

RSA Journal

Issue 4 2021

Environmental justice

Lord Nicholas Stern on why society needs a radical new model for global economies in order to reach net zero

Josie Warden explores regenerative thinking, a mindset that can help us build a more equitable future for all

Andy Haldane, the RSA's new Chief Executive, shares his vision

RSA



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Anthony Painter



“COP26 needs to be a turning point that precipitates the whole-system change we need”

As this issue of *RSA Journal* goes to press, world leaders are gathering in Glasgow for the UN Climate Change Conference, COP26. Climate change is the big existential challenge of our time and must be matched by the scale of our global response. This summit needs to be a turning point that precipitates the momentum for the whole-system change that we so urgently need. Many of those within the RSA's global network of Fellows are already active and engaged in these issues and with wider issues of environmental degradation.

In this issue we explore the bold thinking and radical action needed at this critical juncture. Lord Nicholas Stern, former World Bank economist and author of the 2006 game-changing *The Economics of Climate Change: The Stern Review*, offers his expert insights on how we set about realigning world economies and make the seismic shift needed to our economic models. He also offers some hope.

At the RSA we are acutely aware that the goal of net zero carbon by 2050, as stated in the 2015 Paris Climate Agreement, is not enough by itself and that we need to rethink our economy and the way we consume. While all of our work is informed by this, one of our core programmes, Regenerative Futures, brings together people and ideas with the aim of helping to create a world where communities harness their potential to be sources of health and regeneration for all life on earth. The RSA's Josie Warden sets out the need for a change in mindset and what regenerative thinking means in practice.

In his piece, Daniel Christian Wahl further explores the concepts of regenerative design and development. Arguing that we face the enormous task of nothing less than the redesign of the human impact on Earth, he suggests what we can do personally to reshape cultural thinking, and concludes that a mindset

of “stubborn optimism” holds the key to all our futures on the planet.

Bangladesh has one of the smallest carbon footprints per capita, yet the country is one of the worst affected by climate change. With 52% of land under water and floods becoming more and more common, its population is increasingly at risk from climate disasters. Runa Khan, founder and Executive Director of the non-governmental organisation Friendship, writes about climate justice and her organisation's efforts to mitigate suffering in Bangladesh through healthcare as well as education, giving voice to the people who suffer disproportionately from climate crises.

Also on the subject of education, RSA Fellow and teacher Joe Hall argues that a radical rethink of schooling is needed to empower young people, encourage critical thinking and give them the confidence and agency to shape a more equitable future for society in the world they will inherit. We will be returning to these themes when we launch our Fair Education programme in 2022.

With public appetite for climate action reaching new heights, positive momentum needs to be matched by the actions of governments, which in so many cases seem to lag behind public sentiment. For this reason, the political landscape is changing as voters increasingly give green political parties – no longer regarded as fringe – a mandate to shape policies at the very heart of our governments. Jamie Kendrick and Beatrice White of the *Green European Journal* write about the rise of this phenomenon in European politics, and how green parties in power might influence the future.

In September we welcomed the RSA's new Chief Executive, Andy Haldane. And in this issue he sets out his vision of the RSA and how the organisation can help to address the major challenges of our times. ■

Anthony Painter is Chief Research and Impact Officer at the RSA

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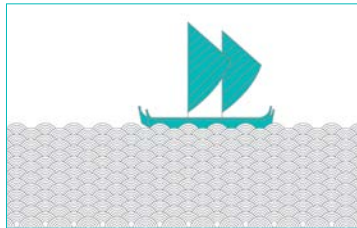
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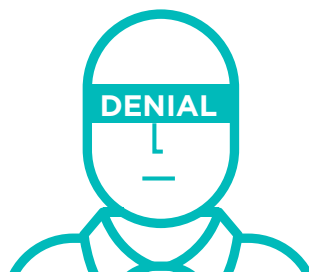
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Periscope

- 1 Sixty per cent of all deaths due to tropical cyclones between 1980 and 2000 took place in Bangladesh (page 16).
- 2 Scottish Enlightenment philosopher David Hume described the appeal of horror and tragic fictions as “an unaccountable pleasure” (page 25).
- 3 At the height of the American presence in Afghanistan there were more than 100,000 troops in the country (page 35).
- 4 In the 2021 German elections 23% of people under 25 voted Green, compared with 7% of people over 70 (page 36).
- 5 The UK Labour Party recently presented a bill in parliament to introduce 'sustainable citizenship education' in schools from 2023 (page 40).
- 6 To this day, 80% of global biodiversity is still found within 'hot spots' nurtured by our distant ancestors (page 43).
- 7 Around 90% of the world's goods are transported by container ship (page 47).
- 8 Since 2008, rising sea levels and natural disasters have displaced more than 150,000 Fijians, just under 17% of the population (page 48).
- 9 Compostable, plastic-free food packaging can be created using agricultural waste from palm trees (page 49).
- 10 While 93% of Europeans believe that climate change is a serious problem, 75% also believe that their governments are not doing enough to tackle it (page 50).



Essential workers face the ‘security trap’

In the light of the pandemic, is the government doing enough to support our key workers?

From food to health to energy, care and justice, our society’s basic needs cannot be fulfilled without the input of key workers, something that has been drawn into particularly sharp focus during the pandemic. Yet research reveals that many key workers remain undervalued, in poor conditions or low paid.

According to a report by the RSA, *Key workers in the pandemic: Security traps among Britain’s essential workers*, many

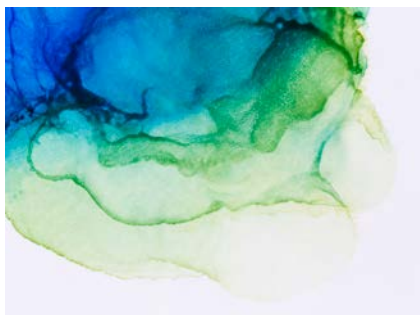
key workers have been pushed into undesired trade-offs when balancing their work, wellbeing and family. These ‘security traps’ come from the nature of key workers’ relationship to work and the wider economic system. The report also argues that often low-paid care or supermarket workers, alongside those in education or emergency services, should continue to be treated as critical ‘human infrastructure’ which enables the wider economy to thrive.

The report concludes that tackling economic insecurity in key workers should be a public-policy priority. This would benefit not only these workers but the rest of society through better services and increased productivity. It puts forward a comprehensive six-point plan that would enable the government to boost the economy and to ensure all key workers are properly supported to enjoy secure, healthy, fulfilling lives both at work and at home.

■ To download the report, visit <https://bit.ly/3aRObXp>

Poll

Blues are turning greener



There is little evidence of a left-right 'culture war' when it comes to environmental issues, according to findings in the RSA's recent poll of British voters' hopes and expectations for the COP26 summit. Voters on both left and right strongly support action, and climate denial is regarded as completely fringe. However, support for the type of action to take does vary on political lines.

There is a 'British bounce' among Conservative voters for UK leadership on the climate crisis. This effect vanishes

for Labour voters, who tend to support action on the same level whether it is framed within the context of the UK or globally. This 'British bounce' is so strong that Conservative voters become even more likely than Labour supporters to back climate action.

Seventy-four per cent of Conservative voters think the UK should play a leading role at COP26, while 67% think the conference will be a big test of the Prime Minister's leadership, and 46% think it will affect how they vote at the next election. A further 46% say that COP26 will have an impact on the lives of ordinary Brits.

Twenty-six per cent of Conservative voters have "definitely" or "likely" seen their home or garden damaged by climate change. Sixty-five per cent say they have seen the effects of climate damage globally, while 56% say they have seen damage in the UK.

■ To find out more, visit [thersa.org/reports/tackling-climate-crisis](https://www.thersa.org/reports/tackling-climate-crisis)

Arts in spotlight

Trinity College London

Trinity College London, the leading international exam board and independent education charity that provides assessments in music, drama, combined arts and English language, has accelerated its existing plans to offer a full digital suite of performing and creative arts assessment. Head of UK Arts Development, Annabel Thomas FRSA, explains: "Digital options mean that our arts assessments can be delivered remotely, reducing our carbon footprint and increasing equality of access. We have also seen a rise in creative opportunities through our Arts Award programme, and it is clear that digital outreach is not only great for the environment, but can broaden horizons in previously impossible ways."

■ To find out more, email annabel.thomas@trinitycollege.co.uk or visit <https://bit.ly/3b8UWV8>

660k

The number of key workers in the UK claiming Universal Credit, according to the RSA's report, *Key workers in the pandemic*. Low-paid but critical workers in sectors such as care, often women who also have to factor in expensive childcare costs, find themselves caught in the trap that the more they work, the less they are paid in Universal Credit. So, despite actively wanting to work, the gains from working more are minimal.

■ To find out more, visit [thersa.org/reports/key-workers-pandemic](https://www.thersa.org/reports/key-workers-pandemic)

34%

The percentage of people living with multiple long-term health conditions who have low economic security, compared to 23% of people without any long-term health conditions. The figures come from the RSA's report conducted in partnership with Guy's & St Thomas' Foundation, exploring the relationship between economic security and health.

■ To find out more, visit [thersa.org/reports/economic-security-and-long-term-conditions](https://www.thersa.org/reports/economic-security-and-long-term-conditions)

803k

This is the number of care and supermarket workers who are paid less than the Real Living Wage, which is voluntarily paid by some 7,000 UK businesses and currently stands at £10.85 per hour in London and £9.50 per hour for the rest of the UK. The RSA's study of key workers during the pandemic found that these figures applied to 45% of all supermarket workers and 31% of care workers.

■ To find out more, visit [thersa.org/reports/back-to-work](https://www.thersa.org/reports/back-to-work)

Agenda

The RSA at COP26



As a global organisation committed to social change, the RSA was a natural fit for much of the activity at the COP26 summit in Glasgow. With Regenerative Futures at the heart of our activity, we utilised our COP26 Hub at Strathclyde University Union to engage a wide range of attendees, through events, drop-in sessions with Fellows and staff, and outreach. This included Fellow-led projects such as Walk2COP26 and an online event with Melanie Goodchild, founder of Turtle Island Institute, joining us from Canada.

■ To find out more, visit thersa.org/regenerative-futures/our-cop26-community

RSA Student Design Awards

The RSA Student Design Awards Competition 2021-22 has launched. This annual, open innovation competition challenges students and recent graduates to apply their skills and creativity to a set of compelling briefs that tackle pressing real-world social and environmental issues. This year's nine briefs include such varied topics as cardiovascular health, active travel and circular design. Submissions are being accepted from 24 January to 9 March 2022.

■ To find out more, visit thersa.org/student-design-awards

Welcome back to RSA House

RSA House has reopened following the easing of government restrictions. At the time of going to press, hours are 8am to 8pm, Monday to Friday, and the Coffee House is open from 8.30am to 5pm, currently taking credit and debit card payments but not cash. We do encourage visitors to continue to wear facemasks as they move around the House and respect the safety of our staff and other visitors. We very much look forward to welcoming you back.

■ For the latest information, visit thersa.org/rsa-house/reopening

Fellowship

New Fellows

Anne Aslett is Global Chief Executive Officer at the Elton John AIDS Foundation, where she has worked for almost 20 years. The Foundation works with some of the most vulnerable members of society and looks to develop new human-centred design approaches to healthcare that address systemic, often unconscious bias and provide the best possible care to those who need it.

As Executive Director of Jabulani Youths for Transformation, **Johanssen Obanda** is committed to encouraging youth development in Africa and creating resilient communities. The organisation helps to co-create social enterprises and develop sustainable jobs. He is also a community manager at AfricArXiv, a pan-African open-access portal that aims to build an African-owned scholarly repository.

Make the most of your Fellowship by connecting online and sharing your skills. Search the Fellowship at thersa.org/fellowship. While you're there, don't forget to update your own profile: thersa.org/my-rsa.

■ Follow us on Twitter @theRSAorg
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Join the Fellows' LinkedIn group
www.linkedin.com/groups/3391

Where possible, Fellowship events have moved online; to find out more and connect with Fellows in our global community visit thersa.org/events/fellowship

Grow your idea through RSA Catalyst, which offers grants for Fellow-led and new or early-stage projects with a social goal.

■ To find out more, visit our online Project Support page thersa.org/fellowship/project-support

Events



Catch up online

Leading public thinkers, innovators and changemakers take to the RSA Great Room and digital stage to share and debate the ideas, events and movements that are shaping the future of our societies, our economies and our world.

■ *Subscribe to our YouTube channel and 'like' us on Facebook to catch up on the latest content*

▶ [youtube.com/thersaorg](https://www.youtube.com/thersaorg)

▶ [facebook.com/rsaeventsofficial](https://www.facebook.com/rsaeventsofficial)



Who gets to imagine the future?

How can we build the social, political, economic and cultural conditions that ensure communities have agency in shaping their futures? With **Jess Prendergast**, Onion Collective; **Geoff Mulgan**, UCL; **Pupul Bisht**, School of International Futures; and **Inua Ellams**, playwright and poet.

■ *Watch now: <https://bit.ly/3AWWBax>
#RSAfutures*

How to create breakthrough

The major challenges of our time demand creative and collaborative solutions. But they're not always easy to come by. Leading organiser, facilitator and designer **Adam Kahane** offers a guide for how we can all become better mediators – bridging our differences, distributing power, and moving forward together.

■ *Watch now: <https://bit.ly/3jd0C4U>
#RSAbreakthrough*

The EU and the UK – a new relationship

As Chief Negotiator for the EU, **Michel Barnier** was at the very heart of the Brexit process over four turbulent years. Revealing insights from one of the most complex sets of talks in modern political history, he shares his perspective on the lessons learned on both sides of the negotiating table, and looks forward to a new chapter in EU-UK relations.

■ *Watch now: <https://bit.ly/3aMaX31>
#RSAbarnier*

What will it take to 'go big' at COP26?

What would bold thinking, radical action, and meaningful momentum-building look like at this critical juncture in climate politics? On the eve of COP26, former Labour Party leader and ex-Climate Change Secretary **Ed Miliband** explored what it would take for this moment to become a catalyst for real change.

■ *Watch now: <https://bit.ly/3paSMMX>
#RSAGoBig*



“We need a new form of economic growth that breaks the destructive relationship between economic activity and the environment”

Economist Lord Nicholas Stern is interviewed by Fiona Harvey
✉ @lordstern1 @fionaharvey

Fiona Harvey: The 2021 United Nations Climate Change Conference (COP26) is bringing together world leaders and 25,000 representatives of governments, businesses and civil society. COP26 has been called one of the last chances to put the world on track to tackle the climate crisis and limit global heating to 1.5C, the aspiration of the 2015 Paris Agreement. What would success look like?

Lord Nicholas Stern: We should look at the main aims for COP26 in three or four dimensions. One is the targets for emissions reductions, known as Nationally Determined Contributions, or NDCs. We should look for good progress in closing the gap between the NDCs that were set for Paris, which were way too high for “well below 2C” (the upper limit set in the Paris Agreement) let alone 1.5C (the aspiration limit in the agreement).

We will not close that gap completely. But we should hope for good progress, and for mechanisms

and ways forward on how we close that gap further between now and 2025. We should look at the total emissions targeted for 2030. That is how we should think about what is a good, better or worse result. A language of success or failure doesn't seem to me to be very helpful. To have a tick box doesn't really make a lot of sense, the question is whether we have made good progress on these key dimensions: NDCs, climate finance, phasing out coal, looking at nature-based solutions to climate change, and the overarching goal of net zero.

The goal of reaching net zero emissions globally by mid-century is important and the degree of commitment is actually quite promising on that front. If you look at the number of countries that have declared for net zero in some shape or form, it's well over 100, and those countries are responsible for the bulk of emissions globally. Having the US and China both committed to zero is very important, so we should regard progress on net zero as rather positive, but we need to do more. ▶

Lord Nicholas Stern is an academic, economist and author of *The Economics of Climate Change: The Stern Review*
Fiona Harvey is Environment Correspondent at *The Guardian*

“Having the US and China both committed to net zero is very important, so we should regard progress as rather positive”

Harvey: Developing countries were promised in 2009 that by 2020 they would receive at least \$100bn a year in finance to help them cut greenhouse gas emissions and cope with the impacts of the climate crisis. That target has been missed so far. What needs to be done on climate finance?

Lord Stern: We will probably hit the \$100bn for next year. The latest figure the Organisation for Economic Co-operation and Development (OECD) came up with for climate finance delivered in 2019 was about \$80bn. The US has just pledged an increase in climate finance, as have other countries, and the development banks including the World Bank are having meetings ahead of COP26 where we could see more. So let's hope that the \$100bn is delivered by next year; it should be, it's not good if it's delayed.

There are three main forms of climate finance: bilateral (coming directly from donor countries); multilateral (coming through the development banks); and private. The private sector is very significant. If we have good figures from bilateral and multilateral sources, then we could see some big multipliers on the private side. My own view is we must push very hard to get the \$100bn, and then look to 2025 to get a bigger package of bilateral, multilateral and private finance.

Another important dimension is to raise the profile of resilience and adaptation, helping people cope with the impacts of the climate crisis, extreme weather, heatwaves, floods, droughts, rising sea levels and fiercer storms. There are so many examples of how resilience and adaptation can be achieved. Mangroves, for instance: they capture carbon, they protect against storm surges, they help fish and they are good with the environment; in some places they help the tigers, which in turn helps with tourism, which is good for development. Adaptation includes public transport, decentralised solar and restoring degraded land (there is so much degraded land and so much you can do to restore it, such as looking after the forests and planting some more). There is so much we need to do.

Harvey: Some countries have already improved their NDCs. For example, the UK has set a target of reducing emissions by 68% by 2030 and by 78% by 2035, the toughest target of any developed country. The US and the EU have also set stretching

targets. What other countries should we look to for strong plans?

Lord Stern: It is going to matter a lot how China and India come in, simply because of their size. I'm working very much on getting something specific from India. I am hoping that there will be some progress and the UK Prime Minister, Boris Johnson, will be in touch with Prime Minister Narendra Modi of India about that, but it is not settled yet. That would be valuable. Driving past coal is the really important point here, and orienting climate finance around driving past coal.

Harvey: You have mentioned private sector capital. One way of raising capital is through the sale of carbon credits. Projects in the developing world that reduce emissions, such as preserving forests or restoring peatlands or growing more trees, are awarded carbon credits that can be used by companies in the developed world to offset their greenhouse gas emissions. This has been controversial and some say it is a way for companies to carry on with high emissions. What is your view?

Lord Stern: The voluntary carbon markets for carbon credits and offsets could be very significant. A lot of existing climate finance is in the form of loans, and if you get a loan you have to repay it. But the voluntary carbon market doesn't have to be repaid, you just have to do the thing that you said you would: restore degraded land or phase out coal, whatever it might be. It's quite possible that those voluntary carbon markets, given the way in which the firms have committed, could turn out to be very substantial and very valuable.

Mark Carney, the former Governor of the Bank of England and now a UN and UK climate envoy, and others are doing some tremendous work on the voluntary carbon markets. The whole transparency, commitment and stability that Mark has been striving for should be urging financial firms to be very clear with shareholders and customers about their own targets, and moving to net zero.

Harvey: You have mentioned the development banks, which include the World Bank, where you were chief economist. We have had a climate change action plan from the World Bank, discussed at its



annual meeting in October 2021. Is it a good plan, and does it go far enough?

Lord Stern: It is a good start. It really does show commitment and focus on a country level. We all know that this needs to happen on a big scale and the World Bank will be a leader in that. We need to have a discussion between shareholders, the World Bank and the other development banks about the next five to 10 years, and how fast the banks can ramp up on climate development.

I am increasingly moving away from the idea that a fraction of World Bank funding is designated as climate finance. All of its spending should be sustainable and that is where the World Bank is moving. The scale and the urgency of the challenge is now such that we need to have a discussion on how we can expand this.

Harvey: What scale of investment should we be looking at, and what do we need to invest in?

Lord Stern: We ought to be seeing something like the doubling of multilateral lending from the development banks, at least, in these next few years. That would be a major step up, and within that we need very strong focus on sustainability planning and development. It's just a logical consequence of the scale of investment

that we have to make. In a recent paper I co-wrote for the G7, we argued that we are going to have to increase investment by two or three percentage points in GDP around the world (though not for China, as its investment is so high already).

They will be very good investments that will drive growth and change the nature of economic growth, because they will be sustainable investments. A lot of the investment will be in infrastructure, which we need to build anyway, but we should be making it environmentally sustainable.

Harvey: What about the private sector? What is its role in this and is it moving fast enough?

Lord Stern: If you look back to Paris in 2015, what's changed since then is that the whole net zero language has, quite rightly, risen to the top of the list of priorities. Resilience and adaptation have moved up in a very strong way, and so too has natural capital.

While those three concepts existed in Paris, they were not the most prominent, but they have now moved right up the agenda. And while the movement from the private sector since Paris has been remarkable, it's still not enough. However, though we are way behind where we need to be, you also have to recognise the momentum from the private ▶

“We have created the climate catastrophe, so resources in future will be far more valuable than if we had acted sensibly”



sector that has been generated; it has been particularly striking over the past few years.

Harvey: What about the companies that have caused the most emissions? There are 20 companies that are responsible for about a third of all carbon emissions. Do we need to clamp down on them somehow?

Lord Stern: In a world where energy is changing very rapidly, there have to be energy companies. On the supply side, these firms need to invest in new technologies and new ways of doing things. They should be moving very rapidly to net zero, and there should be strong pressure on them to produce credible plans and actions for delivering this. Some of these companies, like BP and Shell, have taken up this issue very seriously. Have they moved fast enough? Probably not, but their commitment should be recognised.

But you have to be a little careful about saying that just 20 companies are responsible for a vast amount of emissions. It's the people who demand it as well, and the companies are supplying this demand for energy from oil, gas and coal. So you have to change both sides of the market, and changing consumer demand is very important.

Harvey: Do you think any of these companies think they might be bailed out by the state at some point?

Lord Stern: I don't know. The issue is how they are going to change, because if they don't move fast

enough, they may be in trouble. A company that fails because it doesn't react in an agile way to the change in circumstances is not necessarily a company that should be bailed out. The big question is, how are we going to move quickly in a world that is changing so quickly?

Harvey: You also talk about the demand side. Some campaigners argue that energy companies put too much emphasis on the consumer, and that we need systemic change from companies, rather than behavioural change from people. What do you think?

Lord Stern: If you are shifting the whole economy to net zero by 2050, it is a change of such fundamental importance that it has to come from both sides. It isn't a race between behaviour and systems.

Some parts of changing behaviour, like buying and using electric cars, are not so dramatic. After all, you want a car to be reliable and to get you around. Similarly with electricity, when you use it you are not really focused on how those electrons reach you. The important thing is to work on changing the systems, making it easier for people to buy and use electric cars and having the right kind of incentive structures, regulations and carbon prices to encourage companies to change the electricity supply to the low-carbon generation.

That is not a fundamental behavioural shift, it's fostering change on the supply side. Other things, like walking and cycling more and changing how we consume and produce food, do require a behavioural

shift. And we have to design the systems that enable that, such as the energy-charging infrastructure, or making it easier and safer to walk and cycle in towns. It's about doing both together, not one versus the other.

Harvey: You are an economist, and your 2006 *The Economics of Climate Change: The Stern Review* was the first time we had an answer to the questions of the cost of dealing with climate change, and the economic benefits. What do you think economists can do for other aspects of the environment?

Lord Stern: The challenge for economists now is to focus on the question of how to generate very fast, systemic change and gain a great potential benefit from a new form of economic growth: one that breaks the destructive relationship between economic activity and the environment.

So we want an economics of innovation, an economics of system change, an economics of rapid change. Too much of economics is still rooted in the comparatively static variety, one that posits that if you have a market failure, this is how you correct it, and then your new equilibrium will be better than the old one. We now need to deal with the question of how we change the whole economy in just 20 or 30 years.

In 2018, I wrote a piece in honour of the late British economist, Tony Atkinson, who focused on social justice, which was published in the *Journal of Public Economics*. I argued that we need a programme of public economics as if time matters, one that focuses on very rapid change. It will look rather different from the standard economic techniques, although they will be embedded in it.

Harvey: One of the revolutionary aspects of the Stern Review, which was controversial at the time, was how you changed the way people looked at the concept of the discount rate; how we value costs today versus benefits tomorrow. Before your work, the way conventional economists viewed climate change was very skewed, because costs today were counted in full, but the value of future benefits was discounted. You argued it was wrong to discount the lives of future generations as if they were worth less than the lives of people today. Are there other big changes in how we look at things that would be helpful?

Lord Stern: I never talk about the discount rate; the subject is discounting: how you treat the future relative to now. That is a much better description than talking about the discount rate, because how you value the future depends on what you think it will look like. We have created the climate catastrophe, so

resources in future will be far more valuable than if we had acted more sensibly.

Discounting in the future is dependent on how well we tackle climate change now. This is something that economists didn't understand very well at the time. It's much better to talk about discounting and its relation to standards of living, and what we will actually have created in the future. That two-way relationship is very important.

It's the economics of innovation and rapid changes to systems where we need to do much more. While we are not doing too badly on the economics of innovation, we need to get better. We have to think about how we bring forward the big changes, not only in technology but in systems management. Cities, energy, transport, land, these are the areas where economists need to look very closely and intensely at rapid change. ■

RSA Fellowship in action

Post Growth Institute

Based in the USA, Donnie Maclurcan is Executive Director of the Post Growth Institute, which works globally to develop collaborative projects that promote the equitable circulation of money, power and resources within communities. He was awarded a £10,000 Catalyst Scaling Grant to develop facilitator training for his project, the Offers and Needs Market (OANM). The OANM is a two-hour, facilitated process for people to exchange knowledge, skills, resources, opportunities and needs. Created by Donnie in 2011, and having now engaged tens of thousands of participants, the OANM was a response to the 'hollowing out' effect he observed in his local community, whereby the gifts, talents and offerings of neighbours were increasingly hidden by the supposed efficiencies of the online, global market.

Having now trained almost 200 OANM facilitators worldwide, to respond to increasing demand Donnie and his team are developing a hybrid, virtual facilitator training that allows people to learn rapidly through a mix of pre-recorded sessions as well as live coaching within a cohort. "Additionally, the Catalyst Scaling Grant allows us to continue our rigorous certification process for facilitators who have graduated from our previous training, ensuring the OANM is designed for inclusivity, while generating deep impact," Donnie says.

"In the coming years we envisage the OANM becoming a common way for people around the world to develop interpersonal relationships within their communities while reclaiming their agency in the formal and informal economies."

■ To find out more, visit offersandneeds.com

BUILDING CLIMATE JUSTICE

The world's poorest communities create the smallest carbon footprint yet suffer disproportionately from the ravages of ecological disasters

by Runa Khan

🐦 @runakhan_ed

For the past 20 years I have been working on the frontline of the climate crisis. Bangladesh, a 148 sq km delta of silt with 170 million people, 52% of which is under water, is battered by climatic disasters and faced with submersion within decades if the world keeps warming at its current rate, leaving 42 million people at risk by 2050.

Along the coastal areas of the Bay of Bengal, in a remote village near the Sundarbans, lives Mashkura. She had a happy childhood, later a happy marriage. As she passed her youth, a future disaster had already begun unfolding. Sea levels were rising. The cyclones that battered this coast were becoming more frequent and unpredictable. The embankments that protect them from tidal surges began to crumble. No one repaired them. Over the years, salinity from the sea spread inland, impacting lives dramatically.

Over six years, Mashkura had three miscarriages. Abandoned by her shrimp-farmer husband, she was ostracised by her community. All her dreams were shattered. Mashkura was a victim of salinity. There are millions of Mashkuras.

Bonomali Mondol, 65, withered and suffering, looks 100. He silently sits looking at miles and miles of saline water, grey dying trees, and reminisces of his once flourishing green fields and happy life before Cyclone Aila struck in 2009. He passed years in poverty. Nobody cares for his loss either.

Nupur, 14, lives far inland on the banks of the mighty Brahmaputra River in North Bengal. Her home is on a char, or a sandbar island, called

Dewalikhola. Nupur is one of five daughters of a day labourer, Kaiyum, who lives hand to mouth. They have had to shift their house several times over the past 10 years. During monsoon, erosion happens. As the islands move, the population is displaced.

In 2020 the floods come again. In an unprecedented twist, they recede and return five times, sweeping away entire islands. Nupur's home starts to break away once again. Erosion at this scale and frequency was unthinkable 20 years ago. In danger of losing the family's home again, their food being depleted from the prolonged flooding, Nupur is married off to her father's friend. At least now there is a chance that Kaiyum can feed his other four daughters and they can live up to the age of 14, perhaps only to be married off again for survival.

Nupur, Bonomali and Mashkura have not contributed to their fate or to the climate crisis in any way.

Understanding climate injustice

To understand climate justice, we need first to understand climate injustice. In Bangladesh, each person emits on average 0.47 tons of carbon, compared with an average of 10.3 tons in high-income countries and 15.3 tons in North America. Yet, Bangladesh is the seventh most climate-impacted country in the world, with the highest number of people affected. Sixty per cent of all deaths due to tropical cyclones between 1980 and 2000 took place in Bangladesh. ▶

Runa Khan is a Bangladeshi social entrepreneur and the founder and Executive Director of Friendship NGO



In 2019, the International Institute for Environment and Development found that the rural poor in Bangladesh spend an average of \$2bn a year to address the impacts of climate change, more than the government and aid agencies put together. International aid covers only 4% of spending on climate action in Bangladesh.

Far from 'helping' people in impacted countries, polluting nations are at loggerheads about responsibility and blame. Each day more lives and livelihoods are lost. There is no hope or future for those who are impacted. With what conscience can we dare to face them?

It was sadness and anger at the injustice that provoked me to start Friendship. Twenty years ago, I was visiting a char on the Brahmaputra, where I was invited into the home of a family I had met by the riverbank. It was a humble straw hut where the family, along with the entirety of their belongings, lived in one room. I saw the wife feeding their sick child just before dusk with rice and a little onion. I asked the mother, "Why do you not feed her a little later so that she will sleep at night, contented?" She looked at me in disbelief. "What an extravagance! One taka (one cent) of kerosene to light a lantern so they can eat after dark! If the child falls asleep now, she will not know that she is hungry at night."

Another mother came with a baby who had cerebral palsy and asked me, "Doctor (meaning the village quack) said that there is nothing to be done for my child. Should I kill her?"

Unable to walk away, we launched the first hospital ship in Bangladesh the following year, taking essential medical services to the char areas where permanent structures cannot be built, as the land is constantly breaking away. Everyone said it would be impossible simply because it had not been done before.

One hospital grew into a three-tier healthcare system being one of our most impactful successes. The first tier is a hospital (on ships or on land) providing secondary-level care. The second tier is satellite or static clinics offering prevention, awareness, basic curative medicines, check-ups, and follow-ups of hospital services. The third tier comprises women from each village trained as community medical aides and midwives who monitor the health of every household, assist in childbirth, provide over-the-counter medicines, connect to the expert Doctor Centre via our mHealth app, and refer patients to the hospital as required. Today we directly serve 350,000 patients every month.

Even though we started through compassion, we had essentially built an important tool for climate justice.

Everything is connected

We were far from bringing justice for these communities. They did not have enough food to eat or opportunity to even hope for a better life. Climate and geography stunted any natural growth and isolated them from support systems. We saved lives, averted physical suffering, and responded when the storms and cyclones struck. Our Climate Action sector was set up for preparedness, relief, rehabilitation, and transitional funding.

I encountered 18 families who had not eaten for two days. Everything they owned had been washed away. They had settled on a newly deposited char. After providing basic relief, we asked them what we could do for them. Microfinance would be a foregone failure, because there was no way they would be able to repay loans. All they had was a little land. They needed a water pump and seeds so they could sell their products. Through our transitional fund we gave grants and training for agriculture and basic finance, then linked them to markets and government services.

When we visited a few years later, they asked us for a school, saying they would pay the teacher themselves. They were then linked for further finances to our Sustainable Economic Development sector, where intense training would enable further economic growth. They had made the transition into the mainstream economy. Yet hidden issues marred any development they would strive for: poverty, lack of services when they migrated and lack of knowledge of the socio-political ecosystem beyond the char areas. Where would they go to seek help? In constantly migrating they missed connectivity to mainland society and systems. Child marriage, violence, lack of development in education and culture are all, for them, environmental issues.

For example, consider that schools could help create opportunities for economic growth, understanding state systems and even reduce child marriages. But conventional schools were impossible when operating on impermanent land. Anyone with a higher education left to pursue better opportunities on the mainland. We found whole islands of over 2,000 people where not one person could read or write.

School buildings needed to be mobile so they could be moved when the land broke. Teachers needed to be part of the community so that they were close to the children and felt responsible for them. We decided to find people with high acceptance in their community and who had basic literacy and maths skills. Then we started training them as teachers. We built schools that could be dismantled within hours. We then started our primary schools and eventually built high schools with video classes viewed through televisions powered by solar panels.



“Solutions for economic, social and life issues are all connected, and if access to any one of these services is removed, it is no longer a long-term sustainable solution”

We set up adult education centres to create new economic opportunities. This helped to ensure that parents did not send their children to work in the fields during school hours; child marriages decreased drastically. In 15 years, Char Nawshala, for example, went from having less than 10% basic literacy to more than 80% today.

Migrant communities needed to be linked to the economic and socio-political ecosystem of the country, including state infrastructure. They spend their lives so far removed from the mainstream state systems that they have no idea about laws or the availability of services from the government. There was no justice system; even the village arbitration system (‘shalish’) had been dissolved. We had to make sure that people could access justice and be aware of laws. We started an Inclusive Citizenship sector. Our Cultural Preservation sector works with these communities preserving the age-old crafts of boatmaking, closely linked with the community’s dignity and sense of identity.

Solutions for economic, social and life issues are all connected, and if access to any one of these services is removed, it is no longer a long-term sustainable solution. It is imperative to approach climate justice in an integrated way. Both problems and solutions are interlinked.

Together for a new tomorrow

There will be no climate justice until the individuals, companies and decision-makers who contribute

to climate change accept responsibility. Elected decision-makers cannot procrastinate in fear of unpopularity until their terms are over, instead of making strong decisions on regulating corporate carbon emissions.

This means replicating innovative projects carefully. ‘Renewable’ energy solutions that involve millions of batteries without a proper, responsible disposal system cannot be a solution. It also means decision-makers and those who are responsible for emissions listening to the pain in the voices of those impacted by their actions. Without listening to them, how can we hope for a solution?

We need scientists to give evidence of the changes happening, just as we need academics to help us understand the situation. Decision-makers and politicians can make far-reaching policy changes. Development organisations and implementers can find solutions. We need activists to raise awareness and the media to amplify each of their messages. Each of these elements are part of the whole solution. But we still work in isolation, each knowing with certainty that we are right.

Yet how many Mashkuras and Nupurs do you see at climate conferences? None of their needs are placed directly in front of the decision-makers. Their voices filter in through second, third and fourth parties, all of whom have their own interests and ideas about what is best. When we work in solidarity, intelligently and with empathy, perhaps it will show us the way forward. ■

“The RSA should be helping to paint a picture of how society could be; this is an act of imagining”

After 32 years at the Bank of England, Andy Haldane has joined the RSA as its new Chief Executive. Rachel O'Brien spoke to him about his vision for the RSA

🐦 @racobrien

Rachel O'Brien: You were a public servant at the Bank of England for over 30 years. How does it feel to be moving not just to a different sector but also to a new organisation and team? Does this move present new challenges for you in terms of leadership?

Andy Haldane: Let me give the classic economist's answer: yes and no.

Yes, there are plainly new challenges in moving to any new organisation. There are also great opportunities and it is precisely those that attracted me to the RSA in the first place. These include the chance to have social impact across a much wider number of fronts, on the signature issues of the day, whether that is the new world of work, or training, or education, or the environment. And doing so within such an inspiring entrepreneurial environment at the RSA.

No, in the sense that my whole career has been spent in public service, tackling economic and social issues; drawing together the combined might of the public, private and civil society sectors; using the combination of analytical excellence, intellectual leadership and on-the-ground implementation to design, drive and deliver radical change. In that sense,

there is more that unites the Bank of England and the RSA than divides them.

O'Brien: You have spoken about the importance of charity and how the sector, and all that it does to contribute to society, is not appropriately recognised. How do you think this can be remedied?

Haldane: For me, the crucial role of civil society has been neglected for too long, in ways that have exacerbated fault lines in our economies and societies. The secret to societal and economic success, historically, has come from the partnership between the public, private and civil society sectors. Recent experience with the design and delivery of the vaccine programmes has illustrated this point once again. Yet we have structurally under-invested and under-appreciated the importance of charity, community and civil society in driving success. This has caused subsidence in what is sometimes called the Third Pillar. That subsidence has in turn shown up in rising economic and social disparities, whether financial or educational, and in health and happiness.

Closing those disparities requires, among other things, a restoration of the Third Pillar. This needs to ▶

Rachel O'Brien is a consultant, editor and writer who has worked in the area of criminal justice since 2007



range from the mundane but important (such as how we measure the sector's societal contribution) right through to the institutional and structural (such as how we recognise and reward the massive voluntary contributions citizens make).

O'Brien: You set up Pro Bono Economics to help charities and were involved in the RSA's economic inclusion work. To what extent do you think economics itself needs to change in relation to not just engaging the public but asking different questions arising from climate change, wellbeing and so on? And do you see a role here for the RSA?

Haldane: Yes, economics needs to change and it is, I think, changing for the better. Both the global financial and the Covid-19 crises have prompted a rethink and a refresh of the economics profession and its approaches. Part of that reformation will involve economists engaging far more expansively than in the past, whether when working across disciplinary boundaries or when working with citizen audiences, as the work of the RSA has demonstrated. But we make a mistake in thinking this is just a change programme for economics. Tackling the issues of today will require a reboot that encompasses every discipline and every sector. That is what system change means.

O'Brien: You join the RSA at a hugely challenging time for many individuals and institutions. The pandemic has changed us all, both further exposing deep divides and what binds us. For many there is a deepening sense of their own powerlessness. What role do you think the RSA can play in this context?

Haldane: The pandemic has created a renewed sense of agency and community-mindedness among a great many people. One of the ways we can build back better (and fairer and kinder) is to nurture the social capital that the Covid-19 crisis has helped create. The RSA, with its 30,000 Fellows and global reach, has a huge role to play in ensuring communities have the voice and the agency they need to achieve this rebuilding.

Recently, I spoke about 'community capitalism', a model of our economy and society that puts communities and civic institutions centre stage. Whatever we wish to call it, this is the model for the future: a new localism. And I'd like the RSA to be in the vanguard of that reformation of thinking and practice through its own research and through its changemaking community of Fellows.

O'Brien: With this in mind how does the RSA need to change? For example, the RSA combines being a

think tank, focused on policy change, a membership organisation focused on motivating others, and is also concerned with practical innovation. How do you see these elements developing and do you think the RSA needs to prioritise one model?

Haldane: The power and the uniqueness of the RSA come precisely from its capacity to meld together these three elements. Think tanks, member organisations and innovation hubs are ten a penny. No one else combines the three. That unique blend of these assets is what has enabled the RSA to effect social change in the past and they will be the key in doing so in the future too.

Large and lasting social change comes from coupling the most able minds with the most dexterous hands, academic rigour with entrepreneurial energy. The world does not need more hand-wringing about the present; it needs a sense of vision and optimism about the future. The RSA should be helping to paint a picture of how society could be; this is an act of imagining. And it then needs to set about creating that future in practice, on the ground.

O'Brien: The RSA has a long and proud history but – like the Enlightenment that shaped its foundation – it remains a relatively elite organisation. Do you see this changing under your tenure and, if so, how?

Haldane: We need to be careful with labels. In a great many respects, the RSA is as open and inclusive as any social change organisation I can think of, by dint of its Fellowship, its focus on community action, its approach to system change. But, of course, in everything we do we need to continue to champion openness and diversity, in all of its senses. And, like every other organisation on the planet, we have further to go on those fronts. As one example, there is a lot further for us to go in reaching a younger and more diverse set of Fellows. I hope these new initiatives we are putting in place can help achieve that.

O'Brien: At the Bank of England, you visited many 'left behind' communities, listening to what they had to say. You are now advising the government on its levelling up agenda. Could you say a bit about what you learned from this process and what you think levelling up means? Is this a new narrative on inequality or something else?

Haldane: Yes, I spent several years before the pandemic visiting the UK's less well-performing parts, speaking to local people about the local challenges they face. It was one of the most enriching professional



“Both the global financial and the Covid-19 crises have prompted a rethink and a refresh of economics and its approaches”

experiences of my life. Among many other things, it taught me the importance of active listening, which is exhausting and rewarding in equal measure.

Levelling up is for me about three things. First, it is about economic prosperity: unleashing the potential currently too often constrained in the less well-performing parts of the UK. Second, it is about social justice: ensuring greater equality of opportunity in access to good work, education, healthcare and the like. And third, it is about political legitimacy: giving people, their families and communities sufficient agency over the decisions that shape their lives. That is why it has been a personal passion of mine for 40 years.

O'Brien: One of the central programmes at the RSA is around the future of work. Recent times have highlighted the importance of some neglected areas of ‘key workers’ and the lack of resilience and recognition some sectors face. What do you think we need to learn from this and what can be done?

Haldane: The Covid-19 crisis has been a wake-up call for us all when it comes to recognising what and who really matters. The importance of family, friends, communities, charities, that civil society pillar I spoke of earlier. But also the importance of the state in protecting individuals and businesses from uninsurable events – the public sector pillar – and the importance of those key workers and businesses who have been essential for the effective functioning of our economies and societies, the private sector pillar.

As after the global financial crisis, the Overton window is now open for us to rethink how we value,

reward and make resilient those essential activities and jobs. This is broader than the future of work. It is also about the future of business, the future of government and the future of civil society. Each needs to be re-imagined, not individually but as part of a system whole. That, distinctively, uniquely, is where the RSA can play a leading role. ■

RSA Fellowship in action

Community Climate Connectors

Guy Dauncey FRSA is a long-time climate author, activist and organiser. With some friends, he has founded the Community Climate Connectors on Vancouver Island in Canada, a network of facilitators who will offer Community Climate Circles to friends and neighbours to encourage them to reduce their personal climate pollution, and maybe take other forms of climate action.

“The climate emergency is all over the news, but governments have totally ignored the need for neighbourhood engagement,” Guy says. “During the Second World War, people were not just told to build a bomb shelter. They were given guidance and support. We need to do the same, helping every household to reduce its climate pollution, and to play a greater role in tackling the emergency.”

With help from a £2,000 Catalyst Seed Grant, the goal is to start small, and to ramp up to train 2% of the local population to become Connectors. “If each Connector offers support to 20 families, that would reach everyone. The need is to scale up to cover the whole of British Columbia, and for this or a similar model to be embraced across the world.”

■ To find out more, visit communityclimateconnectors.ca

THE PLEASURE OF PAIN

From horror movies to hot curries, what makes us seek out and enjoy the thrill of the unpleasant?

by Paul Bloom
 🐦 @paulbloomat Yale

When you add up the hours, the most common pleasure is not being with friends and family, playing games, participating in sport or having sex, even though people do enjoy all these things, or at least claim to when they fill out surveys. The most common pleasure is indulging in experiences that don't really exist, as when we read novels, go to movies, play video games and daydream. They are pleasures of the imagination. This is how we spend most of our time: Netflix without the chill.

One popular theory of the appeal of the imagination is that it provides surrogates of enjoyable real-world experiences. If we like sex, we can enjoy fantasising about sex. If we aspire to a full life, with love, adventure and triumph, we can partially scratch the itch by putting ourselves into the shoes of others, real or imagined, who are fulfilling that life. We can do all this just by closing our eyes and creating new worlds, but often we immerse ourselves in worlds created by those who are more creative and skilled than we are, and this gets us to fictions ranging from the *Avengers* series to Shakespearean comedies.

But this story is incomplete. A while ago, I came across my elder son doing his physics homework while watching, on his laptop, an artsy French cannibal movie called *Raw*. I took one look and it ruined my

afternoon. At least some of us want to be scared and saddened; we want to scream and retch and sob. How do we explain this?

One answer is that we get pleasure through contrast, by creating situations where the release from unpleasantness is its own source of delight. Think about slowly sinking into a painfully hot bath, and then gradually adapting to the temperature, experiencing the soothing contrast with the initial pain. Or the burn of hot curry balanced by cool beer. Or the pain of rigorous exercise and how good it feels when it is over.

Some of our fictional pleasures work in much the same way. Consider the typical structure of revenge flicks, nicely illustrated by the tagline from the remake of *Death Wish*: "They came for his family. Now he's coming for them". Bad-then-good is the contour of children's stories such as *The Little Engine That Could*, where the initial struggles ("I think I can, I think I can") make the engine's victory at the end ("I thought I could! I thought I could!") all the sweeter.

This is a feature of many stories. The American data scientist David Robinson analysed a database of 112,000 plots, from books, movies, video games, TV shows and so on. The most common pattern he observed was that stories begin on a high point and then gradually descend, becoming more and

Paul Bloom studies and writes about human nature, and is professor of psychology at the universities of Toronto and Yale. His book *The Sweet Spot* is published by The Bodley Head, an imprint of Vintage



more negative until, just before the ending, they rise sharply in positivity. As Robinson puts it: “If we had to summarise the average story that humans tell, it would go something like ‘Things get worse and worse until at the last minute they get better.’”

Then there is the pleasure of play. Children, left to themselves, choose to play. They pretend to be aeroplanes or to have tea parties or make war, or they just grapple and race and knock one another down. Other creatures, like dogs and cats, also play, sometimes violently. And adults play as well (though we don’t usually call it this), in gyms and dojos and stadiums and arenas.

One popular theory is that play reflects an evolved motivation to practise. Fighting is the best example of this. Being good at fighting is useful and one way to get better at fighting is to get experience fighting. But getting into real fights is dangerous; you can get killed or seriously injured, or you can kill or injure another. Evolution has come up with an ingenious solution to this problem: we can play at fighting. We can find someone we like and trust and go through the moves of fighting and get better at it but with various constraints to reduce the risk of harm.

More generally, the more we do something, the better we get at it, so we are drawn to immerse ourselves, in a safe way, in challenging physical, social

and emotional situations. Want to get better at flying a plane? You can use a real plane, but it is safer and smarter to log hundreds of hours on a flight simulator. Well, imagination is a flight simulator and you don’t always program a simulator for a smooth flight. You often use it to prepare for trouble.

And so it is no surprise that the fictions we are drawn to include elements that would be unpleasant, sometimes terrible, if we were really to experience them. The idea here is best summed up by the author Stephen King: “We make up horrors to help us cope with the real ones”; it is “the tough mind’s way of coping with terrible problems”. We are drawn to tragedy and horror, then, because they are creative representations of worst-case scenarios, such as being attacked by strangers, being betrayed by friends, or experiencing the deaths of those we love.

The Scottish Enlightenment philosopher David Hume described the appeal of aversive fictions as “an unaccountable pleasure”, and there is a lot left to be accounted for. This includes the question of why some love such fictions and others can’t bear them. But one thing is increasingly clear and that is that our appetite for horror and tragedy is no different in kind from that which drives us to eat spicy foods or run marathons. Pleasure, on the screen and in the world, bears an intimate relationship to pain. ■



Illustrations by Sebastian Arnold

WHAT DOES 'REGENERATIVE' THINKING MEAN?

To shape an equitable future we must find a new way of imagining our place within the world, one where everything is connected

by Josie Warden
🐦 @Josie_Warden

The RSA recently launched its Regenerative Futures programme, which aims to help shape an equitable future in which all of us can thrive as part of the Earth's ecology. It builds on the organisation's long heritage of promoting pioneering approaches to social and environmental challenges. The scope of its ventures range from the Great Recovery project, which changed the debate about the role of design in a circular economy, to our more recent Leeds Fashion Futures project, which saw us explore the potential for a more place-based approach to addressing the systemic challenges of clothing.

The words 'regeneration' or 'regenerative' are increasingly being used across sectors, from economics to farming, and are often included in descriptions of the goals of circular economy and just transition movements. However, a quick look at different examples shows that the terms are not used consistently. They are sometimes employed as a straight substitution for other words, such as 'sustainable' or 'recycled'. In other situations, they are used to describe specific practices, such as no-till farming, and in others still, used to describe mindsets or belief systems, such as indigenous wisdom traditions. So, what is really meant by 'regenerative'? Is this merely a new buzzword or does it signify something deeper?

At the RSA, we have been exploring these questions. Far from simply being a new piece of jargon, we believe that regenerative thinking, when used in its fullest sense, marks a fundamental shift in thought and action. Growing interest in regenerative thinking signifies the emergence of a new paradigm that will prove to be critical for anyone interested in social, economic or environmental change.

A 'regenerative' mindset is one that sees the world as built around reciprocal and co-evolutionary relationships, where humans, other living beings and ecosystems rely on one another for health, and shape (and are shaped by) their connections with one another. It recognises that addressing the interconnected social and environmental challenges we face is dependent on rebalancing and restoring these relationships.

This way of seeing the world is far from new. It has a long heritage, woven through cultures, indigenous wisdom traditions, philosophies, religions and communities around the world and across time. Despite this, the economic and socio-political structures that have developed over the past few centuries and that shape our globalised world are rooted in human-centred narratives, emphasising competition and individualism over co-evolution and holism. These dominant narratives fail to recognise ▶

“There are other ways of seeing our world: perspectives that see the Earth made up of complex living and evolving systems”



the truth behind environmental scientist John Muir’s observation, more than a century ago, that: “When we try to pick out anything by itself, we find it hitched to everything else in the Universe.”

As we enter the second decade of the 21st century, it is increasingly clear that we are in a period of dramatic change and are seeing the breakdown of systems and structures around us. These shifting sands are evident in many areas: work is changing, climate breakdown is biting, identity boundaries are moving, biodiversity is declining and political landscapes are being redrawn. From the financial crash to the environmental crisis, Black Lives Matter to the #MeToo movement, systems, structures and institutions are being openly questioned and do not appear to be serving us well. Making incremental improvements to these existing systems is not enough to deal with challenges of this magnitude; instead these disruptions are paving the way for transformational and paradigmatic change.

Exploring different paths

We can imagine different world views as different paths in a forest. The path we have been exploring for the last few centuries has been very fruitful, so much so that to many it might seem like the only path there is. The knowledge, discoveries and technologies that we have generated on this path have changed lives.

However, they have also generated harm, for example with the arrival of climate change, biodiversity loss and a rise in mental ill-health and isolation. We have become increasingly divided from nature and often from one another. Moreover, it has led us to prioritise certain ideas and processes over others, such as linearity, separation, replicability, reductionism, homogenisation and growth, and in so doing has crowded out other perspectives.

Today, our path has reached a cliff edge. As a species we are disrupting the balance of our Earth and undermining the systems that make our home liveable. At the same time, we are extracting from and exploiting one another. Despite the wealth and technology available in the world today, millions of people remain in poverty, and shocks like the pandemic and climate change reinforce and exaggerate existing racial, gender and wealth inequalities.

To a minority, the only answer seems to be to doggedly stick to the route we are on. But we have another choice. We can remember the other paths around us that we have separated from and choose also to explore those.

A living systems perspective

There are other ways of understanding our world: perspectives that see the Earth as made up of complex

living and evolving systems, which acknowledge the relationships between things, and value multiple ways of knowing. These ideas are at the heart of regenerative thinking and are seen in fields from computing to physics to ecology, where theories of living systems are increasingly reflecting a more accurate view of the workings of our planet. Biomimicry expert, biologist and self-proclaimed ‘nature nerd’ Janine Benyus has said that we need to take a place in nature’s class “not to learn about nature that we might circumvent or control her, but to learn from nature so that we might fit in at last and for good, on the Earth from which we sprang”.

To help us to structure our thinking, what mental models might support us to move towards recognising and understanding living systems?

First, living systems are nested. This ‘nested’ characteristic, or holarchy, describes how living systems sit within one another to form larger and more complex systems. Consider your heart, which is a whole system on its own with parts that interact with one another and have complementary functions. But it also forms part of your circulatory system, which sits within your body, you within your family and so on. The layers of nested systems are whole, in and of themselves, but to understand their function you must see them as part of the wider systems they form. Like our hearts, their function is only fulfilled when it is within the wider system.

The British economist Kate Raworth is not alone in arguing that an economy can only fulfil its function once we recognise that it is ‘nested’ within society and that human society is nested within the wider natural world. Disease in your heart affects the overall health of the individual. In a social setting, poor ‘health’ of a neighbourhood, say through lack of work opportunities, poverty or inequality, can have knock-on negative effects for the socio-economic and environmental flourishing of the broader region.

Second, living systems move and change. This sets them apart from mechanical systems, like the engine of a car, where the parts and relationships are static and stay the same over time.

Regenerative development practitioner Jenny Andersson describes this movement as a flow between convergence, divergence and emergence. Resilience is found in the relationship between these dynamics. Too much convergence and a system may become rigid, too much divergence and it becomes chaotic. Living systems will often be operating and finding balance between these two states in order to maintain integrity in the long term. Ongoing adaptation provides greater resilience than rigidity – earthquake-proof buildings, for example, are designed to absorb

energy and move in response to seismic events rather than resist them.

Third, living systems are emergent. Because they are made up of nested and interacting parts, living systems have properties that emerge from the interconnections between parts – properties that would not emerge from those parts in isolation. This emergence happens in a non-linear and unpredictable way. In hindsight, it is possible to identify cause and effect, but the multiple possible avenues open at any one time mean that predicting exactly what will happen in advance is almost impossible.

These emergent properties have enabled biological evolution; likewise, arts, language and culture are all emergent properties of human interaction. Jazz music could not have been predicted, but in hindsight its influences can be clearly traced.

Emergent properties mean that, rather than acting and analysing after the fact (by which time the overall conditions are going to have changed), we need to probe, sense and then respond to what we find.

Fourth, living systems favour diversity. Reductionism seeks efficiency, rationalisation and homogeneity. According to the reductionist way of thinking, if we can cut the number of actions or people or costs and still have the same or a better outcome, then we should do things this way.

However, living systems do not follow this rationale. So, for example, rainforests, perhaps the most mature systems on our planet, are not rationalised and efficient, with one type of tree repeated neatly. They are abundant, with a diversity of flora and fauna, some existing within impossibly small niches, others proliferating. For an animal, constant and ongoing competition is an unproductive route; much better to find key differences that allow you to live alongside others. In a world of constant change, putting all your eggs in one basket, even if it looks to be perfectly formed, is a foolish endeavour.

Fifth, living systems build mutuality and reciprocity. They are founded on relationships and interactions that create mutual net benefit. We often think of this in direct, two-way interactions between parties, such as the relationship between peas and other leguminous plants, and the nitrogen-fixing bacteria found in their roots, where the plant receives nitrogen from the bacteria and the bacteria receive sugars from the plant. But mutuality and reciprocity in nature extends beyond bidirectional transactions; we see abundance and generosity, as one species provides nutrients or helps create the conditions for others to thrive as well. Take for example the acorns of an oak tree: some will grow into saplings and others will provide food for nearby animals. ▶

“Humans are hardwired to thrive in this world and the potential to act is already within us and our communities”

The challenge

We are undoubtedly on the brink of profound transformation. Whether we are able to build a regenerative future for tomorrow depends on the actions and commitments we make today and the questions we ask ourselves.

Underpinning the everyday structures, systems and institutions in our lives are beliefs about how our world works and what our place in it is. More than ever, it is important that we are aware of these and how they guide our actions. Because although the daily news shows us the evidence of our impact as a species on our environment and on one another, from extreme weather and biodiversity loss to marginalisation and poor health, if we look around us, we can also see signs of a hopeful future in the here and now.

Interdependencies and relationships have never been more important. The social challenges that we are grappling with are nested within our environmental ones, carbon emissions are intertwined with community health, biodiversity with social justice, and so on. The world is made up of living systems that are complex and emergent, not linear and predictable. But humans are hardwired to thrive in this world and the potential to act is already within us and our communities.

At the RSA, we are committing to building awareness of the importance of regenerative thinking, working with others to nurture the capabilities to put it into practice, and amplifying existing examples and creating new demonstrations that show what this looks and feels like in action.

Preparing ourselves for the journey is about reaching for a compass rather than a map. The terrain is as yet uncharted but by choosing a direction that sees our future health as being reliant on one another's health and the health of the species and ecosystems around us, we can find a path not only to sustaining but to flourishing. How might we embark on this new path together? ■

■ Find out more about the RSA's Regenerative Futures programme at thersa.org/regenerative-futures

GUIDING PRINCIPLES FOR REGENERATIVE THINKING

Regenerative thinking does not give us a blueprint for the future, but it can help us to ask better questions about where we want to go and how to get there. These are questions that move us from reductive and siloed thinking to dialogues that engage holistically with the challenges of our time.

There are several different sets of principles that have been proposed for underpinning regenerative working, notably by the Capital Institute and by regenerative development practitioners such as Carol Sanford and Bill Reed. Learning from these and drawing on our own insights, we have chosen the following design principles for the Regenerative Futures programme to help us put this thinking into action.

Under each principle we have given one example of the kind of questions these might prompt.

1 Start with place and context

Recognise that people, places and communities have different and unique qualities. Question assumptions that context-agnostic or top-down solutions will work in any and every place. Instead, ask what it would look like to begin working from the potential that is offered by a place, community or specific context.

How might starting with land, community and geography bring different qualities of conversation?

2 Seek different perspectives

Regenerative thinking recognises that complex problems look different from different perspectives and that a diversity of views are needed to address them. No one person can see the full picture and by missing certain perspectives we may end up addressing perceived rather than real challenges.

What might the blind spots be in the work and how might they be illuminated?

3 Build capability and reciprocity

Work with people and places to create shared ownership of challenges and find shared solutions. Work to create the conditions where others can continue to shape the work into the future. Support others to build capabilities and nurture relationships, mutuality and reciprocity. Consider how mutuality and reciprocity can go beyond

transactional 'you scratch my back and I'll scratch yours' relationships and into more systemic interactions.

How might focusing on projects as catalysts, rather than end points, change the quality of work?

4 Take a nested systems view of success and consequence

Look beyond financial value and narrow measures of success. Recognise that you are working with nested wholes and be aware of the relationships between different layers. Always think about the impacts, consequences and contribution of your work on the wider wholes, both intended and unintended: across knowledge and skills; infrastructure and relationships (both physical and social); ecosystem health; biodiversity; resilience, etc.

Where is value being captured and how could value be shared more widely and equitably?

5 Design for circularity and circulation

Ensure that information, value and power, as well as physical resources and elements, can flow and circulate across and between layers of the system in a way that helps the system regenerate. Enable participation and ensure that everyone can have their voices heard. Actively engage and create spaces for the exchange of ideas; encourage plurality and diversity.

Might 'working in the open' help others to engage with and influence the work?

6 Create space for emergence

Test and iterate ideas and activities, rather than planning then acting at scale. Recognise that this is the best way to learn about potential impacts and spot new opportunities or potential pitfalls. Share your insights widely. Recognise that scaling can happen in different ways: up, to influence rules or policies; out, through replication; or down, to change mindsets.

How might you cultivate an experimental culture and create space for questioning assumptions?

7 Design from a hopeful vision of the future

The future is not pre determined. Beginning by envisioning a hopeful vision of where you want to get

to can help you move beyond short-term barriers. Working from a place of hope, the 'what if?', can build energy, momentum and commitment for the work that needs to happen now to realise it.

How might starting from 'what if' rather than 'what is' shine new light on paths ahead?

8 Work on the inside as well as the outside

Remember that your interior conditions – how you think, reflect, communicate – affect everything you do. Designing regeneratively involves a developmental outlook and requires us all to work on ourselves and our mindsets and behaviours as much as on the infrastructure, institutions, services and products in our external world.

How are my own perspectives changing and how am I reflecting on these changes?



Josie Warden
(right) is Head
of Regenerative
Design at the RSA

WHAT NEXT FOR AFGHANISTAN?

How law and education fed the flames of the global war that blighted the people and environment of this uniquely misrepresented country

by Shah Mahmoud Hanifi

After years of minuscule media coverage, including a reported total of five minutes across the three major American television networks for the entirety of 2020, Afghanistan surged into the global limelight in late summer 2021. The evaporation of the US-sponsored Afghan government, enacted by the precipitous flight of Ashraf Ghani from Kabul's monstrously fortified Green Zone, took most observers by surprise on 15 August 2021. US media punditry joined US officialdom in the universal chorus of derision toward Ghani as he settled into his new life as a political outcast in the United Arab Emirates (UAE). American officials were less condemnatory toward their declared medieval adversaries and reincarnated rulers of Afghanistan, the Taliban, with whom they coordinated to evacuate suddenly entrapped American citizens and some, but certainly not all, of their local allies.

With girls' schools and access to universities for women arguably the most common variables invoked in discussions of the recent regime change, education is clearly a contentious arena of political action in Afghanistan. As such, it will be useful to outline its history before turning to questions of law and the environmental impact of war in this uniquely misrepresented country.

Politics and education

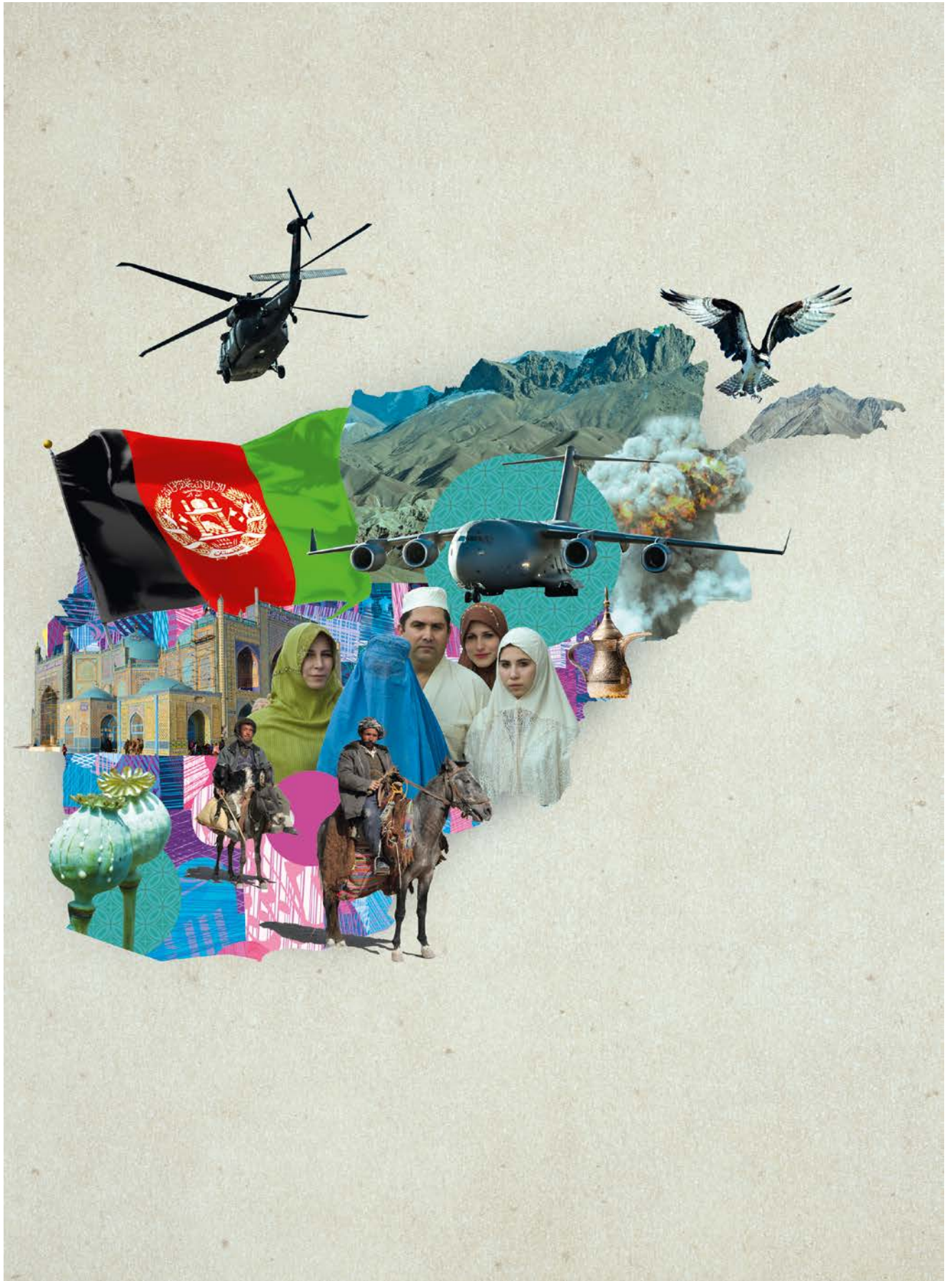
Since the early 20th century, education in Afghanistan has been tied to the history of international actors, who used it as a domain to advance their interests in the country. In the first half of the century, Ottomans-cum-Turks, French, Germans and English all provided teachers, curricula, funding and exchange

opportunities for Afghan students, teachers, scholars and bureaucrats. Although Afghans earned doctorates at American universities as early as the 1930s, the US became a leading actor in the country's educational system after the Second World War. Education was an important supporting field of action in the context of the Helmand Valley Development Project that was the centrepiece of US relations with Afghanistan from the late 1940s through the 1970s.

The February 2020 Doha peace agreement between the US and the Taliban, which significantly did not include Ghani's administration, accounted for the aforementioned 300 seconds of US network news. The chief US negotiator was the Afghan-American diplomat Zalmay Khalilzad; in the 1960s both he and Ghani spent time as high school exchange students in the US. The pair matriculated at the American University of Beirut, a nest of CIA activity in the Middle East during the Cold War, before earning doctorates from, respectively, Columbia University and the University of Chicago in the 1970s and 1980s. Columbia University, in particular its Teachers College, granted doctoral degrees to dozens of influential Afghan nationals during this period. For example, the Afghan head of state at the time of the 1979 Soviet invasion, Hafizullah Amin, studied there, although he did not complete his degree. Publicly funded programmes routed through USAID and the State Department in conjunction with dozens of American colleges and universities combined to grant degrees to hundreds of Afghans during the Cold War.

Considerable resources in both countries were necessary to recruit and vet candidates in Afghanistan and place them at US universities. The key actor in ▶

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“Large swathes of Afghanistan’s agricultural landscape have been landmined into disuse”

these Cold War education politics was the American University Field Staff representative in Afghanistan, the Harvard archaeology-trained Louis Dupree, who for decades split his time between Afghanistan and the US, ostensibly as a scholar of anthropology. However, in addition to maintaining a high public profile through these educational programmes, Dupree followed in the footsteps of his mentor at Harvard, Carleton Coon, in also serving as a covert intelligence agent. Dupree’s CIA connections positioned him well for work with the anti-Soviet Afghan mujahedin in the 1980s, which remains the most extensive and expensive covert operation in US history.

The mujahedin are the forefathers of the Taliban, and they too have an international educational history. Under Director Thomas Gouttiere, the Center for Afghanistan Studies at the University of Nebraska-Omaha produced the infamous pro-jihad textbooks used in Afghan refugee schools in Pakistan. Additionally, Saudi Arabia’s financing of Pakistani madrassas in the Afghan borderlands instilled Wahhabi ideology among the mujahedin, who were also exposed to staunchly conservative curricular influences through madrassas supported by South Asian Deobandi and Tablighi Jamaat Islamists.

There are clear contradictions in the international history of education in Afghanistan before 2001, insofar as US policies toward official educational projects in Afghanistan trained multiple Afghan heads

of state and hundreds of high-profile Afghans, while US covert educational activities engaged and trained thousands of Afghan mujahedin who became the foot soldiers and leaders of the Taliban.

The post-2001 celebration of education in Afghanistan, girls’ schools in particular, must be considered in light of complex historical cause and consequence and an international military occupation that politically instrumentalised all forms of education. At the university level, the American University of Afghanistan was the most conspicuous example of Afghan knowledge cultivation designed to fill an American political appetite, and a similarly overriding US national political motivation was evident in the provisioning of international educational opportunities, most importantly through the Fulbright Program that brought thousands of Afghan students to the US. The proliferation of girls’ schools in Afghanistan mirrors the development of the Afghan military, in that it involved additional thousands of Afghans training at military bases and schools in the US. Both American-sponsored ventures are notorious for proportionally very large numbers of ‘ghost’ soldiers, schools and students that existed only on paper. The ever-increasing volumes of misdirected US funds for Afghan students and soldiers ultimately fuelled not only ever-widening lawlessness and warlordism that characterised the US imperium in Afghanistan, but also, as the war wore on, the resurgence and growth of local support for the Taliban.

In late 2021, education in Afghanistan is being regressively reconfigured by the Taliban, while simultaneously US and other governments, American and other universities, and a sea of international non-profit organisations and security contractors, have effectively coordinated for the continuing evacuation of thousands of Afghans, women and girls in particular, to continue their education in countries all over the world. This latest phase in the international history of education in Afghanistan involves the extraction of human resources produced locally in the education sector which was a very small component of the vast global corporate–military complex that profited exorbitantly during the war.

The rule of law

The rule of law became an ideological keystone in the local war that was globally marketed as an exercise in humanitarianism and the advancement of democracy, despite abundant evidence to the contrary. To project democracy founded on the rule of law for the benefit of the Afghan people, Americans and their international allies sponsored elections at

municipal, parliamentary and national levels, police and judicial training for women especially, and many other initiatives in Afghanistan that were interlinked with major public and private US universities. For example, Stanford and New York University devoted considerable resources to rule of law programmes that attracted students, grew curricula, provided lucrative consulting opportunities for faculty and generated substantial institutional grants.

Law programmes at public institutions such as the University of Virginia created faculty positions for government rule of law practitioners with experience in Afghanistan, and coordinated with government officials to host training programmes for visiting, preponderantly female, Afghan civil society leaders. Scholars with no legal training and/or no background in or with Afghanistan suddenly began writing on the rule of law in Afghanistan, while programmes sprung up at institutional interfaces between the academy and government agencies; that is, ‘think tanks’ such as the United States Institute of Peace in particular. The rule of law in Afghanistan was a lucrative business: institutionally transformative for many para-governmental organisations and US universities, and career-advancing for more American academics and entrepreneurial Afghanistan ‘experts’.

Just as the remarkable educational development in Afghanistan from 2001 to 2021 was contextualised by and subordinated to the exigencies of combat, so was the advancement of the rule of law in Afghanistan framed by the Global War on Terror.

The vast resources devoted to promoting the rule of law in Afghanistan were contravened by a wide range of activities that transgressed the boundaries of international law and violated human rights. I am referencing a legally problematic matrix of incessant drone bombing, night raids, abductions and illegal renditions to a global network of black sites where a regime of torture took shape, resulting in the 2020 International Criminal Court indictment of the US for war crimes in Afghanistan.

War and the environment

Beyond the many legal, ethical and moral questions raised by the Global War on Terror, the conflict has resulted in irreversible long-term environmental degradation in Afghanistan and Iraq. It has involved a relentless aerial bombardment campaign that began with ‘daisy cutters’ in the north and ‘bunker busters’ in the east and south of the country in the autumn of 2001 and culminated with the largest bomb short of a nuclear weapon ever used, the ‘mother of all bombs’, which detonated in the Achin district of

Nangarhar in 2017. This 20-year monsoon of bombs in Afghanistan has carried depleted uranium into groundwater systems in the east and south especially, where birth defects among both humans and animals are now possibly endemic, as appears to be the case in Fallujah, Iraq.

At the height of the American presence there were 100,000 troops stationed in scores of military bases in Afghanistan. Each of these leaked and dumped toxins into the environment, perhaps most grievously through burn pits where the incineration of all forms of military waste including plastics, metals and oils have poisoned the topsoil near and far from the base in question. Beyond this, large swathes of Afghanistan’s agricultural landscape and vital routes of local movement have been landmined into disuse by the US and its proxies. In this regard, the US is unique among its global allies for not being a signatory to the 1997 international Mine Ban Treaty.

This slow violence reaped upon local environments is a long-term mortal threat to the physical and economic health of the Afghan people. The overweighted carbon footprint of the US military became inescapable in Kabul, which now ranks among the most polluted cities on earth, resulting in a poor respiratory health profile for the population that amplified the ravages of Covid-19. The heavily polluted surface and groundwaters of Afghanistan are becoming increasingly scarce due to climate change-induced droughts that have resulted in repeated years of famine, while deglaciation has been rapidly depleting Afghanistan’s Hindu Kush Himalayan natural water tower. The scale of water and food insecurity in Afghanistan rings an alarm call to environmental action for local livelihood security to which the international community must respond, because it is primarily responsible for this human tragedy.

Decades-long international intervention in Afghanistan set in motion an unforeseen chain of events with long-term consequences. Whether these interventions have been undertaken for the advancement of foreign ideological and political agendas, or for altruistic reasons (such the evacuation of precious ‘human capital’ – educated women and girls – by international charities and non-profit organisations), Afghanistan’s natural resources have been left damaged and depleted.

More must be done to educate constituencies and stakeholders about this unparalleled, global, war-induced catastrophe. Afghan leaders of all kinds, at all levels, in all locations, can speak with one voice about the remedial action that is necessary for the survival of all life forms in our cherished shared habitat. ■

THE SHAPE OF GREEN TO COME

The resurgence of green politics in Europe speaks of the increasingly central place of ecological justice in public consciousness

by Jamie Kendrick and Beatrice White
🐦 @GreenEUJournal

Despite achieving their best-ever result in September's federal elections, the German Greens nevertheless wanted more. Going into 2021, they were hoping that a Green chancellor would succeed Angela Merkel. Instead they will most likely make up the second-weightiest part of a three-way coalition alongside the Social Democrats and the Liberals. Elsewhere in Europe, green parties are already in power. There are greens in government in Austria, Belgium, Finland, Ireland, Luxembourg, Montenegro, Scotland and Sweden, as well as in many cities and regions. For a political tradition with its roots in protest and opposition, this is new. It speaks to the central place of ecological issues in 21st-century politics.

Europe's green parties share the common values of ecology, social justice and democracy, but how they position themselves varies, as do their relationships with power. Broadly put, green parties sit on the left of the political spectrum. But green politics is also prepared to look beyond the left-right divide, arguing not that the conflict between capital and labour has gone away, but that it is not the only cleavage shaping modern societies. Some of the larger green parties – most notably in Germany and Finland – have grown thanks to an appeal widened beyond left-wing voters and an openness to working with left and right (though never the far right). Others have entered government through developing ties to social

democracy and operating in effective left-wing blocs, as in Sweden. The new Scottish government may also be a step in that direction.

While green politics is most successful in north-western Europe, its influence is not limited to the continent's more prosperous countries. In central and eastern Europe a growing trend is for greens to rule in capital cities, as in Budapest and Zagreb, or even Prague where the libertarian Pirates hold the mayoralty. It is more marginal in southern Europe. Municipalist movements centred on democratic participation such as that which emerged in Barcelona in the years after the Eurozone crisis stand out as trailblazers.

Green politics is by no means dominant across Europe, but it is established and growing in influence. Whether it is made evident thanks to proportional representation as in Germany and the Netherlands or masked by winner-takes-all politics as in England and France, its presence reflects the shift away from binary politics towards fragmentation, with the electorate split into five or six camps. For younger voters, especially those in cities, green is often the political colour of choice. In the 2021 German elections, 23% of people under 25 voted Green, compared with 7% of people over 70.

Green parties wield real power in a Europe increasingly characterised by patchwork coalitions. At times, the kingmaker role provides outsized influence. But in situations with three or four parties

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in coalition (or seven as in Belgium), leverage is conditioned by the need for compromise, especially in the context of a strong far right.

The long march through the institutions that green parties set off on in the 1980s always entailed negotiation between radicalism and reformism. Divisions between the more idealistic fundi and the more pragmatic realo wings of the German Greens caused conflicts for decades. The Green primary for the French presidential election held in September 2021 spoke to the same dilemma: play the political game to get things done or seek to transform an unjust, unsustainable status quo. The run-off saw the eco-feminist Sandrine Rousseau pitted against the eventual winner Yannick Jadot in a debate less about policy, more about the strategic purpose of a green in politics.

In an era of pandemics and climate disasters with the role of the state swinging towards intervention, this perennial question may be part of the problem. The 2020s are pivotal for minimising the worst effects of climate change. If radicalism defaults to principled opposition, it scarcely looks justifiable. At the same time, the scale of events that the world is living through implies radical choices, even for a politics of stability and security. This path is the balance that green parties are trying to strike: using their strength to shift the status quo wherever possible without letting up on a truly alternative vision for society. They do so under the watchful eyes of the wider climate movement.

As the world looks towards COP26 in Glasgow, it could seem evident that the time for politics based on ecology has come. Floods in Belgium and Germany, fires throughout southern Europe, energy costs rising out of control, the inherently linked questions of climate, energy and the wider environment are undeniably political. This was always the point for green politics, but now that the moment is here, it brings a new set of risks.

The question of who will pay for the transition is key. Rural areas, workers in fossil fuel industries and people who already struggle to pay the bills will feel the costs more than much of the electorate of green parties. Voters may prefer to turn to social democrats willing to gamble on a slower energy transition despite the real risks of delay, or to liberals who prefer to bet on technology and the market. Far-right parties may well try to funnel legitimate yellow vest-style anger into a wholesale rejection of climate policy.

Facing these risks will require that green parties dispel the rhetorical trade-offs used to discredit their politics since its inception: social justice versus the environment, government regulation versus individual freedom, radicalism tomorrow versus pragmatism today. Dismantling these reductive oppositions will help green parties to grow beyond their current base, as well as into parts of Europe where they are only sparsely represented. If they manage, green parties can be central to European politics for decades to come. ■

POST-INDUSTRIAL SCHOOLING

We need a new model of education that gives young people the skill and understanding to address the collective challenges faced by humanity

by Joe Hall FRSA

Teachers, as with many of those working in institutionalised professions, are so wrapped up in the cut and thrust of day-to-day survival that they rarely pause to consider the original purpose of the system in which they work. When universal education was introduced in England and Wales in 1870, it was largely on the back of pressure from industrialists who feared that Britain would lose its global competitive edge without a better skilled and educated workforce. Liberals were concerned about the newly enfranchised masses' ability to choose 'wisely' at the ballot box.

Our education system was designed to meet the needs of the industrial age. In countries where industrial capitalism required innovation, entrepreneurship and captains of industry, the mantra in the classroom evolved to include critical thinking and analytical skills. In the still under-industrialised, low-wage and supply-side economies of the south, learning-by-rote and memorisation of teacher-fed 'knowledge' remain stubbornly resilient to the relative free-thinking of the liberal enlightenment. The 'factory model of education' that aims to reproduce us in the fashion of 'rational economic man' has scarcely changed in 140 years.

In her influential book, *Doughnut Economics*, Kate Raworth argues that a new model of education is urgently needed to meet the needs of the post-industrial era. Outside of education, meaningful, often fierce, debate is raging around what this might look like. The future of work, economic democratisation, sustainable ecosystems and circular economies are hot topics and our educationalists and pedagogues are starting to look stale, mute and left behind.

The potential costs of inertia could not be greater. Some hoped that the pandemic might shake schools up and realign priorities. To some extent it is still too early to say whether this is happening and there have been some hopeful signs of progress, particularly with regard to mental health and a renewed focus on student wellbeing. However, in general the conversation has been disappointing. If Covid-19 is the consequence of our increasing misuse of the natural world, and if today's generation of young people are amongst those most affected by the consequences of our flailing attempts to control the pandemic, then the inadequacy of our post-Covid-19 timidity could not be more stark.

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Eco-anxiety

Mental health may indeed be a good place to kick-start the reform process. The causes of our ongoing mental health crisis, as experienced by at least one in five (and rising) five- to 16-year-olds are complex and multifarious. However, if we look at what worries young people today, the key features of anxiety and worry paint a shocking portrait of the state of the world.

According to recent surveys by the *Financial Times*, along with increased economic insecurity and rising living costs, Generation Covid is feeling increasingly powerless, vulnerable and daunted by our collective challenges: climate change, growing inequality, conflict and threats to international cooperation. Young people are collectively experiencing a persistent niggling sense that things are not right, that the world is either at or somewhere near a devastating turning point and that, most importantly, nobody seems to be doing anything to lead us back to dry land. In some cases they are able to articulate this and define it with explanations such as ‘climate change’, ‘environmental crisis’, ‘authoritarianism’ and so on, but in most cases it simply equates to feelings of despondency,

powerlessness, insignificance and disconnect. To reiterate, this is not an attempt to explain the mental health crisis but to acknowledge some of the issues that many young people are beginning to articulate.

In their 2009 book, *Hope in the Age of Anxiety*, psychology professors Anthony Scioli and Henry Biller identify nine types of hopelessness and urge us to identify which type we are suffering from and then engage in a mind-body-spirit struggle to replace powerlessness with hope. Much of this is about changing our thinking and replacing the negative with the positive, but all nine types speak of a common language of deploying rationality to reduce our irrational tendency towards doom, alienation and abandonment. What though, of a world in which, however hard we struggle to identify potential sources of hope and progress, the overarching narrative – at least for our physical world – becomes one of tragedy, destruction, regression and devastation?

Even the most timid of reformers might suggest that Generation Covid needs a new purpose and a collective project aimed at helping it to see that change is possible. Whole-school collective activism and action planning can make young people feel powerful ▶



“It should be a scar on all our consciences that 4 million children felt powerful only by abandoning school and taking part in the Fridays for Future movement”

As the American social scientist Christina Kwauk argued in *Roadblocks to quality education in a time of climate change*, published by the Brookings Institute in February 2020, our refusal to stop seeing learners as “separate from the non-human world... is in contrast to a more radical framing of the learning crisis in terms of children’s inability to understand concepts like human dignity or to engage in planetary or relational thinking, thus affecting their ability to not only be responsible to distant people and places and past and future generations but also stewards of the environment and non-human life”.

again. It should be a scar on all of our consciences as teachers that 4 million children felt powerful only by abandoning school and taking part in the Fridays for Future movement.

When school ‘eco-councils’ in assembly halls around the world stand up on stage once a year and tell their sleepy-eyed audiences that ‘next Thursday will be World Earth Day’ and that students should come dressed in green and turn off all the lights between 9am and lunchtime, our feelings of collective hopelessness deepen. When head teachers write home to parents encouraging ‘the use of reusable plastic bottles’ or ‘car-pooling on the journey into school’, even the most disinterested and ill-informed young people know deep down that, however hard they try to imagine otherwise, there remains a vast chasm between where we are and where we need to be.

Radical reframing

Perhaps the central problem is not with these initiatives themselves but with the way in which they are ‘tagged on’ to the core (industrial era) business of our schools, side-lining them to a peripheral status along with the myriad of other initiatives rolled out every year. More worryingly perhaps, the same can be applied to school curricula. The big challenges of our post-industrial world – achieving environmental sustainability and eliminating critical human deprivation – are relegated to the fringes of ‘non-core’ subjects or, in many parts of the world, not included.

While we continue to rank and measure Generation Covid’s numeracy and literacy (both essential tools), today’s classrooms remain largely silent when it comes to the values and knowledge we will need to move into a post-carbon circular economy and society.

Environmental stewardship remains, with a few notable exceptions, relegated to subsets of geography and science curricula and very few educational systems have made it a subject in its own right. As Kwauk goes on to say, a narrow focus on climate science means that we also ignore climate justice. Addressing inertia within education itself remains a moral obligation if we are to meet our responsibilities to Generation Covid. But it is also necessary if we are to meet humanity’s urgent need to keep the rise in global warming below 2C and halt biodiversity loss, air pollution, chemical pollution, ocean acidification and land conversion.

In May 2021, Unesco said that environmental studies should be standard teaching in all schools by 2025. As Lorenzo Fioramonti, former education minister in Italy, one of the first countries to do so (although its implementation has been patchy), said: “Without faster progress on education there will be no chance of achieving the goal of net zero emissions by 2050.” The Brookings Institute has called for climate action projects in all schools by 2025. In the UK, the Labour Party recently presented a bill in parliament to introduce ‘sustainable citizenship education’ in schools from 2023. The momentum for change is out there.

The question remains whether the steps taken towards a post-industrial education system get resigned to the dustbin of greenwashing, hopelessness and inadequacy, or whether they represent a grown-up, radical and desperately needed vision for today’s realities. Governments need to engage in a radical overhaul of the fundamentals of purpose, philosophy and methodology at the heart of a stagnant system. But it would be a massive sign of progress if calls for change and proposals for action came from within, rather than without, the teaching community. ■

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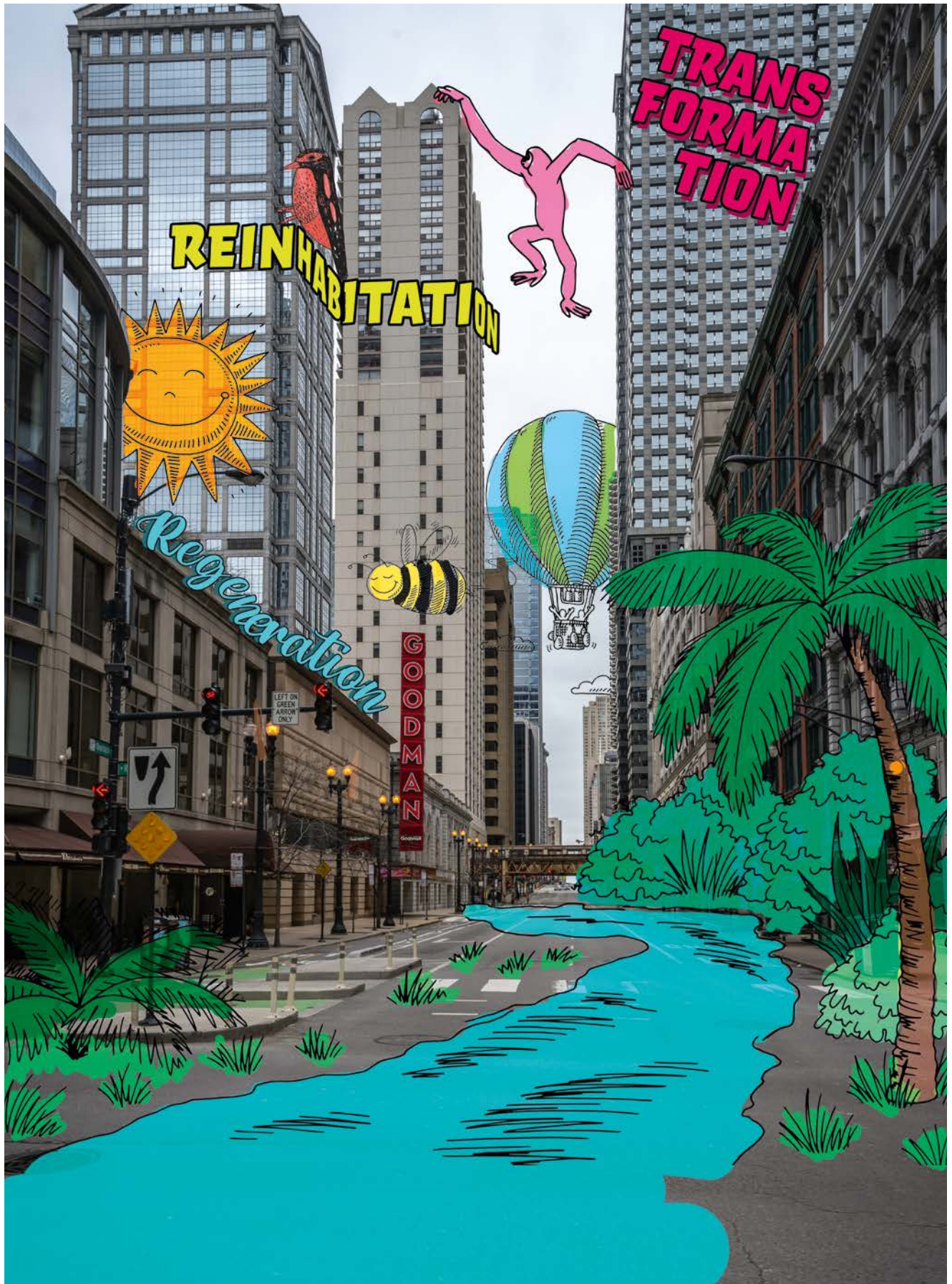
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CONSTRUCTING A REGENERATIVE FUTURE

Why moving away from constant growth and instead investing in the potential of people and places is the key to addressing the climate crisis

by Daniel Christian Wahl

🐦 @DrDCWahl

Our times call for “stubborn optimism”, as Christiana Figueres and Tom Rivett-Carnac suggest in their 2020 book *The Future We Choose*. We all owe them gratitude for their very personal effort in making the 2015 Paris Agreement possible. Since then, they have continued to stimulate action towards a transformative response to climate change. Together with the outstanding strategic work of Nigel Topping, as the UK’s High Level Climate Action Champion in the run-up to COP26, there is a basis for hope that we will see more bold and coordinated action within and across sectors after the Glasgow conference.

Pathways to a regenerative future

The capacity building work that Bill Sharpe and the ‘Future Stewards’ coalition have undertaken with industry-specific climate champions around the world by training them in the use of the ‘Three Horizons’ pathways practice, will provide a shared mental framework to address and implement systemic transformations at local, regional and global scale. We urgently need to get better at discerning how our visions of the future and our problem-solving mindset affect our individual and collective agency in working with the future potential of the present moment.

To navigate this turbulent transition and steer our path towards a regenerative future requires the capacity to listen and learn from diverse perspectives. Without the need to agree on everything, we can nevertheless learn to disagree more intelligently as we build collective capacity for transformative innovation.

The Three Horizons pathways practice developed by Sharpe and colleagues in the International Futures Forum is distinct from the ‘Three Horizons of Growth’ used by McKinsey. It allows us to collectively explore sector – or location-specific – transformations through the managerial perspective of Horizon 1, the entrepreneurial mindset of Horizon 2, and the visionary call of Horizon 3 for profound systemic and world-view transformations that will enable a viable future. All three perspectives are necessary to contribute to a regenerative future.

The human potential for regeneration

A regenerative human impact on Earth is not only possible but has been the norm for most of the deep history of our species. Oral traditions of indigenous cultures that pre-date agricultural or fossil fuel-based societies describe how human beings used to nurture abundance and diversity while actively regenerating the health of local and regional ecosystems.

Our indigenous ancestors predominantly lived as bioregionally based regenerative cultures. Scientific evidence suggests that entire forest ecosystems in the Colombian Amazon, the old growth forests of the Pacific North West and the ‘lost forest gardens’ of Europe were shaped by our distant ancestors, who nurtured these ecosystems into increased diversity, biological productivity and abundance. To this day 80% of global biodiversity is found within these ‘hot spots’ of indigenous territories around the world. To create a regenerative future we must value and ▶

Daniel Christian Wahl is a consultant and educator in regenerative development and author of the book *Designing Regenerative Cultures* (Triarchy Press)

humbly learn from the indigenous knowledge and practices that informed our regenerative past.

We must ask ourselves: how do we become healing expressions – rather than owners – of place? How do we participate appropriately as we aim to align ourselves with life’s evolutionary pattern of creating conditions conducive to life? How can we better discern which modern technologies and innovations truly support us in co-creating diverse regenerative cultures everywhere?

Are we treating symptoms or causes?

The 2021 Intergovernmental Panel on Climate Change (IPCC) report clearly states that “limiting human-induced global warming to a specific level requires limiting cumulative CO₂ emissions, reaching at least net zero CO₂ emissions, along with strong reductions in other greenhouse gas emissions”. To do so is clearly an urgent prerequisite for a regenerative future. Yet we need to simultaneously address the deeper causes underlying the climate crisis. We will fail if we structure our response exclusively around carbon emissions.

At best, addressing climate change through the carbon lens will only buy us time. At worst, techno-fix solutions and emissions trading will exacerbate the problem. How do we avoid carbon myopia and its unintended consequences? Precisely because of the urgency and the decreasing options if we get it wrong again, we should also ask ourselves: what are we missing as we focus in on carbon metrics and structure policy to stimulate emissions reduction? Is ‘fighting climate change’ the appropriate framing? Could it be that to ask ‘how do we get to net-zero emissions by 2050’ is a dangerously insufficient approach that predisposes us to potentially ignore root causes?

The deep commitment to making a positive difference by many people driving the ‘race to zero’ is not in question. Yet, it simply can’t be emphasised enough that our culturally dominant narrative of ‘separation from’, ‘power over’ and ‘ownership of’ nature creates the mistaken belief that we can manage, technologically innovate and (carbon) trade ourselves out of the evolutionary dead end we have been heading into for a couple of centuries.

As Camilla Moreno and colleagues warned in their 2015 essay, *Carbon Metrics: Global abstractions and ecological epistemicide*, published by the Heinrich Böll Foundation: “Carbon or GDP alone will not point us the way. We need to challenge our mental infrastructures, how we acquire the established foundations for our thinking. ...the all-powerful carbon paradigm can entail profound injustices. Beyond carbon, we need a multi-dimensional perspective, one which is aware of the metabolic,

life-maintaining processes of the planet, taking into account its natural limits, as well as the fundamental rights and needs of all human beings and the ground rules of participation and inclusion as we move on.”

Regenerative development does not solve global problems through scaling up universally applicable solutions. It is not aiming to deliver permanent solutions; rather, the focus is on improving our capacity to co-create and keep transforming in response to changing context. When we talk about co-creating ‘regenerative futures’ it is best to let go of the notion that we will arrive and live happily ever after. Co-creating regenerative cultures is an ongoing community and place-based process of learning.

Participation and inclusion are not just social ideals to aim for, but fundamental prerequisites for the emergence of diverse regenerative cultures everywhere. Co-creating a regenerative future is about supporting people, places and cultures to express their unique contribution to the health and vitality of the nested complexity in which we are embedded. To do so simultaneously serves ourselves, our communities and life as a whole.

The potential of people and place

Faced with the climate emergency, humanity is now undergoing a species-level rite of passage. We are challenged with nothing less than the redesign of the human impact on Earth. It is time to become mature members of the community of life and, as such, to learn how to create conditions conducive to life. Doing so appropriately invites us to pay attention to and learn from the bio-cultural uniqueness of place – community by community, ecosystem by ecosystem, bioregion by bioregion.

Paradoxically it seems that the path towards a globally regenerative human impact on Earth is one of local and regional regeneration. It is not a global problem-solving exercise, but rather an ongoing collective learning and capacity-building process of people in place. The American essayist and poet Gary Snyder called this process “reinhabitation”. We are coming home and rejoining the family of life.

Abstraction and generalisation, metrics and certification, and control and prediction are central to a problem-solving approach. This old way of working remains within the mental scaffold of what the thought leader in responsible business development, Carol Sanford, calls the “extract value”, “arrest disorder” and “do good” paradigms of modern living. To live regeneratively is to act from within a fourth paradigm that Sanford describes as: “evolve capacity/regenerate life”. An approach aimed at building capacity and manifesting the potential of



“We are challenged with nothing less than the redesign of the human impact on Earth”

people and place focuses our attention on uniqueness and specificity, qualities and trust, and participation and learning, as we aim to regenerate life.

In a conversation I had with Bill Reed, Principal at Regenes Group, he remarked “we can’t save the world, we can only save places”. For me this is an important reminder that what we do locally has regional and global effects. Just like the health of your body depends on healthy cells and organs, planetary health depends on healthy communities, ecosystems and bioregions.

To bring about the now urgently necessary transformations over the coming decades we must reinhabit the places and ecosystems we live in as a regenerative and healing presence. Humans have the potential to nurture biodiversity and heal ecosystems. If we begin to think and work over ecological time scales, we can heal many of the ecosystems, communities and places damaged by centuries of exploitation and suppression of the rights of the world’s indigenous people.

Responding to climate change is about much more than the ‘race to zero’. An adequate response necessitates becoming conscious of our deeper relationship to life as a nested, regenerative community. Life is a planetary process that has created the condition for more life to evolve and flourish over the long journey of 3.8 billion years. Our success and failure in co-creating regenerative futures will depend on our ability to realign with the syntropic evolutionary patterns of life itself – moving from competitive scarcity towards collaborative abundance.

The ReGeneration is rising!

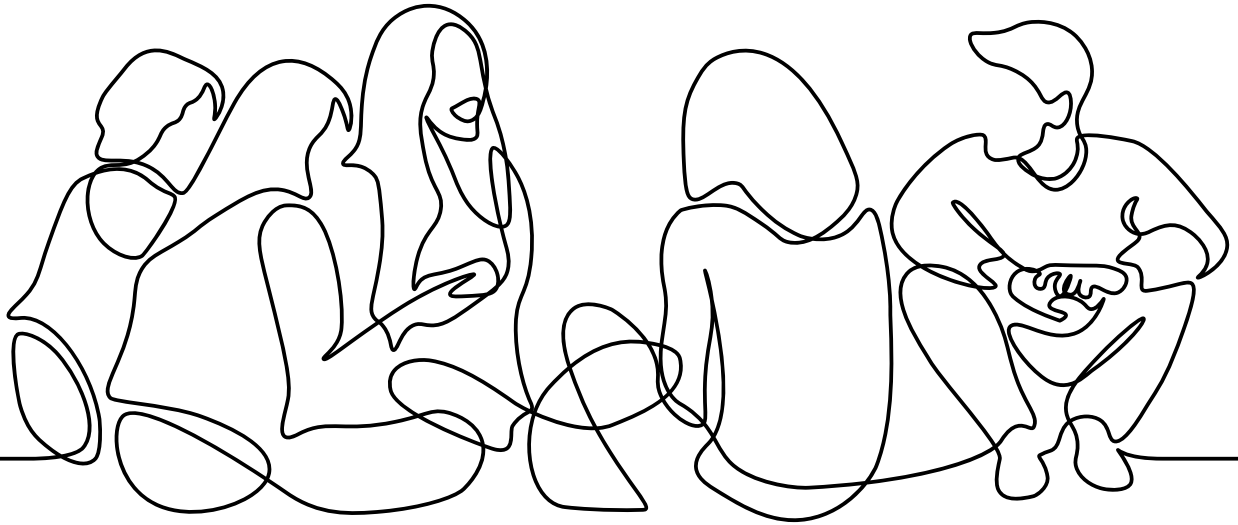
There is a basis for being stubbornly optimistic and confident that we can still choose a regenerative future. I base this belief not on denying the real and present danger that cataclysmic climate change is imminent if we don’t change our current trajectory, but in my optimism that people everywhere are connecting with the regenerative impulse.

Here are just a few of those reasons for optimism: this year marks the launch of the United Nations Decade on Ecosystems Restoration (decadeonrestoration.org) and landscape-scale regeneration projects, such as landscapes.global, are proliferating. There are national initiatives in Costa Rica (through Common Earth) and Australia’s Regenerative Songlines projects. Regenes Institute is training regenerative practitioners which have formed regional networks. Carol Sanford is supporting people around the world through her development groups for change agents.

Regeneration International is an initiative connecting the rapidly growing regenerative agriculture movement. The Capital Institute in New York has created the Regenerative Communities Network of bio-regionally focused regenerative economy projects. Kate Raworth’s Doughnut Economics Action Lab is taking regenerative economics to active citizens engaged in creating thriving places.

Many more people are offering regenerative learning journeys and programmes to link collectively into the process of co-creating regenerative cultures.

I am under no doubt that the RSA’s Regenerative Futures programme will inspire many more people to join the ReGeneration. I hope you are one of them! ■



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SHIPSHAPE

We desperately need a climate-friendly shipping industry

by Michelle Bockmann

🐦 @Michellewb_

Around 90% of the world's goods are transported by sea, yet the centuries-old shipping industry is one of the world's dirtiest (and largely invisible to most of the world's population). Nearly all of the 70,000-strong global fleet uses 'heavy' fuel oil, full of polluting compounds, consuming more than 200m tonnes annually and emitting 2.8% of the world's global greenhouse gases, almost equal to Japan's annual emissions in 2020.

The United Nations agency, the International Maritime Organization (IMO), has set targets for a 50% reduction in greenhouse gas emissions by 2050 and a 40% fall in carbon intensity by 2030 compared with 2008 levels. Mitigations such as sailing at slower speeds, using more efficient internal combustion engines and other measures such as propeller and hull modifications partially meet immediate targets. However, although the global rules also mandate that ships burn fuel oils with reduced sulphur content from 2020, many of the largest vessels have fitted abatement technology to continue burning the dirtiest fuel.

The shipping industry desperately needs to make the transition to zero-carbon fuels, yet the challenges are huge: the technology is unproven, zero-carbon fuel availability is uncertain, trillions of dollars in investment is needed, and regulators cannot agree on the pathway to meet climate change objectives. Meanwhile, no clear preference has emerged for any one fuel to lead the energy transition. Ammonia, methanol, hydrogen and battery fuel cells are expected to form part of the mix, but all have their shortcomings, and none can yet be produced in the quantities required.

Even though the first ammonia-fuelled ships are currently being built and are expected to set sail by 2024, scaling up this production will be a huge feat. For example, if all the world's vessels moved to using ammonia, the fleet would need 650m

tonnes each year: three-and-a-half times the world's current production, according to a report by US non-profit group, the Environment Defense Fund. On top of that, all of this would need to be produced using clean, renewable electricity.

Cost is another factor. Studies prepared by the Climate Change Champion's shipping lead ahead of COP26 amplify this dilemma. Some \$70 billion needs to be invested by 2025 if international shipping wants to switch just 5% of marine fuels consumed to zero-emission alternatives by 2030.

The industry is now shifting from marine oils to liquefied natural gas (LNG)-powered ships, which are said to emit 20% less CO₂, although this claim has been challenged; figures depend on the engine type and do not take into account methane emissions. Of the ships currently on order just 4.3% will use ammonia, hydrogen, methanol or battery power. Another 6.1% will use LNG.

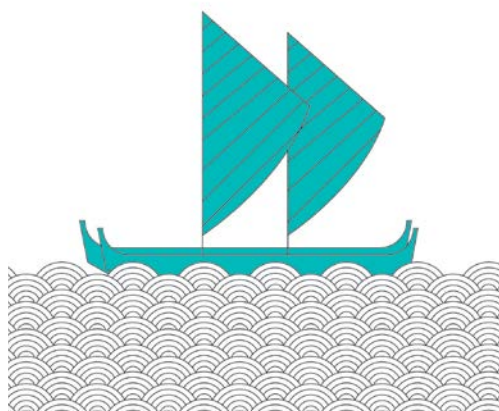
As a result, marine fuel oil is expected to retain a dominant share in shipping's energy mix over the next 20 years – the average vessel's lifespan – despite climate imperatives.

So why has the pace of reform been so glacially slow? The IMO must agree decarbonisation targets by consensus among its 174 member countries and insists a global approach is better than regional targets. This crawling pace of change means that some countries and regions are going out on their own. For example the EU's 'Fit for 55' package controversially includes shipping in its emissions trading scheme from 2023.

While regional measures will help shift the dial, we urgently need a joined-up plan from international governments. Shipping cannot clean up on its own. ■



Michelle Bockmann is a shipping and energy analyst and Markets Editor at *Lloyd's List*



PACIFIC PRACTICES

How the University of Fiji's Our Drua Voyage project teaches students the value of Traditional Ecological Knowledge

by Philipa Duthie and Shaista Shameem
 ✈ @theRSA_ANZ

The University of Fiji (UniFiji) is embarking on an ambitious project to record the traditional oral knowledge and coastal conservation practices of iTaukei (Indigenous Fijians). Named after the drua – the sacred Fijian sailing vessel – the Our Drua Voyage project is part of a global research study exploring the role higher education institutions can play in addressing and responding to climate change, beyond research and teaching. The study aims to strengthen the contribution of universities in low- and middle-income contexts and looks at how institutions can mobilise community engagement around climate risks.

Led by University College London (UCL) in partnership with the Commonwealth Climate Resilience Network, the initiative brings together universities from four nations: Brazil, Fiji, Kenya and Mozambique. These countries are highly vulnerable to the impacts of climate change and also face greater geographic and economic constraints in adapting to these changes. Each university will design and implement a local intervention to build public awareness and prompt civic action around the climate crisis. Universities in Fiji will work collaboratively to address the brief, with each institution focusing on complementary mitigation methods.

UniFiji hopes the project will build students' awareness of Traditional Ecological Knowledge practices, which have enabled coastal communities to adapt and survive for thousands of years. Students will use traditional navigation methods once employed by Pacific Island voyagers (the world's first blue-water fleets) to sail a replica drua to villages around Saweni and the Mamanucas. This journey will include interviewing members of iTaukei coastal

communities about traditional marine conservation practices and recording oral narratives on building climate resilience. The university will also provide pro bono legal services to protect the intellectual property of Traditional Knowledge holders and turn footage of the voyage into a documentary.

The project is particularly timely as, like many small Pacific islands, Fiji's Traditional Ecological Knowledge is at risk of being lost as many young people regard these customs as outdated. Indigenous Knowledge practices in the Pacific are retained and passed on through generations via oral narratives, which include valuable insights on seasonal cycles, ecological processes and the management of biocultural diversity.

iTaukei communities also face the risk of physical displacement, as rising sea levels and more severe weather events force coastal residents scattered across the country's 300 islands to move inland to higher ground, or relocate to larger urban centres. Since 2008, sea level rise and sudden-onset natural disasters have triggered the displacement of more than 150,000 people; just under 17% of the total Fijian population. For iTaukei communities, who have deep cultural and spiritual connections with their localities and depend on their immediate environment for subsistence, displacement can have severe cultural, social and economic impacts.

Traditional Ecological Knowledge has the potential to build resilience to displacement and other environmental changes by informing adaptive measures and enhancing communal ownership of climate-change challenges. This is the message that UniFiji hopes to broadcast to communities through the Our Drua Voyage project. ■

Philipa Duthie is the Director of RSA Oceania
Professor Shaista Shameem is the Vice-Chancellor of the University of Fiji

PLÉPAH PROJECT

Creating a natural and affordable alternative to plastic food packaging in Indonesia

by Gamia Dewanggamanik FRSA

📧 @plepah_id



Plépah Project works with a community of farmers and women in rural Indonesia, developing a sustainable village enterprise through the cultivation of agricultural waste such as pelepah pinang (areca palm sheath) for bio-material packaging. Currently, our project is situated in Mendis Village in South Sumatra. The initiative offers alternative solutions to reduce plastic consumption while providing opportunities for the village communities to improve their livelihood.

Our team consists of nine people with a background in design. In 2019, we began researching an alternative for single-use plastic food packaging in Indonesia, given the staggering amount that ends up in landfills, rivers and the sea. With this mission in mind, our research brought us to Sumatra where areca palm is an abundant crop. The plant sheds an enormous amount of leaf sheaths that are usually burned or discarded. We identified that these can be moulded by heat-pressing into disposable plates and packaging that can be composted over 60 days.

The project has created more jobs that allow the involvement of local communities in the production process. We have also collaborated with the village-owned enterprise and local cooperatives to ensure that the community has ownership and benefits from the enterprise. Currently, eight local people have been involved in running the workshop and the cooperative, while 50 smallholder farmers have participated in the project. Given the village's remote location, we have implemented a concept of micro-manufacturing: a small-scale, decentralised production system that is adaptable and contextually appropriate.

We manufacture our own machines, designed to be easily replicated and maintained using local tools and resources.

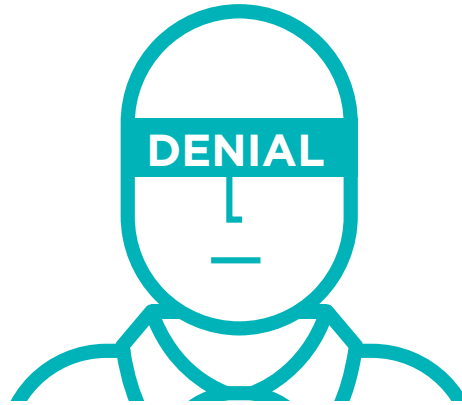
Considering the fast-growing demand for plastic substitutes, we recognised the tremendous economic opportunity in using this material for alternative food packaging, as it is both affordable and natural. The village communities' awareness of environmental issues has also increased, especially with being involved as a part of the solution. This is evident in the increased take-up of the product within the community itself. Since the Plépah Project started, the local people have shifted towards using the products, especially during community events.

The project has been implemented as a social enterprise platform, connecting the village with businesses and consumers across Indonesia. With the help of a Catalyst Seed Award from the RSA, we now aim to develop the project further and scale up our impact by strengthening the village enterprises through continuous product development, increasing community participation and facilitating partnerships with the local government. ■

Gamia Dewanggamanik is a design researcher and founder of the Plépah Project

Top tips

- Before introducing new ideas and solutions, look for ways to integrate them with what is already working at community level.
- Do not rely on replicability; find solutions and approaches that are contextually located.
- Strengthen the internal capacities of communities' and your own organisation before rushing into scaling up the business.



Why do some individuals and groups continue to deny the existence of a climate crisis in the face of scientific fact?

by Kirsti M Jylhä
 🐦 @KirstiJylhae

What is climate change denial? The phenomenon has received a lot of attention in research and public discussions over the past decade, and the concept may seem straightforward. Denial is produced and maintained purposefully through organised campaigns that spread disinformation and aim at delaying climate action. The circulated material is commonly pseudoscientific: it does not meet conventional standards of scientific credibility, but it nevertheless looks like it is science-based. In this way, the public have been made to believe that scientists still disagree on the issue.

But individuals are not just passively reacting to (dis)information. Various psychological and social factors influence which messages they find to be more reliable and attractive. For example, my colleagues and I have consistently found correlations between climate change denial, conservative ideological views and acceptance of group-based hierarchies. This supports suggestions that resistance to acknowledge climate threats reflects – at least partly – willingness to protect the status quo and a tolerance for the uneven distributions of benefits and risks of climate change.

However, is denial only about disbelief in the scientific conclusions? Even when accepting climate science, many people continue living as if climate change did not exist and we had all the time in the world to act. Indeed, we are failing to meet the climate goals even though almost all nations have signed and ratified the Paris Agreement. Also, the public expresses extensive worry about climate, and support

for mitigation efforts. For example, the Special Eurobarometer 513 survey (July 2021) reported that 93% of Europeans believe that climate change is a serious problem, and 75% believe that their national government is not doing enough to tackle it. From this perspective the persistent absence of successful mitigation efforts seems puzzling.

There are certainly gaps between how we think and how we behave. So perhaps we are all guilty of living in denial. Disregarding the consequences of our lifestyles may enable psychological wellbeing despite the distress that results from the conflict between our values and actions. On the other hand, navigating climate discourses is not an easy task. Politicians and different segments of the public disagree on how to best address climate change. Even the relevance of individual versus collective action in mitigation is debated. In the middle of these disputes, individuals may struggle deciding what to do, experience a low sense of self-efficacy and, consequently, do nothing.

So how can we fix this? From the social psychological perspective, it is beneficial to promote both individual and collective action. Societies are built of individuals, who together have a power to make large reductions in greenhouse gas emissions and influence political systems and social norms. And society influences individual behaviours. Therefore, the infrastructures and economic incitements could be designed to support and enable climate-smart lifestyle choices – also among those who today oppose climate action. There is still hope that climate change is yet another problem that humans can solve together. ■

Kirsti M Jylhä
 is a researcher in social and political psychology at the Institute for Futures Studies, Stockholm

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