Miconia](#)
[Herbicide Ballistic Technology](#)

Quotes

"Herbicide Ballistic Technology (HBT) is a state of the art weed management tool developed by the University of Hawaii, which has been designed to surgically eliminate invasive pest species with pneumatically delivered, herbicide-filled projectiles. Since 2012, the HBT platform has been deployed in over 500 hours of helicopter operations to detect and eliminate miconia (Miconia calvescens) from the East Maui Watershed (EMW). In these last five years, we have eliminated over 20,000 incipient plant targets, protecting the most remote areas of the watershed."

Our take

Little that is truly wild exists on our planet anywhere - humans have affected all ecosystems. Accountability demands responsible remediation. This in turn will need innovative tactics, the impacts of which are fully and systemically assessed. Humans can partner and ally with the wild things we have put in harm's way - incidentally opening up an entire new sector of 21st C jobs. Given a generation that grew up with first-person shooter video games, plant snipers could prove an attractive first step towards a future filled with eco-warriors. Can we develop a bioethical standard that can practically encompass high-precision remediation with zero collateral damage?

Pairing notes

It's not the sound of a helicopter playing Herbicide Paintball, but here's [a collection of soundFX for paintballing](#) to put you in the mood, and "[Weed Killer](#)" by [The Kills](#) seems to describe the fate of the Miconia plant.



On a collision course

Intense December heat drives brown beetles into Argentinian towns in droves, much to the annoyance of the inhabitants.

Source(s)

[Millions of Brown Beetles in Argentina due to intense heat](#)

[Australian attitudes to eating insects are changing](#)

"These insects tend to gather in cities as they are attracted to light, and generate an ugly smell and annoyance to neighbors. To combat them, several towns ... turned off public lighting at night, and instead lit drums with fire... Although they are completely harmless, these heavy insects also collide violently with everything that crosses their path, so it is recommended to cover your face and eyes to avoid impact injuries."

Our take

Culture is having an ongoing conversation about bias, whether it's Amazon's AI hiring algorithm, or racial bias in facial recognition technology. But what of human - animal bias? As legal cases seek to ascribe personhood to the majestic elephant and the mighty river, what about species we find unpleasant or scary? Is it time for a #rightsfortheuncute movement? Human-made changes to the environment have invaded and damaged ecosystems, so should we welcome all nonhuman refugees? And how? In Australia, insects have long been a staple food for indigenous people, while recent changes to [European Union rules](#) mean farmers can feed pigs and poultry purpose-bred insects. Will human biases towards non-humans change if they are #uncute, yet tasty?

Pairings

Check out the best [wine and bug pairings](#) according to an expert and explore [your brain on cuteness](#).

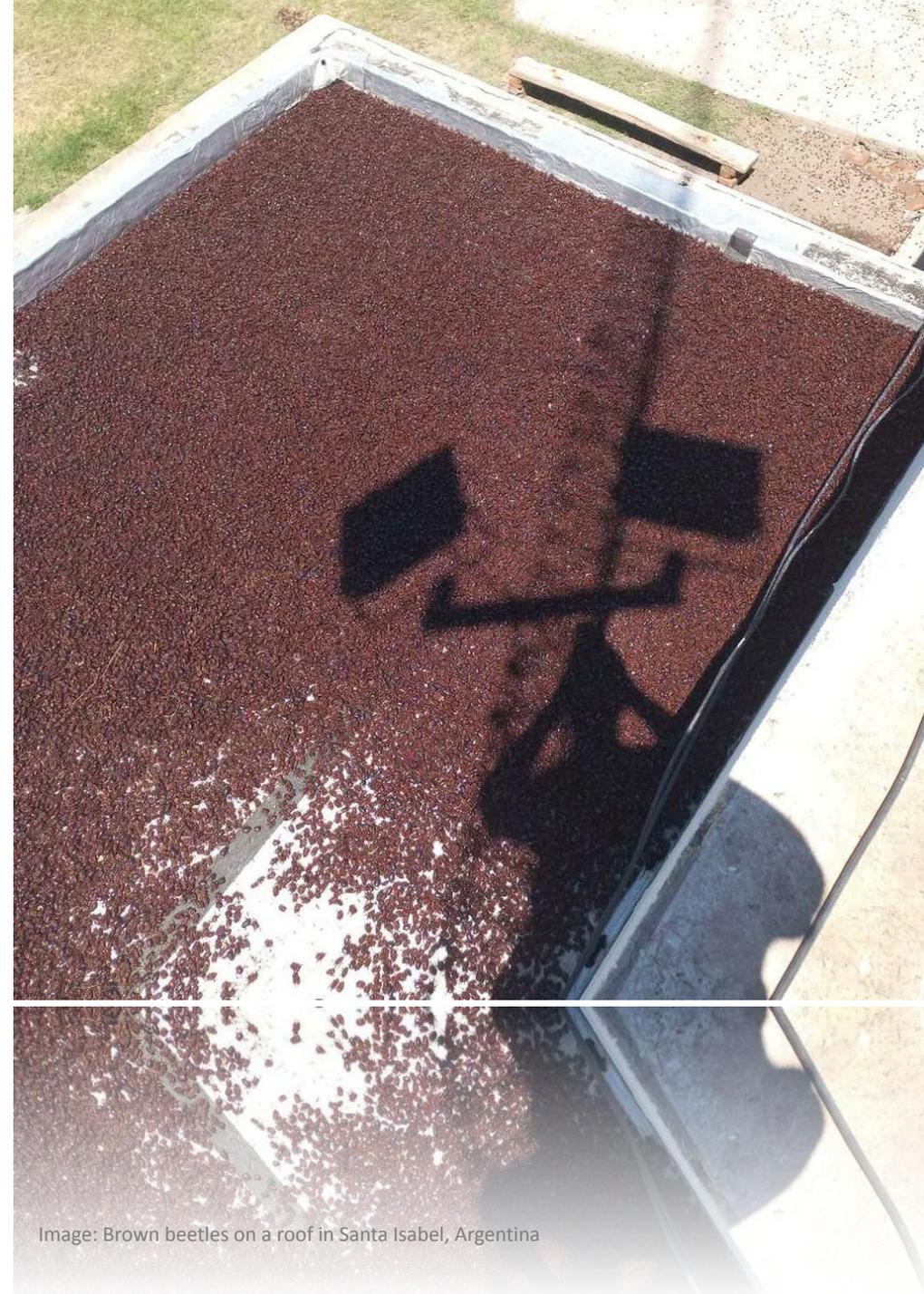
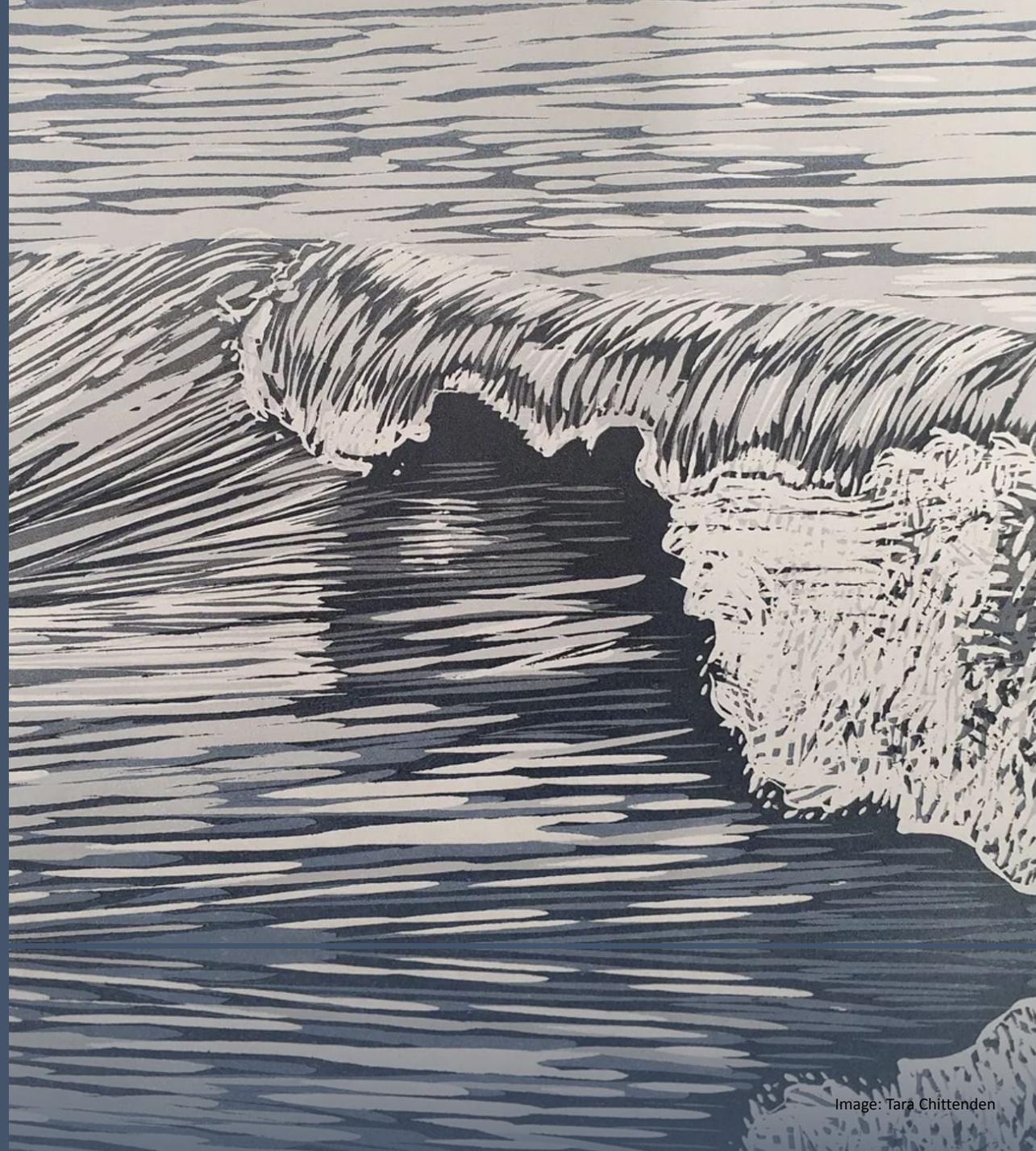


Image: Brown beetles on a roof in Santa Isabel, Argentina

The planetary boundary

Breaching the planetary boundaries, near no-return, global response needed, fragments of hope, emerging alliance, tipping points and social contagion

- stakeholder capitalism has a powerful role to play in net-zero
- how to get humanity back inside the safe operating space
- rethinking boundaries of water governance
- naturally cooled data centers: promising, problematic, both?
- the vital contagion of social change





Breaching the planetary boundary

Chemical pollution has passed the safe limit for humanity and needs a global response.

Source(s)

[Safe planetary boundary for pollutants, including plastics, exceeded.](#) Stockholm Resilience Centre.

[Outside the safe operating space of the Planetary Boundary for Novel Entities](#)

[The nine boundaries humanity must respect to keep the planet habitable](#)

[Legal implications of the circular economy](#)

“There’s evidence that things are pointing in the wrong direction every step of the way,”...“For example, the total mass of plastics now exceeds the total mass of all living mammals. That to me is a pretty clear indication that we’ve crossed a boundary. We’re in trouble, but there are things we can do to reverse some of this.”

Our take

[The first Stockholm Resilience Centre Planetary Boundaries report](#) in 2009 identified nine planetary boundaries based on processes that regulate the stability and resilience of the Earth system; an EU update in 2020 noted four of them had crossed into the zone of increasing risk. The framework is a tool for sustainability governance, which policymakers can use to identify quantifiable limits for benchmarking and legal purposes. Industries can use it to model a circular economy approach to enable them to stay within planetary boundaries; a [pilot study](#) is under way in the textiles industry with H&M clothing.

In a circular economy, driven by the UN and EU policy, new questions of regulation, Intellectual Property, know-how, collaboration, competition, supply chain and contractual risks arise. How does the law and legal practice need to change to support a circular economy? Is there a case for [circular law](#)?

Pairing notes

Why not listen to [“Dig your own hole”](#) by the Chemical Brothers with fresh ears? ‘In the end/You dig the hole you’re in/When you don’t know what you want/you just repeat yourself again’.



It ain't "woke," we need to fix it

Stakeholder capitalism has a powerful role to play in net-zero; is it strong enough to withstand the pressure of current Return on Investment defaults?

Source(s)

[Blackrock CEO letter 2022](#)

[Task Force on Climate Related Financial Disclosures](#)

[Exxon loses board seats to activist hedge fund in landmark climate vote](#)

[Deep Transitions Futures: towards a radical new investment philosophy](#)

"Stakeholder capitalism is not about politics. It is not a social or ideological agenda. It is not 'woke.' It is capitalism, driven by mutually beneficial relationships between you and the employees, customers, suppliers, and communities your company relies on to prosper. This is the power of capitalism..... We focus on sustainability not because we're environmentalists, but because we are capitalists and fiduciaries to our clients."

Our take

The JF team has been particularly inspired by our facilitation role in the [Deep Transitions Futures](#) project. Influential investors from all over putting their necks on the line to create, and back, an investment philosophy to finance transformation - to act as a manifesto and call to action globally. Urgent work whose combined theoretical rigour, creative storytelling and willingness for individual panellists to take risks sets it apart. An another clue, the rise of activist hedge funds, as in the Exxon story above, also shows the surge in power of niche players, shifting dominant power structures and accelerating change. How will the Trustees and investors determine the nonhuman and other entities to whom they owe a fiduciary duty as well as the humans? How will they stand up for investing in a planet for generations not yet born, or reconciling and adjusting for histories of ownership and stewardship, at the expense of today's pension fund holders and beneficiaries. Who gets taken to court by whom in what class actions?

Pairing notes

Play differently with ideas of measurement and value, the [LIX Index](#), an art project by Lucy Kimbell



A river runs through it

The new borderlands of water need to cross spatial and political boundaries, recognise immediate and long term needs and involve those locally affected. Good translation and building common understanding is key to this endeavour.

Source(s)

Water beyond boundaries. The new borderlands of water governance. Stockholm Environment Institute

“There are three boundary issues arising in water governance:

- *The spatial transfer of water both physically and across watershed boundaries, such as water embodied in the goods and services produced by a watershed like rice or coffee;*
- *The inclusion of ecosystem needs and functions in water management; and*
- *The needs of locals who use and value the water along with national priorities of water use.*

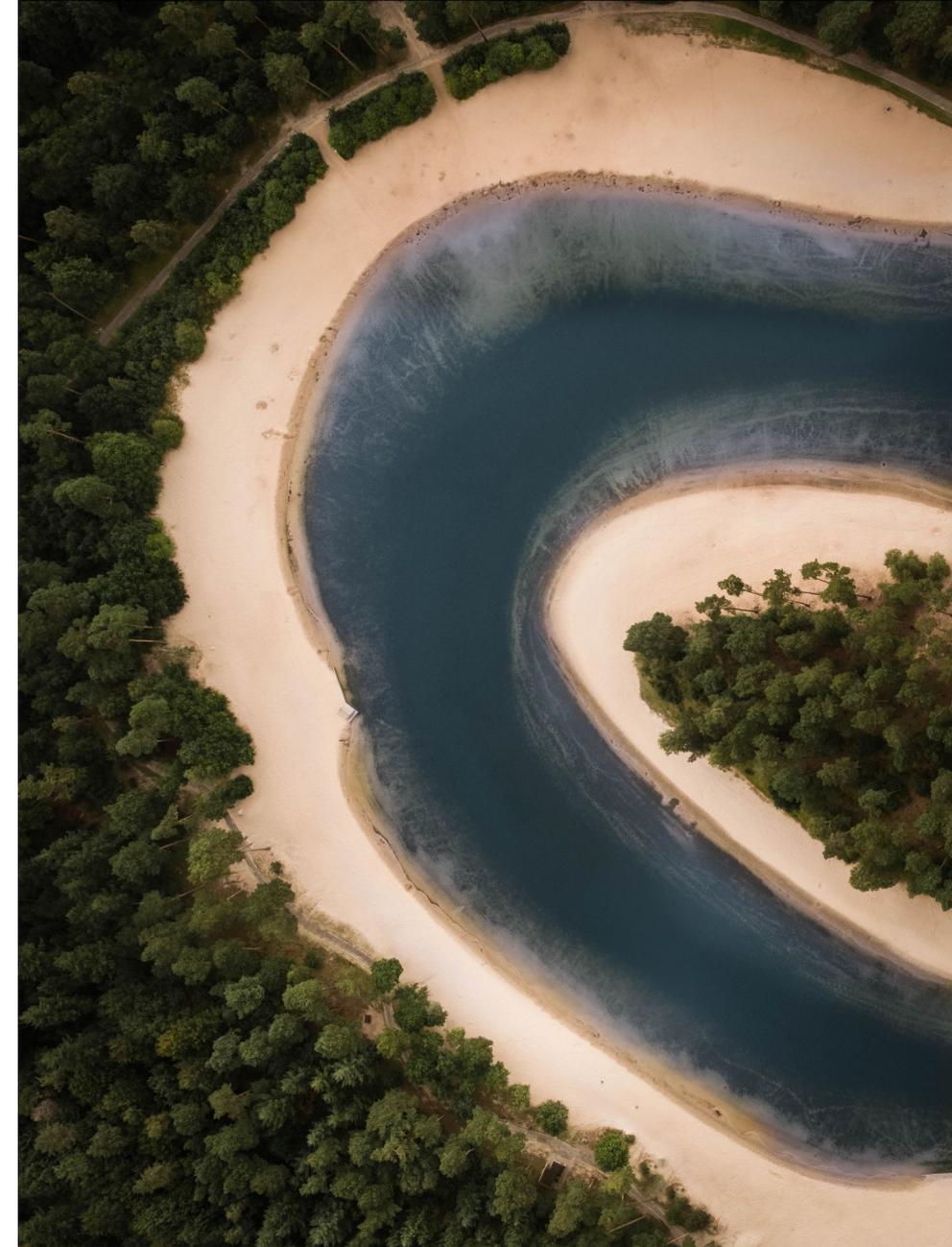
Tensions arise when water governance must address all three boundary-crossing issues at once.”

Our take

Consultation on riverine and coastal decision-making are often exercises in tokenism, despite EU requirements, and complex science can be used to exclude ‘non experts’. Arnstein’s ladder of participation calls for a sharing or transfer of power to citizens for policy making and accountability. How might legal frameworks both accommodate the human ‘non expert’ and move beyond human interests in water to consider the nonhumans in the ecosystem and impacts throughout the catchment area, including land based watershed products such as rice and coffee?

Pairing notes

Participatory research in Sardinia, which faces increased drought and flooding, resulted in scientists and the Youth Orchestra of Sardinia co-producing "musical variations on climate". Their metaphor of a discordant orchestra symbolises how translation of science is essential for harmonious responses to climate change.



Credit: Kees Strieskerk, Unsplash



Pouring cold water on the idea

Data centers cooled with naturally cold water can be placed in more global, brownfield locations - good both for communities and for the environment? Or are they?

Source(s)

[Naturally cold water cooling for data centres](#)

[Nautilus data barges ahead with floating data center](#)

[Back to nature](#)

[Causes and Effects of Thermal Pollution](#)

"We are able to plug in quite sizable computing capacity into very small geographies, which in turn enables us to fit into the edge, as edge computing continues to grow. And the edge is core to what we do. It means we can continue to grow these big regional and global hubs that are more remote and repurpose infrastructure in locations where there are massive exchanges and everything in between... this kind of digital transformation and adoption of new technologies such as water cooling will happen very quickly once it's taken up..."

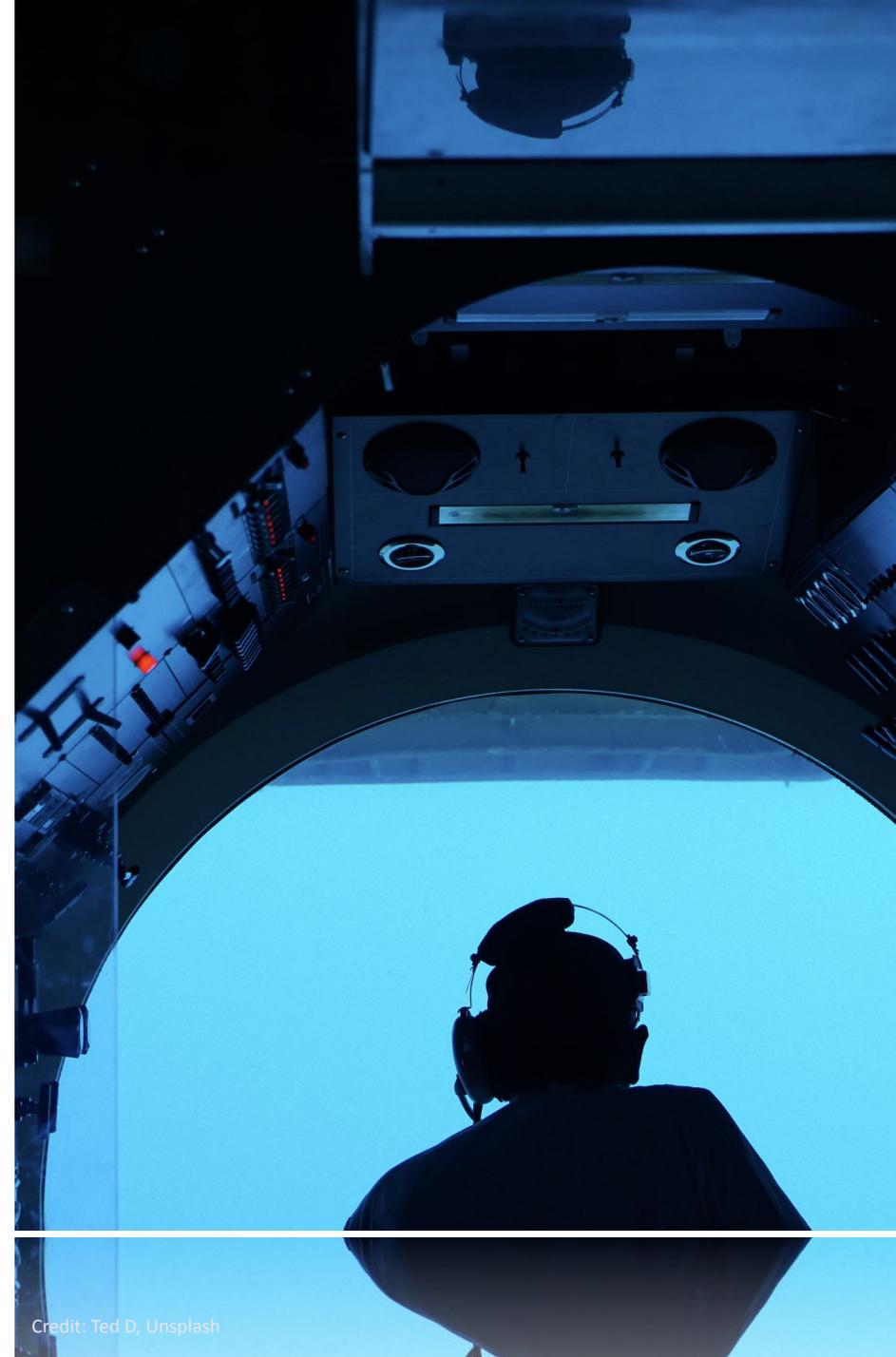
Our take

So much to like, with new jobs and digital infrastructure for communities that might otherwise get left behind. And old barges, which previously hauled gravel and sand are being repurposed. Is that upcycling? Or more - a sense of history which perhaps reassures us that if you can teach an old barge new tricks, there's hope.

But what about the complexity of interlinked systems? The solution to the data center cost-of-cooling problem creates potential thermal pollution elsewhere. What are the implications of returning warmer water to aquatic ecosystems? Could the heat generated be used instead to power local heating or hot water? There's a bigger and growing problem with the huge energy use and e-waste associated with other innovations like cryptocurrencies and NFTs. How can these cascades of impacts be taken into account and mitigated without slowing necessary innovation? As data centers become more portable and plug in, is there a heightened security threat of hijacking?

Pairing notes

Ever wanted to listen to arctic climate change? Now you can, thanks to Michael Begg's ["Light Water is Black Water"](#) supported by the Ocean ARTic project.



Social contagion, bird by bird

The vital contagion of social change triggered by tipping points.

Source(s)

[Operationalising global tipping points towards global sustainability](#)

[Identify a-ha moments to trigger climate action tipping points](#)

[The surprising source of social influence](#)

“The scientists also said the approach [of tipping points] could dispel feelings of helplessness about complex global challenges, stressing that big changes could start in small groups...For example, people putting solar panels on their roofs has been shown to grow across communities from small initial groups via social contagion.”

“If you want to spread gossip — easily digestible, uncontroversial bits of information — go ahead and tap an influencer. But if you want to transmit new ways of thinking that challenge an existing set of beliefs, seek out hidden locations in the periphery and plant the seed there.”

Our take

A [recent study](#) of young people worldwide found that over 50% felt “sad, anxious, angry, powerless, helpless, and guilty” about climate change. In the face of such global complexity, focussing on small changes and peripheral groups feels like using a plant mister to put out a house fire. And our house *is* on fire. Yet what we’re seeing is growing recognition that, counterintuitively, it’s the small, habitual, unheroic and un-grammable moments that build to the big changes. Yes, we need to move quicker. But we’re all more aware than ever that once a contagion starts to spread, it gathers speed and pace at a compounded rate. What’s one apparently small change you or your organisation could make, and what would a climate action tipping point look like to you? Lastly, encouragement from [Anne Lammott](#): “Bird by bird, buddy. Just take it bird by bird.”

Pairing notes

Take a look at the [Chancery Lane Project](#) to see how you can align climate and net zero aligned clauses in your contracts. Listen to [“Inside the Futures Studio: Planet Conscious Drafting for Changing World”](#), a podcast episode by Jigsaw Foresight for The Law Society with Becky Annison.

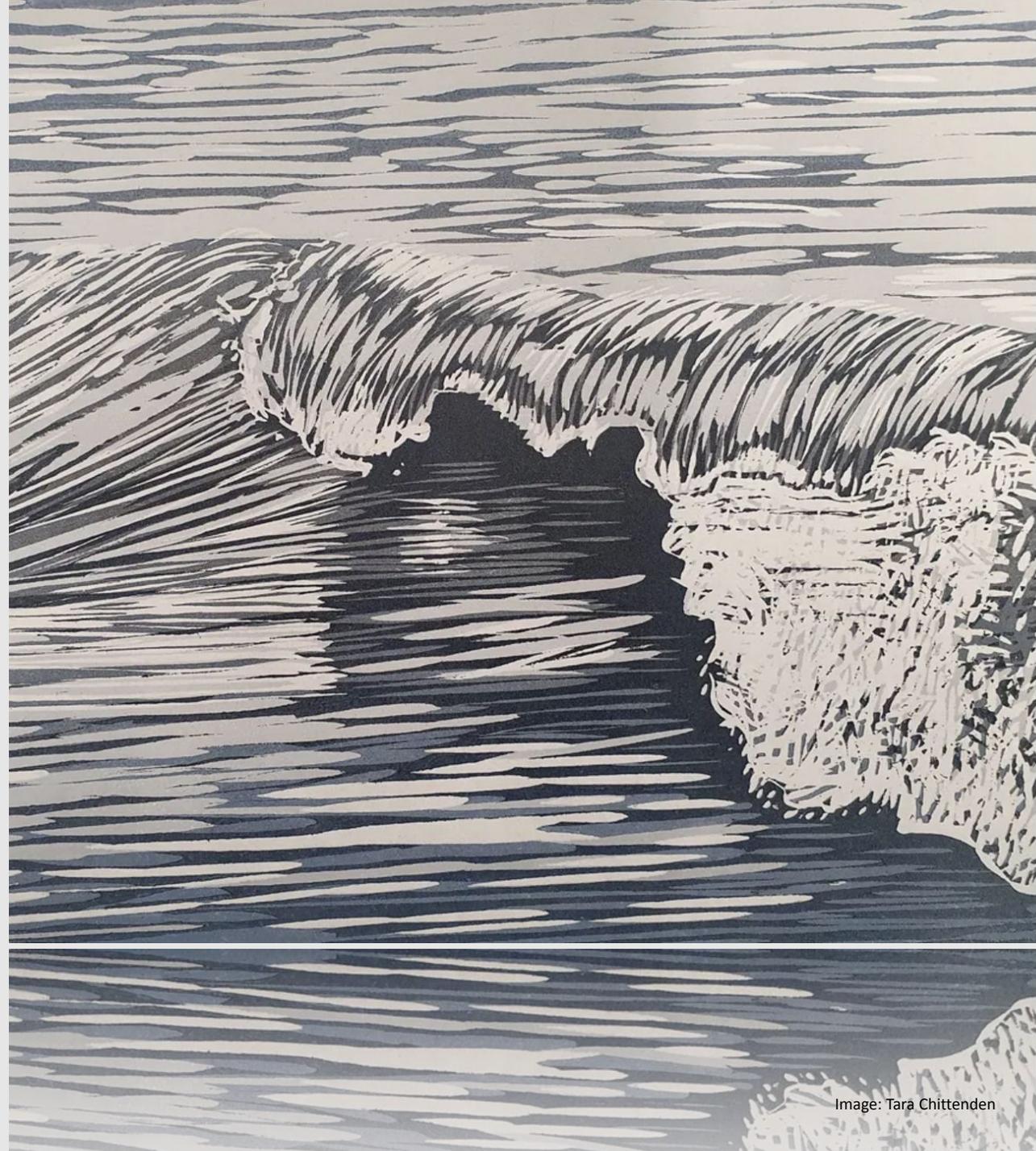


22 Species of Bird. Chromolithograph from Boston Public Library via [Digital Ark](#)

'Calling all bio-philosophers, barristers and interdisciplinary artists'

The role of humanities and the arts, and of ethical (angry) individual and collective action and play in interdisciplinary activism, reconciliation, reimaginings, witnessing

- a vital role for future generations of lawyers
- storytelling to find novel reimaginings of intractable problems



Barrister for a Blue Planet

Earth lawyers are needed more than ever to go on ahead and help humanity find an equitable way back inside the planetary boundary.

Source(s)

[UK government sued over 'pie in the sky' net zero strategy](#)

[Lawyers for nature](#)

[The Global Alliance of Rights for Nature](#)

"We now live in a legal system where an entirely fictional entity that you can create online for £12 in less than an hour [a registered company] has more legal rights and standing than living organisms which pre-date our entire civilisation (sometimes by thousands of years) and which we fundamentally rely on for life."

Our take

Protecting the planet is also about protecting each other: "We know that those who do least to cause climate breakdown are too often the hardest hit," says Katie de Kauwe of Friends of the Earth in the 'pie in the sky' article above. As well as ensuring the rights of nature and nonhuman entities, earth lawyers are often concerned with reducing human inequalities. As we discuss in [the call of the \(re\)wild](#), advocating for a better future for all can mean breaking down distinctions between human systems and natural ones. But only humans have the power to hold one another accountable for our impact on the climate—a vital role for jurisprudence & other governance systems in the future.

Pairing notes

Katie Willingham's poem "[Staying Power](#)" gives us a glimpse of our mislaid priorities: "We study most fervently what's gone, and then / what's going, like the emperor penguin." Earth lawyers have the power to act; to prevent the rest of the planet from going the way of the dodo.



Image: Tara Chittenden

Project Unsong

UNHCR has launched a storytelling project to create a new chapter in the story of humanitarian innovation. Interdisciplinary activist art partnerships give rise to novel reimaginings of seemingly intractable problems.

Source(s)

[UNHCR Project Unsong](#) (do spend some time wandering in the download)

[Waters Rising: A View From Our Backyard](#), Chrysler Museum of Art

[‘A stitch in time: realising the value of futures and foresight’](#), published by the RSA

“[A] a speculative storytelling project ..The worlds produced through [different] mediums create visions for how we might radically reimagine our work with communities, our organizations, and our relationships to each other and the planet....framed across three overarching issues:

- *Nature (restoring and repairing the world by confronting climate change and ecological loss);*
- *Identity (fostering belonging, connection, and kinship);*
- *Power (reimagining and reconfiguring power dynamics and social transformation through decolonizing, localizing, and building solidarity across difference).”*

Our take

Storytelling, art and interdisciplinary approaches are increasingly being taken seriously by serious institutions. That gives us hope, and validates the role of foresight fluency and the power of convening in shaping our future together. In *‘Human Compatible’* Stuart Russell says that *‘To AI we need to add ideas from psychology, economics, political theory, and moral philosophy.’* And, we say, futurists, artists and bio-philosophers too. Bringing lawyers and ethicists into interdisciplinary settings, or inviting others into legal settings can create the porousness of multiple perspectives, to convene spaces of moral imagination, with the ability to *‘hammer ...ideas into a structure that will be strong enough to resist the enormous strain’* (Stuart Russell).

Pairing notes

This UN publication [“Moral Games for teaching Bioethics”](#) is a handy and thought-provoking companion. [“A stitch in time”](#) is an RSA publication on foresight that makes a strong case for multidisciplinary and creative approaches.



JIGSAW FORESIGHT for The Law Society

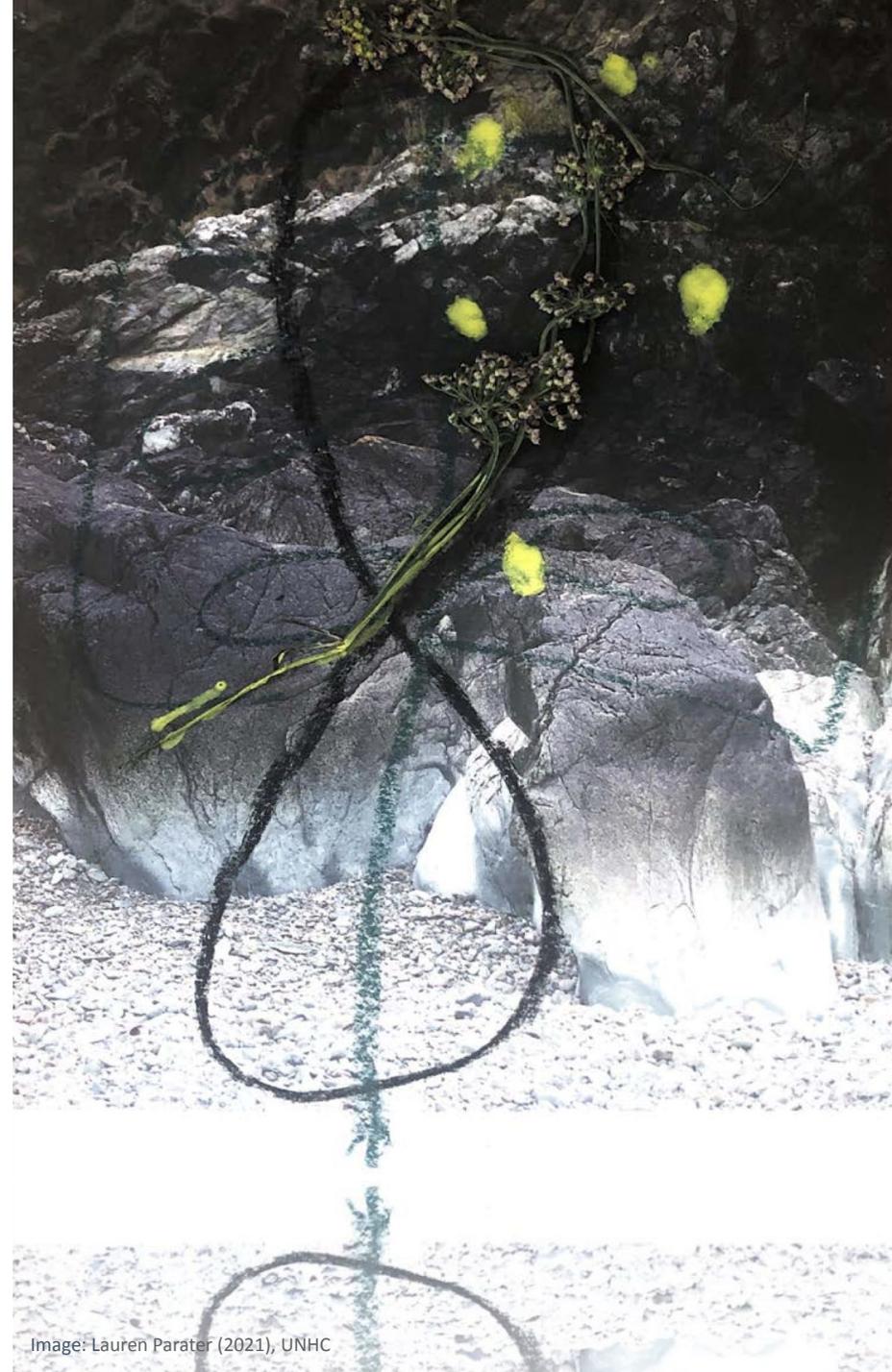


Image: Lauren Parater (2021), UNHC

A close-up, macro photograph of a dandelion seed head, showing the intricate structure of the brown, cylindrical seed pods radiating from a central point. The background is a soft, out-of-focus green, suggesting other parts of the plant or foliage.

From the archive

Extra nuggets from previous postcard collections

AI-Designed Food

The Jigsaw Foresight take:

NotCo farmers are using a patented “Giuseppe algorithm” to create animal-free products. With a long history of consumer skepticism about genetically modified foods, will people be more open to consumables dreamed up by an AI? Eg, these recipes:

Export Bean Spoons In Pie-Shell, Top If Spoon and Whip The Mustard
Chocolate Pickle Sauce
Whole Chicken Cookies
Cabbage Pot Cookies
Crockpot Cold Water

Quotes:

“The company said that its machines could replicate the taste, look, and nutritional value of meat and dairy thanks to Giuseppe’s algorithm, which identified chemical compounds found in animal products and suggested matching plant molecules. Once Giuseppe identified a recipe based on those matches, it was then reviewed by a team of scientists and three in-house chefs who provided “human feedback.”

“We are not a food company, we are a tech company,” NotCo founders have repeatedly said in interviews.”

Required Reading:

[Foodtech startup NotCo just became a unicorn and Chile’s dairy farmers are furious](#)

[AI invents new dessert recipes](#)

[This scientist made an AI that invents recipes and the results are hilarious](#)

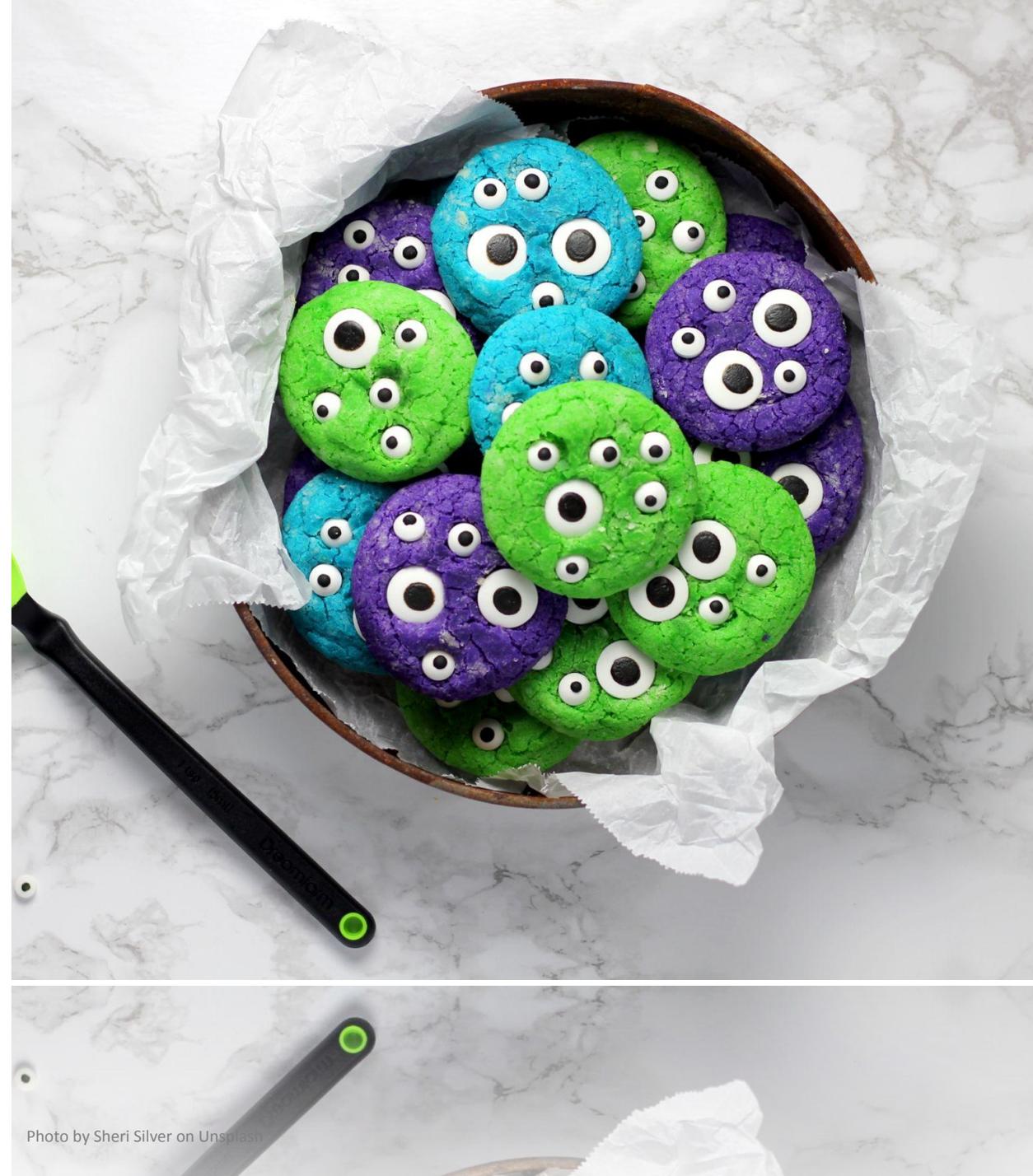


Photo by Sheri Silver on Unsplash

The tech cult of youth

Source(s)

[Who wants to live forever? Big tech and the quest for eternal youth](#)
[Alexandra Grant refuses to dye grey hair](#)

Nub and gist

The tech investors and entrepreneurs, including 27-year old Celine Halioua, seeking a “cure” for aging.

Quotes

“The quest for eternal youth may not be new, but it is now bankrolled by some of the wealthiest individuals and corporations on Earth... Google founders Sergey Brin and Larry Page helped launch Calico, a Google subsidiary focused on combating ageing, in 2013.”

The JF take

We confess, we find it hard to read about Celine Halioua and not think about the much-tech-intoxication-followed-by-much-egg-on-face scandal of Theranos. That prejudice aside, This ageing-as-disease makes us wonder if, as biotechnology develops, “natural” ageing will become socially unacceptable, like smoking, obesity or being unvaccinated. Already, figures like Alexandra Grant (Keanu Reeves’ girlfriend) are these oddballs of the celebrity world - deemed countercultural for letting their hair be its natural colour. In this youth obsessed culture, how do we give space for variety of age, experience and timeframe? How will biotechnology help or hinder us here?

Thank you, O elegance of age, for persevering into grace. Let us embrace the grey.



Image: Keanu Reeves with his staunchly grey-haired girlfriend. Daily Mail Online.





What has the starfish ever done for us?

Source(s)

[Brittle starfish shows how to make strong ceramics](#)

[Ultrasound-activated ciliary bands for microrobotic systems inspired by starfish](#)

[Starfish reveal the origins of brain messenger molecules](#)

Nub and gist

The humble starfish has inspired a range of innovations, from ceramics to synthetic cilia and new insights into neural function. New appreciation for all of life is increasing biomimetic design.

Quotes

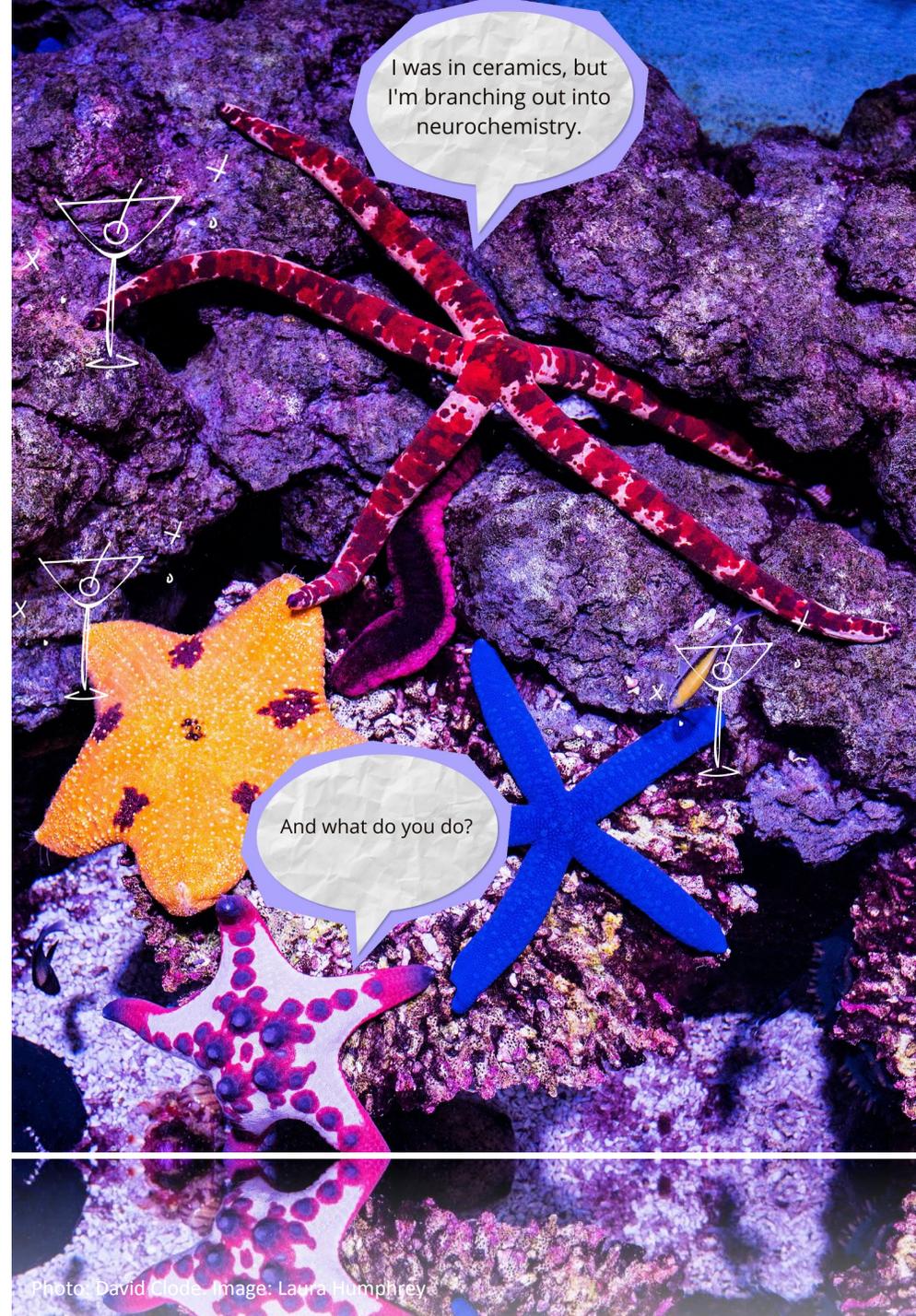
"Nature exhibits tremendous creativity in improving the organism's abilities in various contexts such as strength, sensing, and self-defense."

"Our research not only provides us with fascinating insights into the evolutionary origins of brain chemicals that affect how we feel and behave. Investigating neuropeptide evolution may also inform the development of novel drugs for therapeutic applications."

The JF take

More than one international research project centres on a 'beautiful, brainless, brittle star' with fascinating results. The wonders of creativity in nature power both evidence and imagination. A surge of bio-inspired innovation is a result. And, thinking of [#kidneygate](#), what if the starfish is so commonly used in experiments that implications arise for Intellectual Property Rights if anyone has patented starfish DNA / attributes?

Thank you, 'beautiful, brainless, brittle star', for the fertile possibilities you open up, and thank you multidisciplinary teams for your inventiveness, focus, and attention.



Bio-ennale

Source(s)

[Refuge for Resurgence at La Biennale di Venezia 2021](#)
[Indigenous Knowledge and Respectful Design](#)

Nub and gist

It's past time for thanksgiving to include gathering around an interspecies table to acknowledge and celebrate our gratitude for the interdependence of all life.

Quotes

"As part of an ongoing mission to explore hope through crisis towards a more-than-human future, you are invited to a dinner table around which multiple species gather as equals. In response to the Venice Biennale's theme – 'How Will We Live Together?' – Refuge for Resurgence considered how all forms of life on earth might come together to celebrate their ecological interdependence in a post-Anthropocene world — a symbolic home where all species can prosper with resilience, adaptation, and hope."

The JF take

Is there anything more equalising than sitting around a table together to eat and celebrate? Which also brings to mind the blessing of a pop of blue delight from "[New Zealand's thrillingly blue mushroom](#)," and Vulcan's respect for Infinite Diversity in Infinite Combination (IDIC). Yet some Indigenous scholars argue that natural systems intelligently respond to damaging human acts by making the world less liveable for us. Maybe we can't assume we're welcome at the interspecies table?

Thank you, botanic friends, for having me at your table and reminding me of the web of life of which I'm part.



Leafy love letters

Source(s)

When you give a tree an email address

Nub and gist

A program designed to make it easier to report problems became a channel for love letters between humans and trees.

Quotes

“My dearest Ulmus,” the message began.

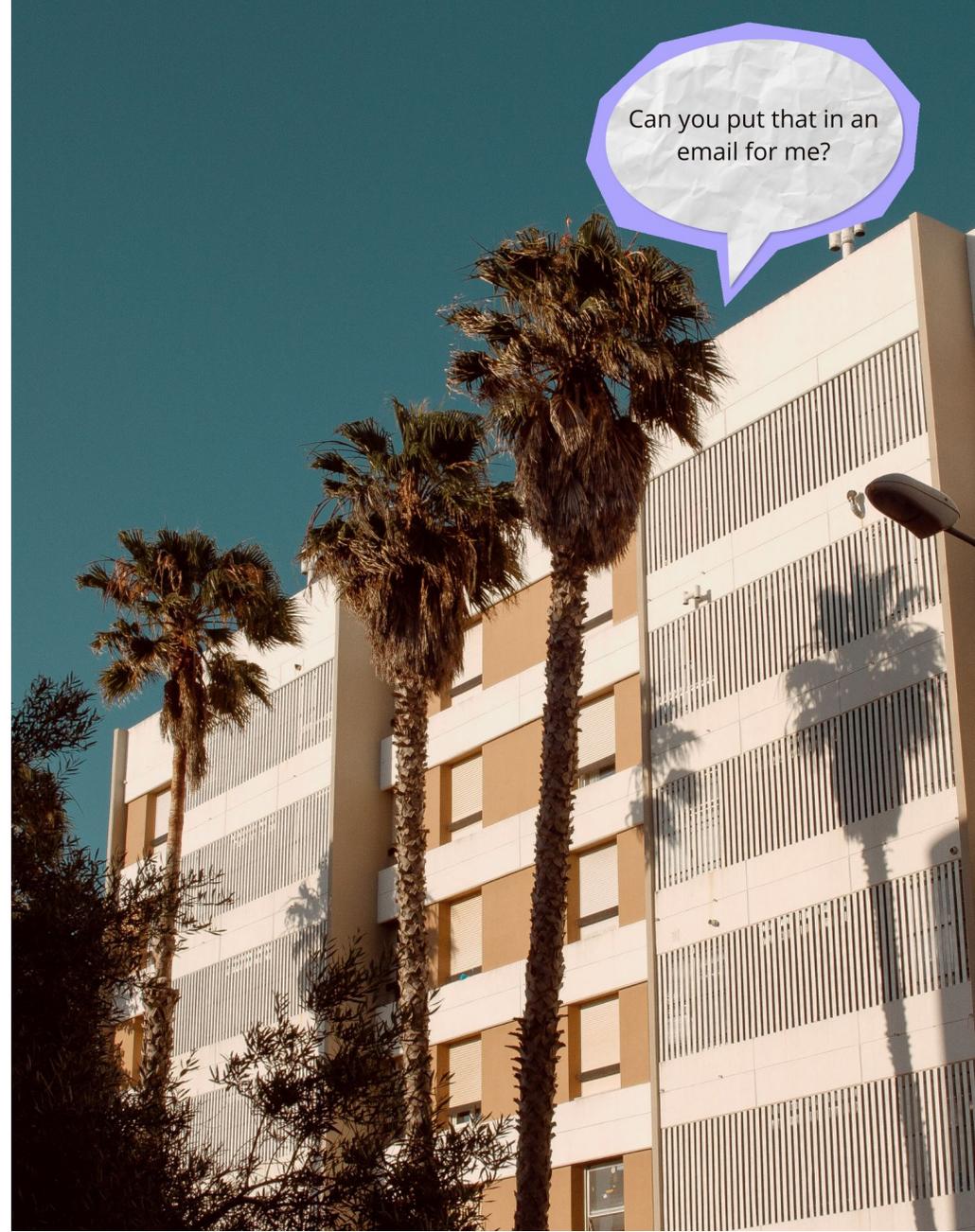
“As I was leaving St. Mary’s College today I was struck, not by a branch, but by your radiant beauty. You must get these messages all the time. You’re such an attractive tree.”

This is an excerpt of a letter someone wrote to a green-leaf elm, one of thousands of messages in an ongoing correspondence between the people of Melbourne, Australia, and the city’s trees. Officials assigned the trees ID numbers and email addresses in 2013 as part of a program designed to make it easier for citizens to report problems like dangerous branches.”

The JF take

This reminds us of another article which made it into our October deck about the loneliness houseplants may experience as we go back to the office. By contrast, there is now an option to leverage an office tool like email to express gratitude to the trees that sustain life on this plant. We also love that a system set up for registering complaints became hijacked by love. How can we hijack more for love, fun, beauty in our systems?

Thank you, civil servants, for your inadvertent brilliance in setting up a communication link for root and branch and crown and leaf appreciation.





Farewell, oldest friends

Source(s)

They carry us with them

Nub and gist

Trees are on the move more than ever before, displaced by the effects of climate change. Even that which seems immovable is becoming ephemeral.

Quotes

“What do these changes to our forests mean? What are the trees taking with them and what is arriving in their wake? What is the relationship between the trees’ migration and the ecological systems and human communities that they are leaving behind? What does the movement of these beings reflect back to us in the present and foreshadow for the future? How do we bear witness? How do we bid farewell?”

The JF take

Like Birnam Wood on the move in Macbeth, these trees which should be a signal of stability are instead a harbinger of disaster to come. With COP26 being deemed by many a failure for its tepid climate resolutions, particularly on coal, will we heed the warning in time? For more on timescale, see [Gratitude & grief in guardianship](#).

Thank you, ancient trees, for reminding us that everything can adapt to change.



Stills from *They Carry Us With Them* by Chelsea Steinauer-Scudder and Jeremy Seifert

#ecosystems #charismatic-species #invasive-species



JIGSAW FORESIGHT for The Law Society



Gratitude & grief in guardianship

Source(s)

[Ecological 'holocaust': Women saving India's Western Ghats forest](#)

[The Church Forests of Ethiopia](#)

[The Good Ancestor: How to think long term in a short term world](#)

Nub and gist

In India, a group of women are guardians of a pocket of rainforest, keeping it as an enclave of biodiversity in a changing landscape. Meanwhile in Ethiopia, church forests have become pockets of biodiversity in a sea of agriculture.

Quotes

“When I came here plastic was still not a part of our culture. I remember when Wolfgang found the first plastic bag in the river, he said: ‘civilisation has arrived’.”

“These church forests are the last remnants of a once-expansive cover of native trees. Over the past century, 90% of Ethiopia's old forests have been lost.”

The JF take

The people in these stories are modelling one of the ways we might best express our gratitude for living systems - by establishing close, listening relationships with it. This stewardship-not-ownership approach almost always comes from indigenous / non-western knowledge and timescales. Reading about these incredible environments and the people stewarding them, we noticed that one of the sacrifices of guardianship is grief. Grief that those in power do not lend their weight to the issue, grief at seeing the plastic bags arrive and the deforestation advance. Yet they are modelling a sacred, ancient gratitude towards living systems. How can we model this in our own unique contexts?

Thank you, bio-guardians, for modelling deep listening and taking the long view in the now.



Photo: Manjunath Kiran/AFP

#indigenous-insight #Earth-guardians #biorelations



JIGSAW FORESIGHT for The Law Society

Musical Pairings

A selection of sounds for Light and Shadows. Listen to the playlist on [Spotify](#)

1. **“Always Returning” from Apollo: Atmospheres and Soundtracks (1983) - Brian Eno**

This album was originally intended as a soundtrack for a documentary on the Apollo space program. Eno sets the tone of this postcard collection with this ambient track evoking returning light and shadows.

2. **“Gorse” from Spell Songs II: Let the Light In (2021) - Spell Songs**

A natural pairing for the “Gorse-tromony” postcard. This album was inspired by The Lost Words, a book from authors Robert Macfarlane and Jackie Morris who sought to restore the words of our natural habitat that are falling out of use.

3. **“Invocation” from Light Water is Black Water (2021) - Michael Begg**

Pairs with the “Pouring cold water” card. Ever wanted to listen to arctic climate change? Now you can, thanks to Michael Begg’s [“Light Water is Black Water”](#) supported by the Ocean ARTic project.

4. **“Water No Get Enemy” from Expensive Shit (1975) - Fela Kuti**

Pairs with the “Elephant takes river to court” card. Legendary afrobeat artist Fela Kuti draws on a Yoruba proverb to make connections between the natural world and political power.

5. **“Death of a Train” from For the Beauty of Wynona (1993) - Daniel Lanois**

Pairs with “The obvious thing to do” card. This song speaks of things we have to leave behind to make room for the next thing.

6. **“Weed Killer” from Little Bastards (2009) - The Kills**

Pairs with the “Plant Snipers” card. Lyrics such as - ‘You were once, the rose I wanted /You were once, a rose to me/You’ve become, a twisted tree now’ - seem to align so well with the problem of invasive Miconia plants...

7. **“Dig Your Own Hole” from Dig Your Own Hole (1997) - The Chemical Brothers**

Pairs with the “Breaking the Planetary Boundary” card. Listen with fresh ears. ‘In the end/You dig the hole you’re in/When you don’t know what you want/you just repeat yourself again’.

8. **“My Friend the Forest” from All Melody (2018) - Nils Frahm**

Pairs with the “Gratitude and Grief in Guardianship” card. A beautiful piano piece recorded with the creaks and crackles of the wooden instrument that work as an auditory nod to the forest.

Other sounds for your interest: [Paintball FX](#)

A mycologist meets musician to make [mushroom music](#):

A collaboration between climate change scientists and the [Youth orchestra of Sardinia](#)

Enjoy this eclectic selection of sounds, effects and music and see where your mind wanders.

Dr. Peter Humphrey

Thank you for reading.
April Postcards: Network Strength

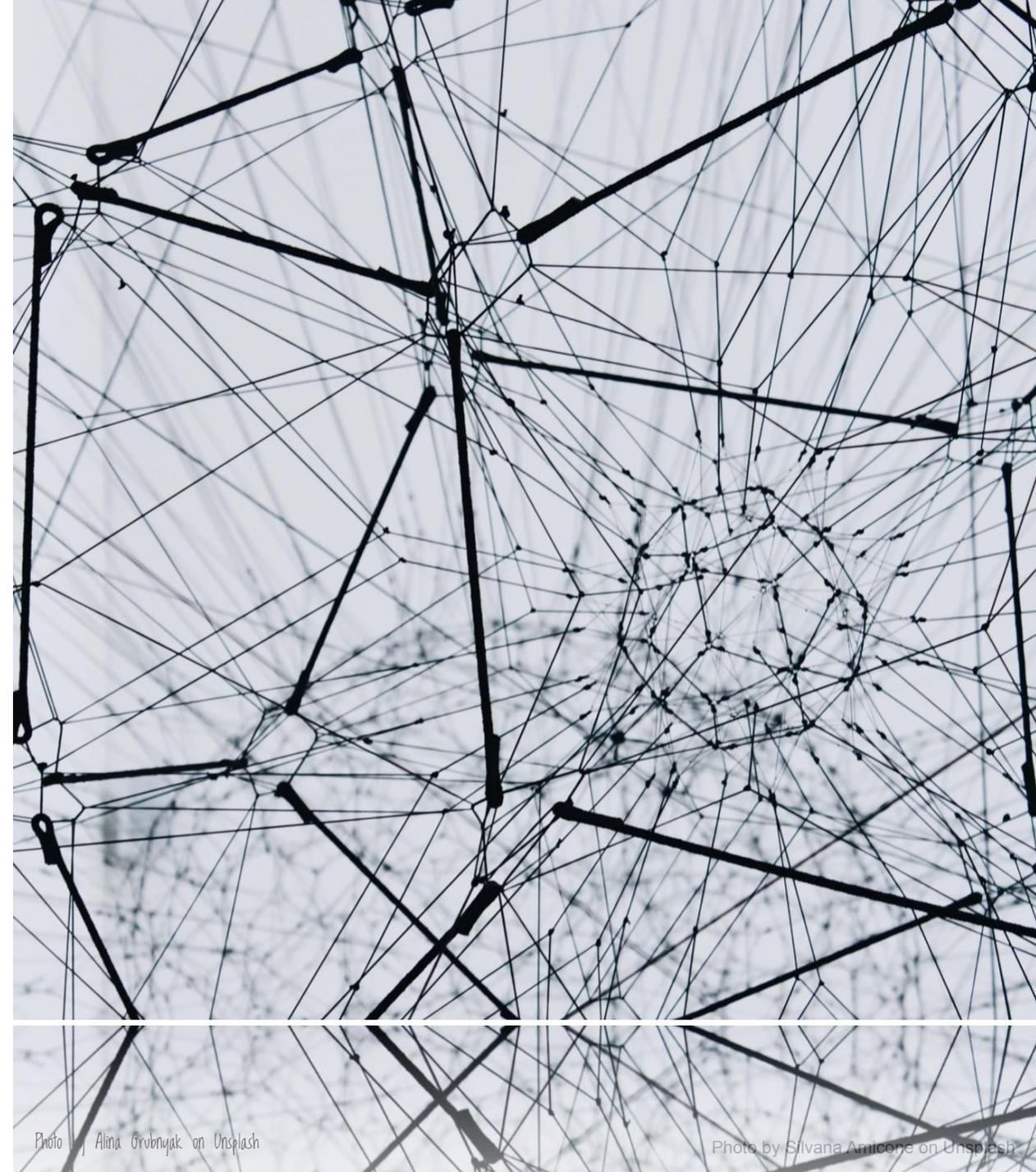


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We are honoured to be keynote speakers at the Henley Forum, where we'll be demonstrating the power of foresight to shape connection in the Next Normal of work. Join us!

The Henley Forum 22nd Annual Conference
Sustaining and Securing Connections
(29-30 March 2022)

KEYNOTE: Using foresight in shaping the future workplace

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Jigsaw Foresight: companions in strange-making

Jigsaw Foresight is a 15 year partnership between Dr Wendy Schultz of Infinite Futures and Victoria Ward of VWL.

Victoria and Wendy built Jigsaw Foresight from deep foundations in academic futures research, practical business strategy, organisational change and storytelling, and wide experience in private sector, policy-making and non-profit team building.

We are **agents, stewards and convenors of gracious disruption** on a personal, collective and planetary scale, taking on knotty problems and worthwhile challenges in deep partnership with our clients.

Our distinctive approach combines research-based expertise across foresight, storytelling, change and knowledge management with a hands-on approach and a commitment to building foresight fluency in whomever we work with. This is supported by a research and creative studio which distils complex ideas and challenges into shareable artefacts that inspire change and action.

Our networks are eclectic, extraordinary and great companions on the journey.

Things we do well and enjoy include:

- Small and large-scale **participatory approaches** to complex transformations.
- **Scanning & research** on selected themes that can be activated as a one-off or on-going basis to support change in teams, organisations, networks or sectors or global movements.
- Building **foresight fluency**, and collaborative scanning capabilities in client teams.
- Supporting the development of collaborative, convening and storytelling practice, a **'remotely human'** personal presence, and peer-to-peer change networks.
- Partnering and **facilitation**.
- Masterclasses, webinars and **keynote speeches** by Dr Wendy Schultz and Victoria Ward.
- **Creative direction and production of assets** (incl. visuals, podcasts, films, learning materials) that carry insight from one place and person to another.
- **Scanning subscriptions** that provide recipients with a curated glimpse over the horizon to the emergent changes impacting people, culture, ideas, organisations and society.

Follow us on [LinkedIn](#)

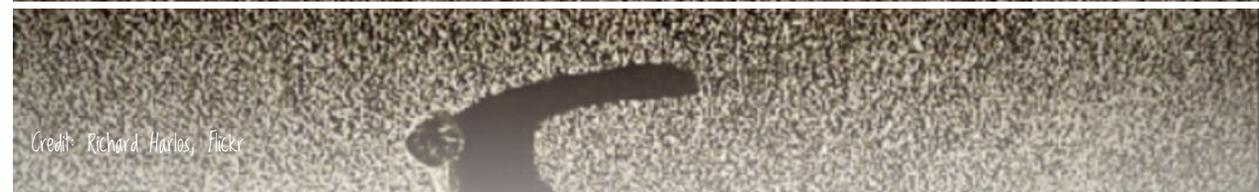
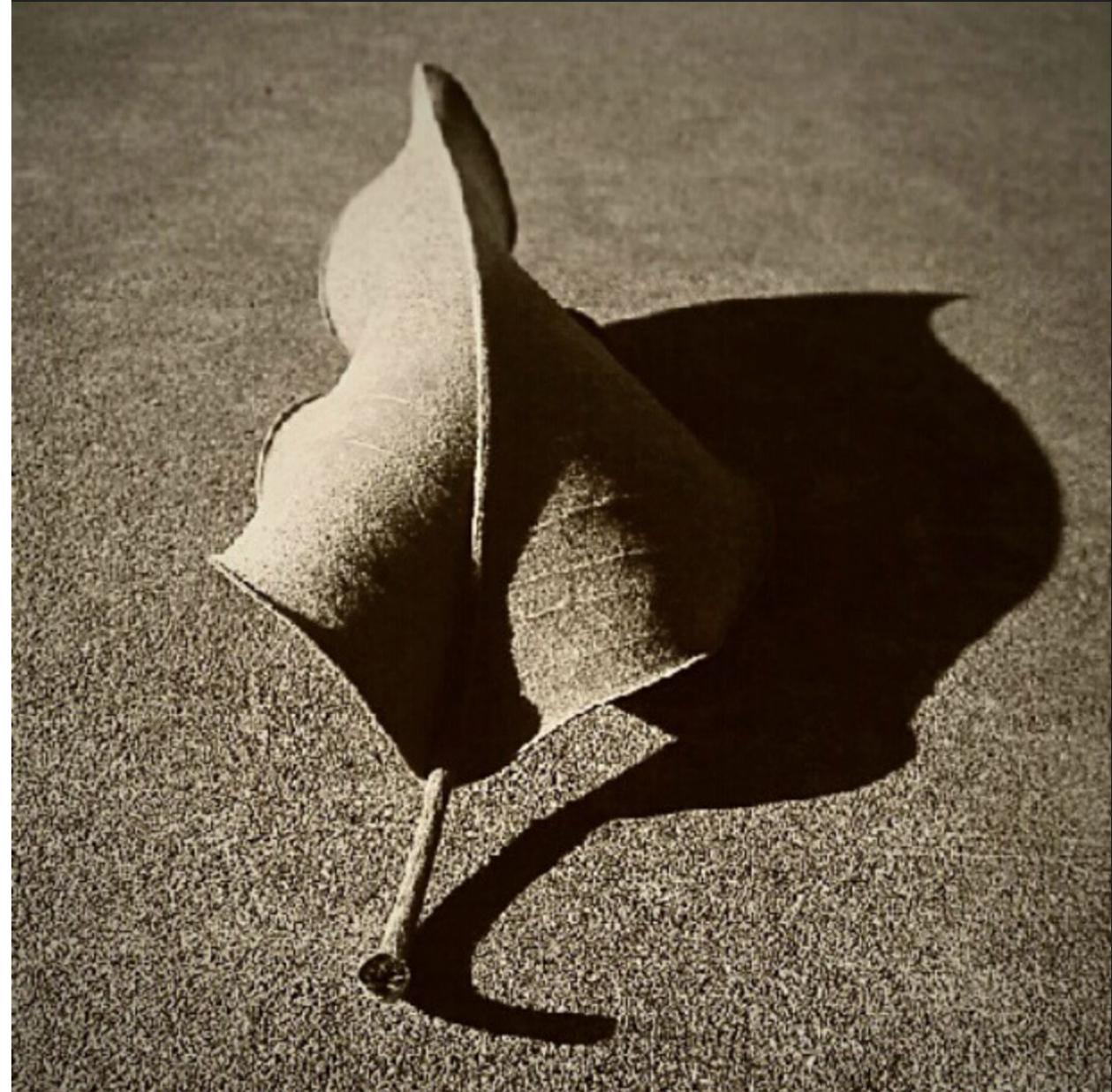
Talk to laura@victoriaward.ltd or james@victoriaward.ltd if you'd like to know more about our services, our ongoing scanning capabilities & subscriptions, or to be added to our mailing list.

“As Jung has pointed out, every solid object has its shadow side. The shadowy parts of a mind are an essential part of its form. To deny one’s shadow is to lose solidity, to become something of a phantom. Self-deception about it may increase our confidence, but it surely threatens our wholeness.”

Wickedness, A Philosophical Essay |

Mary Midgley, Routledge, 1984

Accompanied, if you like, by Brian Eno’s [‘Always Returning’](#)





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