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Cultural Relations Collection

An obtuse triangle: the nexus between digital skills, soft power and climate change mitigation in Georgia

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Part of **The Climate Connection**

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Foreword

The rapid changes currently affecting the Earth's environment amount to arguably the biggest story in human history so far – one that will affect every person on the planet.

The way we tell that story, the language we use and the people we engage will determine our success in minimising and mitigating its effects.

There is little dispute that action to avert catastrophic global heating is essential. But action does not take place in a vacuum. It is the consequence of data, calculation, reflection and the way in which concerned humans communicate.

So cultural relations, the art and practice of international communication as expressed through national cultural assets, has a vital (though largely unexamined) role to play.

As one of the contributors to this collection sums it up: 'Climate change is a crisis of culture.'

The study of cultural relations in the context of climate change – and perhaps more importantly, as a spur to action – is a young field, but one that needs to grow up fast.

This volume of essays commissioned by the British Council is an attempt to survey some of the thinking in the field. We've done this in partnership with researchers from a range of academic backgrounds and disciplines. These new and exciting voices had a brief to provoke and challenge as well as to illuminate – and their essays do just that.

The result is an excellent primer to a variety of approaches from a broad spectrum of authors – and subject matter from 'cli-fi' novels to the meaning of the climate strike movement.

The narratives of myth, religion and history fulfil our need to make sense of the world and our place in it. We urgently need to discover new ways to communicate our present predicament, but I believe all the cultural tools we need for the task are at hand.

The climate emergency has made a single interest group of all people on Earth. So, as well as being a moment of crisis and challenge, the period we are living through has the potential to be a time of unity and common purpose. In that fact, I find great hope.

Advancing as one global community to solve a challenge that is simultaneously paralysing in its enormity and impossible to imagine in its ultimate consequences, has never been attempted before. But that shouldn't stop us trying. Nothing else has ever been so important.

Kate Ewart-Biggs OBE
Interim Chief Executive, *British Council*

The Climate Connection Cultural Relations Collection Special Edition

The following essays are part of a special edition of the Cultural Relations Collection and part of the Climate Connection. You can find out more about the Climate Connection at www.britishcouncil.org/climate-connection

You can find this special edition and other essays in the Cultural Relations Collection on our website at www.britishcouncil.org/research-policy-insight/research-series/cultural-relations

Introduction to The Climate Connection Cultural Relations Collection Special Edition

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Three years ago, the Intergovernmental Panel on Climate Change (IPCC), an international body that brings together the world's leading climate scientists, published what is commonly referred to as the 1.5°C Report, in which for the first time ever the authors set an implicit deadline for decisive climate action. The report recommended reducing global greenhouse gas (GHG) emissions by 45 per cent by the year 2030, or in other words limiting the warming of the atmosphere to 1.5°C compared to pre-industrial levels (IPCC, 2018). Beyond the 1.5°C threshold, report authors warned, lies a world marked by 'long-lasting and irreversible' risks for our ecosystems and societies alike (IPCC, p. 36). This unprecedented clarion call for action was the IPCC's attempt to underscore the seriousness of the global climate emergency and galvanise support for aggressive GHG emission reductions at the international and national levels.

Some climate activists have found hope, or at least a silver lining, in the global COVID-19 pandemic, suggesting that reduced economic activity would dramatically curtail carbon pollution (Balch, 2020). The year 2020 did see a decrease in that respect, but not by as much as was expected (Tollefson, 2021). And while calls for 'building back better' have grown in recent months, the general sentiment is that once the virus is brought under control, economic activity will rapidly rebound along with GHG emissions. Not only that, the virus is also said to have had negative effects on climate action. Travel restrictions caused by the pandemic have made it difficult for members of the global climate governance community (governments, NGOs, international organisations, business, etc.) and for activists to meet in person and work together towards more ambitious climate goals. The postponement of COP26 in Glasgow to November 2021 is a case in point. Meanwhile, virtual meetings do not seem to be as effective as in-person gatherings (Evans & Gabbatiss, 2021).

That said, with or without a global pandemic grounding most flights and making face-to-face interactions impossible, the world's leaders have over the last three decades sought – with very mixed results – to build consensus around who should reduce their emissions, by how much, by when and at whose cost. In 2015, the Paris Agreement was hailed by some as a break to this impasse, though critics rushed to point out that the treaty had no punitive mechanisms and relied on voluntary contributions by states (called nationally determined contributions, or NDCs). Indeed, the world is currently on track to limit warming to about 2.4°C above pre-industrial levels, a far cry from the 1.5°C goal advocated by the IPPC and most environmental organisations, and that is based on national governments' pledges and targets rather than tangible progress (CAT, 2021).

It is clear that we need an unprecedented level of international co-operation to tackle the climate emergency. However, this co-operation can and should come in different iterations; effective collaboration of governments at the national level may not be sufficient to avoid the irreversible changes the IPCC warned of in the 1.5°C Report. What is needed is a global ethic of care and responsibility for the planet – a cultural change that would enable climate action in all facets of social life.

That is because climate change knows no borders and affects the world's cultures just as much as it affects our natural environments.

There is no single human or non-human on Earth that will be unaffected by the changing climate in one way or another. There is certainly some awareness that 'we're all in this together' among global leaders. After all, the Paris Agreement did away with categorising nations into those historically responsible for GHG emissions and the rest (Annex-I and non-Annex-I countries). Even the motto of the Sustainable Development Goals (SDGs) – 'leave no one behind' – has an unequivocally cosmopolitan ring to it.

That said, even though we may well all be in this together, we certainly are not equal. Different people will experience climate impacts based on where or who they are – seen from this perspective, climate change is a major socio-economic and political disruptor that can exacerbate global and local inequalities, deep as they already are. This is one of the main concerns of climate justice scholars and activists, who argue that, among other things, we need to refocus the climate debate and action towards those on its frontlines – historically marginalised communities and individuals, and countries that are disproportionately exposed or vulnerable to climate impacts despite having done little to cause it.

This is where the role of cultural relations becomes crucial. While there is no universally supported definition, cultural relations can be said to refer to 'interventions in foreign cultural arenas with the aim of enhancing intercultural dialogue and bringing about mutual benefits connected to security, stability and prosperity' (Gillespie et al., 2018, p. 5). Writing during the height of Cold War tensions, JM Mitchell (1986, p. 1) argued that cultural relations possessed great potential for fostering global stability and that 'alternative forms of international relations' lay beyond traditional diplomacy. Three decades on from the end of the Cold War, the importance of cultural relations in managing and mitigating global issues is more important than ever. It is difficult to imagine developing a global ethic of planetary care without intercultural dialogue and shared environmental and social values among the world's powerful.

However, cultural relations involves a range of actors and institutions beyond just governments, which has always set it apart from cultural diplomacy (Mitchell, 1986, p. 2). Recently, cultural relations has been harnessed in relation to a range of different issues and fields of study. There has been a 'cultural turn' in international development (Singh, 2019), English language assessment has been approached through the lens of cultural relations (O'Sullivan & Patel, 2019), and the continuing global COVID-19 pandemic has raised debate as to the implications of a shift from physical to digital cultural relations (Kerr, 2021). Despite the noted need to consider the role of culture and creative approaches to addressing climate change (Gabrys & Yusoff, 2012), efforts to address the climate emergency have seldom been considered from the vantage of cultural relations.

These emerging perspectives suggest that cultural relations has the potential to foster mutual understanding, trust and co-operation in the field of climate action. Whether rooted in exchanging global citizens' lived experiences of climate change or promoting cross-cultural co-operation in raising climate awareness and ambitions, cultural relations offers many ways to positively contribute to our planet-wide struggle to contain climate change and its impacts. However, precisely because climate change is riddled with international and

sub-national inequalities in terms of who caused it and who will be affected by its impacts, cultural relations must remain an explicitly reciprocal activity between equal partners (Gillespie et al., 2018). Cultural relations is different in this regard from soft power or cultural diplomacy, the pursuit of which can be problematic, and accused of evincing neo-colonial undertones. A cultural relations approach that is guided by principles of trust, reciprocity and equity – an approach embodied by climate justice – can act as a vehicle for sharing knowledge and experiences of climate impacts and injustices.

The six essays to follow exemplify how this can be achieved and reflect on the role cultural relations has had in shaping climate change discourse, activism and praxis. We now turn to these insightful contributions.

Overview of essays

In their essay on cultural relations and climate action, Carla Figueira and Aimee Fullman argue for the need to avoid distant, apocalyptic visions of climate change. Instead, they suggest telling 'better stories' about where we want to go and the sort of world we want to live in. They argue that cultural relations, and cultural relations organisations, can play a vital role in shaping this new framing of climate change. Figueira and Fullman discuss emerging ecosystems of care, bolstered since the start of the COVID-19 pandemic, and how a caring paradigm can be linked to cultural relations, with its focus on expanding shared knowledge, understanding and trust. Further, their essay argues that cultural engagement serves as a useful point of participation in climate action, focusing on the greening of cultural relations organisations, diversifying cultural engagement interventions, elevating programme evaluations and learning by design. They argue that cultural relations is an underutilised resource in addressing the climate emergency, and cultural relations organisations have an important part to play.

Charlotte Nussey considers the ways in which educational engagement with cultural relations offers lessons for the climate emergency, including new ideas and ways of talking and listening. Like other essays in the collection, Nussey argues that the climate emergency cannot be addressed by technical responses and innovations alone, but requires a socio-cultural response, inclusive of culture and education. The essay suggests three important connections and shifts in knowledge that are needed in (higher) education relating to the climate emergency. These are:

1. the need to break down hierarchies of knowledge and ways of knowing

2. the need to create deeper, transformative and non-extractive relationships between higher education institutions globally

3. new links between higher education institutions and the societies they are part of, ensuring that the former learn from the latter.

To better make these connections, Nussey proposes four interconnected mechanisms, drawing on intercultural engagement: art as anticipatory memory, language matters, protest as pedagogy and just participation. The essay spotlights the work of the Transforming Universities for a Changing Climate (Climate U) project, which shows the important ways that higher education institutions in the Global South contribute to tackling the causes and impacts of climate change. This example highlights the important intersections that are taking place between activism and scholarship, and touch on culture, education and climate justice.

Chloé Germaine Buckley and Benjamin Bowman discuss the School Strike for Climate, the global movement initiated by Greta Thunberg in August 2018. Rather than consider the strikes as a protest movement for a large-scale shift in climate policy, they suggest viewing them as a form of global cultural exchange. They highlight the role of three themes to make this case:

1. the role of young people's positionalities in building relationships and global solidarities

2. young people's repertoire beyond attempting to shift climate policy into wider civic activity such as intergenerational care or mental health support

3. the functioning of the strikes as a polyphonic 'text' that invites dialogue, incorporating a multitude of voices in a variety of forms.

In their essay, Buckley and Bowman interpret the efforts of young people not only as a protest against the world as it is today, but as a process that envisions the world as it could be, with all the struggles that come with bringing this view into being. The authors draw on a range of materials produced by young people, from informal protest signs to songs.

Sam McNeilly argues that climate change cannot be overcome by technological developments or engineering advances alone, because it is in fact a crisis of culture. McNeilly addresses the relative failure of communicating climate change and roots his work in the 'energy humanities' – an emergent field of scholarship concerned with the impact of the dominant forms of energy on a given society. He argues that effectively communicating the climate emergency requires increased attention to what drives it: the culture of fossil fuels. McNeilly argues against a simple replacement of fossil fuels with renewables, in favour of an ethical energy transition that involves also understanding and transforming existing cultural practices. Cultural relations can serve to ensure justice is central to shifts away from fossil fuels, and in making this point, McNeilly draws on a variety of cultural outputs, including American naturalist novels, the diary of environmental activist Ken Saro-Wiwa, and the photography and documentary work of Edward Burtynsky. As a post-fossil fuel world still exists in the realm of the imaginary, McNeilly posits that cultural and artistic forms offer opportunities to imagine routes to a just transition and a different kind of world.

In her essay on climate knowledge in the digital age, Nina Schuller invites the reader into the world of the web. As she argues, new communication technologies may be a double-edged sword – stretching outwards and bringing people closer together or being used as a vehicle for promoting certain interpretations and imaginings of the world over others. Schuller explains how digital encyclopaedic knowledge is created and moderated, using Wikipedia as a case study. She notes how our knowledge of climate change is subjected to the politics of translation on the web, with certain interests holding more influence by virtue of digital access and colonial legacies. In this context, Schuller discusses how non-Western knowledges often give way to Eurocentric epistemologies, despite some efforts by media giants like Google and Wikimedia itself to rectify this inequity. The politics of climate knowledge production on the web (and the cultural relations embedded in and shaping this process), Schuller argues, have important implications for global climate action. If generated in a top-down manner, climate knowledges and discourses can contribute to

'disinterest, disengagement and disaffection' at the local level, complicating our prospects for mitigating and adapting to the impacts of climate change.

In her essay, Jessica Gosling discusses the 'obtuse triangle' of unusual suspects: climate change mitigation, soft power and digital skills, using the nation of Georgia as a case study. She argues that digital skills, which she sees as 'vital instruments of soft power', are of crucial importance for building a low-carbon economy and prosperity in the south Caucasian country. Gosling argues that given that climate change is a global emergency, the exchange of information and technology between different cultures and regions of the world becomes crucial for climate mitigation. More specifically, she notes that combatting climate change will require solutions and connectivity afforded by digital and entrepreneurial skills which may not be sufficiently funded and developed in some regions of the world. A related concern here is the unequal access to digital education which limits opportunities for some people to effectively participate in the rapidly digitalising economy and benefit from the wealth that it generates, not to mention being able to engage in discussions on desirable climate change mitigation strategies. Gosling discusses these linkages based on interviews conducted with Georgian experts with regard to the creative industry in the country.

Taken together, the authors of the essays in this collection demonstrate how cultural relations can contribute to the goal of more equitable, intercultural climate action. They offer insights into diverse facets of society, economy and culture and how they can be mobilised for our common good. Our contributors represent different career stages – PhD students, postdoctoral researchers, lecturers and professionals – and different academic and professional disciplines, embodying the diversity of perspectives needed to combat the climate emergency, and do so before the deadline set by the scientists at IPCC.

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An obtuse triangle: the nexus between digital skills, soft power and climate change mitigation in Georgia

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Climate change confronts us with the reality of our interdependence.

Mary Robinson Foundation

The future is already here. It's just not evenly distributed yet.

William Gibson

Introduction

The transition to a low-carbon economy is an urgent issue that affects us all. Through the ratification of the Paris Agreement under the United Nations Framework Convention on Climate Change (UNFCCC), the global community has now formally accepted grand mitigation goals. Despite this, there remains a large gap between the goals of the Paris Agreement and actual real-world commitments and actions of nation-states that have ratified it. I argue that we can only close this gap if we also close the gap in understanding what climate change is and how digital skills could create necessary solutions to this challenge. This can only be done through the mechanisms of education.

Addressing climate change will require action at all levels of society. It will need to have buy-in from organisations, individuals, businesses, local-level government, national governments as well as even international bodies. As a global issue, it cannot be solved by a select few, rather it needs to foster knowledge transfer networks across all sectors. In this sense, education remains an under-used asset in the climate change mitigation toolset. Education is vital within the nexus of climate change, as simply learning from experience is learning too late. Moreover, climate justice plays an equally important role in this nexus, since a more educated population with better employment and social prospects can understand climate change more effectively.

Climate change and sustainability represent complex, dynamic systems. In turn, they require a systems thinking approach to untangle the challenges we all face. In this way, education can enable society to benefit from climate change science by transferring scientific knowledge across societal sectors. Nevertheless, one part of the education debate that isn't focused on as much as it should be the power that the creative economy, in particular digital and entrepreneurial skills can be used as a vehicle to enable climate change mitigation. Indeed, if we turn to the creative economy, digital skills and entrepreneurship, we can see how wider systems thinking approaches can be implemented. When it comes to climate change, digital, entrepreneurial and business skills are often misunderstood. These areas play an important role in addressing climate change challenges as well as any part of any country's soft power dynamics, especially in the run-up to this year's United Nations Climate Change Conference (COP26).

In a time of rapid globalisation, numerous countries have begun to understand the combination of culture and commerce that the creative industries represent is a powerful way to engage abroad (Newbigin, 2014). The creative economy contributes over three per cent to global GDP, making it a powerful emerging economic sector (UNCTAD, 2019), further strengthened by a surge in digitalisation and services. Nevertheless, digital and entrepreneurial skills are commonly associated with the lens of soft power. However, I argue they are vital instruments of soft power. This essay will

compare digital skills and entrepreneurial skills in Georgia through this lens to map out how this area of soft power could be used as a vehicle to enable climate change mitigation. Georgia offers a unique case study due to its continuing efforts to combat climate change and create a more educated society employing digital skills and entrepreneurship, as well as fostering its prosperity.

Digital economy, skills, and entrepreneurship

We live in a time of immense opportunity equated with risk. We have the potential to connect billions of people through digital networks and therefore increase the productivity of our businesses/organisations while effectively regenerating the natural environment (World Economic Forum, 2021). Widespread literacy, unparalleled interconnectivity, the highest income *per capita* to date, railroads, energy, modern mobility, air travel, and so much more are only a few of this society's achievements. The term 'fourth industrial revolution' (or 4IR) is becoming more common, but it isn't necessarily understood in terms of digital skills, entrepreneurship or climate change.

On a broader scale, the UN reports that the digital economy is worth anywhere from 4.5 per cent to 15.5 per cent of global GDP (UNCTAD, 2019). The European Commission (2021) found that five core dimensions are directly important in creating a successful economy; these include connectivity, human capital/digital skills, internet use, digital technology adoption, and digital public services. The digital economy has incredible power to promote prosperity, offer better education and ultimately foster economic diversification. As a result, the importance of taking the digital economy seriously cannot be overstated. Nevertheless, the rise in carbon emissions from the digital industries does pose questions concerning the ethics of the sector.

According to estimates, the current division of labour between humans, computers and algorithms will generate 133 million new jobs by 2022 (Ekholm & Rockström, 2019). With a cumulative total of $3 trillion, digitally deliverable service exports accounted for half of all service exports (FutureLearn, 2020). Big data analytics, app- and web-enabled industries, and the internet of things are some of the most in-demand skills within this. The future of digital work depends on more than tech skills, soft skills are vital in the 21st century (Abere & Constantinides, 2021). Tech skills, as well as entrepreneurial skills, are critical in the digital economy and for being successful within the modern world. Yet, digital competencies, soft skills and access to new technologies, however, are not equally distributed among regions and groups (United Nations, 2018, p. 10). In turn, as conventional conceptions of employment are disrupted, for countries to ensure their prosperity, investing in digital and entrepreneurial skills is vital.

Digital skills have been defined as the ability to use digital devices, communication applications as well as networks to access and handle information (UNESCO, 2018). As a term, it includes a wide spectrum of abilities that underpin significant parts of business, work and education today. The most basic level of skills is what the Department of Education refers to as digital foundation skills (Department for Education, 2019). According to the UK User Digital Index 2020, an estimated 16 per cent of the UK's population

(some nine million people) are unable to use the internet and a smartphone independently (Lloyds Bank, 2021). At the same time, 22 per cent of people in the UK lack the necessary digital skills for daily life (Lloyds Bank, 2021). Indeed, as the world shifts to a more digital age, the need for digital skills will only grow. However, although the UK's example exemplifies the worrying situation inside the developed world, the figures for developing countries are much worse.

We have seen that the significance of digital abilities cannot be overstated. Research suggests that by 2030, 75 million to 375 million workers, symbolising 3–14 per cent of the global workforce, will need to change professional categories (United Nations, 2018, p. 12). Professional networks are an important part of building digital workforce capability because they enable diverse groups of people with shared interests to come together to effect change at different levels (OECD, 2020). Digital skills are a prerequisite for any professional due to the growth of technology and its position in our society. As a result of the widespread adoption of technology, digital skills have become indispensable in the workplace (OECD, 2015). Learning and improving technical skills is just one aspect of digital growth. To get the best out of technology, we also need the acquisition of information, beliefs, attitudes, rules and ethics regarding ICT. They often include critical thought and the responsible application of data collected by technological means.

Entrepreneurial abilities are just as important as digital skills. Entrepreneurship, according to Omoruyi et al. (2017), is described as an individual's or a group's ability to create or discover opportunities and exploit them for the benefit of economic well-being.

It is well understood how widespread entrepreneurship's economic impact on a nation can be, especially in terms of prosperity. It generates job opportunities, shapes the political and social climate, and helps a country's competitiveness to develop. Developing leaders with the skills to guide organisations during these drastic changes is crucial (Artley, 2018), especially in terms of entrepreneurship capacities. We are living in extraordinary times, and anyone who works in a professional capacity must be willing to adapt. The truth is that our current jobs can and will look very different in the future. As a result, educational and training programmes become increasingly necessary.

There is a link between the digital economy and climate change, based upon the notion of economic growth and prosperity. For some, economic growth is not harmonious with mitigating climate change. The rise in energy and resources needed within the digital economy to ensure it flourishes is concerning for many. Nevertheless, if countries across the world build on green energy options, it would allow for new opportunities. At the same time, there is also an argument about whether those from wealthier backgrounds will necessarily care about the continuing climate issues. The one clear thing is a more educated world can navigate climate change issues, and this can be done through digital skills.

Climate change and building a low-carbon economy

Climate change is hastening environmental deterioration and increasing the frequency and severity of extreme weather events, to name only the most significant consequences (United Nations, 2020). Vulnerable populations

are disproportionately impacted by both incremental environmental deterioration and unexpected disruptions such as hurricanes and floods. Infrastructure, livelihoods, resources, health and even the loss of lives and homes are all affected in different ways across countries and population groups (United Nations, 2020). Climate change has an impact on both the prevalence and depth of poverty (United Nations, 2020), adding to global inequality. Depending on the impact scenario, the UN estimates that between three million and 122 million people will slip below the poverty threshold as a direct result of climate change by 2030 (United Nations, 2020).

Globally, connectivity will be a crucial enabler for many, if not most, exponential climate solutions (Ekholm & Rockström, 2019). Ekholm and Rockström (2019) further found that the digital technology sector is the world's most powerful influencer to accelerate action to stabilise global temperatures well below 2°C. The digital sector is already well on track to reduce its emissions, which represent 1.4 per cent of the global total, and it could cut global emissions in half by 2030 while driving exponential growth in data performance (Ekholm & Rockström, 2019). At the same time, the digital sector can also take a strong lead in accelerating demand for 100 per cent renewable energy. The economy in 2050 is going to look hugely different irrespective of a net-zero emissions target, with artificial intelligence, big data, digitisation and ever-greater automation transforming how we create wealth and jobs (ECIU, 2021).

A low-carbon economy (also known as a decarbonised economy) has arisen as a way of fighting climate change (Suttie et al., 2017). For some, it is a green ecological economy based on low energy consumption and low pollution (Chen & Wang, 2017). It is fuelled by low-carbon energy sources that release the fewest greenhouse gases (GHGs) into the atmosphere (Pachauri & Meyer, 2014). Low-carbon economies deliver a range of advantages across all levels of society (Leds Global Partnership, 2016), including ecosystem stability, commerce, housing, well-being, energy protection and industrial productivity. A low-carbon economy is the vital step in the process towards a zero-carbon economy (Suttie et al., 2017). On a global scale, supporting a low-carbon economy could have significant benefits for both developed and developing countries (Koh, 2018), especially when it comes to connectivity and the digital economy.

Transitioning to low-carbon, environmentally and socially sustainable economic economies is a complicated process, especially when we look at the lens of connectivity. This change can act as a strong driver of job creation, job upgrading, social justice and poverty eradication (Leds Global Partnership, 2016). There are other powerful trends at play that will reshape the skills needed for businesses of the future. Automation technologies are considered among the most important of these trends, with estimates that they could displace up to 30 per cent of the global workforce by 2030 (Hawksworth et al., 2018). Indeed, technology is developing at a rapid pace, yet access to such resources remains a privilege. Though we are more connected than ever before, it matters where you are geographically located. Those located in countries with advanced infrastructure or more industrial-focused locations will have access to different opportunities than others. Around 45 per cent of the world's population do not live in urban places (World

Bank, 2018), highlighting the vulnerability of almost half of the global population. We must ensure everyone can fairly access the digital economy in light of how fast-paced technology is moving. Therefore, it follows that digital and entrepreneurial skills will be even more crucial in the future.

New technology has tremendous potential for addressing the environmental crisis, but it also has risks. Emerging technology's benefits are widely recognised; a 2019 report by the Global Enabling Sustainability Institute (GeSI) and Deloitte found that, by 2030, emerging technology could positively impact 103 of the 169 UN Sustainable Development Goal (SDG) targets. Indeed, it has the enormous potential to improve mobility and transportation flows, increase energy efficiency and demand, support innovative ways of working, and help start new businesses.

Nevertheless, the quest for developing such new technology has consequences, like the current situation with cryptocurrency. According to the Cambridge Center for Alternative Finance (CCAF), Bitcoin, a form of cryptocurrency, currently consumes 0.55 per cent of global electricity production (Carter, 2021) – roughly equivalent to the annual power usage of small countries like Malaysia or Sweden (Carter, 2021). There is a nexus between the role of creating new technology, being innovative and meeting obligations to climate change mitigation efforts. Within this, the role of big tech companies should not be forgotten, as they are some of the largest exporters. Nevertheless, some of the biggest players have committed to being carbon negative by 2030, including Apple, Facebook and Microsoft (Apple, 2020; Facebook, 2020). Microsoft's ambition goes one step further. By 2050, they seek to be net-zero on all carbon produced since the inception of the company in 1970 (Smith, 2020). The role of new technologies will only become more vital, as they support new business, drive new opportunities and increase growth, yet the consequences, if not kept in check, could have disastrous impacts on us all.

Education will play a vital role in mitigating climate change risks in all sectors of society (University of Helsinki, 2019). Yet, it remains an overlooked opportunity to bring about real and sustained change in the fight against global warming (Ledley et al., 2017). People need to acquire the knowledge, skills, values and attitudes they need to build a green, low-emission and climate-resilient future (UNESCO, 2019). Education can change behaviour in countries of all sizes (Kanbur, 2020) and empower people to achieve environmentally sustainable development (UNESCO, 2019). Education plays a pivotal role in ensuring that communities are not only informed, but also have access to a variety of job opportunities. To empower the next generations, we need leadership from governments, international organisations, the private sector and civil society (UNESCO, 2019). As private and public sector debates about climate change continue, one thing is certain: the effects of climate change in the natural, social and economic realms will continue to mount unless co-ordinated mitigation and adaptation measures are taken.

Education has the power to become a strategy of adaptation to climate change issues. Yet, new technology and the digital skills needed to keep up in an increasingly digital world are often ignored in this space. The income disparity between the richest and poorest ten per cent of the global population is 25 per cent higher than it would be in the absence

of global warming (United Nations, 2020). Countries can achieve greater economic growth by prioritising the creative economy as the global economy shifts toward more digital knowledge and transformation (Seminario & Kohan, 2020). Within this new environmentally focused economic model, individuals will need green skills to answer the demands of a different job market (UNESCO, 2019). This combination will then become part of larger mitigation and adaptation efforts (Mary Robinson Foundation, 2020). As a result, we must adopt a new and respectful paradigm of sustainable development, a circular economy, and support low-carbon, climate-resilient strategies for the poorest people.

The rise of digital skills and entrepreneurship in Georgia

Georgia is a relevant and interesting case study to reveal the strength and weakness of its path to digital skills. Georgia offers a unique case study due to its continuing efforts to combat climate change, and to create a more educated society through the lens of digital skills and entrepreneurship while fostering prosperity.

In 2004, Georgia implemented a liberal economic agenda, lifting regulatory hurdles and lowering tax burdens (Lashkhi & Obgaidze, 2018). Georgia has been recognised as one of the leading reformers in recent years, according to the World Bank's Ease of Doing Business Survey, ranking seventh out of 185 nations (World Bank Group, 2020, p. 5). The Georgian economy includes significant strength in certain sectors, especially in industrial facilities and small- and medium-sized businesses (SMEs) (OECD, 2021). For many years, environmental issues have been on the government's agenda. The 2014 Socio-Economic Development Strategy *Georgia 2020* highlights three main economic development concepts. Both include the prudent use of natural resources, as well as the protection of the atmosphere and its long-term viability (Government of Georgia, 2014).

Georgia is now incorporating climate and environmental issues into its overall sustainable growth approach. A Green Economy Strategy, led by the Ministry of Economy and Sustainable Development (MESD), is one of these initiatives. The 2016 Green Growth Policy Paper, produced in collaboration with Deutsche Gesellschaft für Internationale Zusammenarbei (GIZ), outlined the paths for the implementation of this plan (Ministry of Economy and Sustainable Development of Georgia, 2017). Analytical work to help the plan considers three key industries (construction, agriculture and tourism) and their interconnections. In the middle of 2017, Georgia finalised its Low Emission Development Strategy (LEDS). It was developed with the assistance of the United States Department for International Development as part of the Improving Ability for Low Emission Development Strategies Initiative (Pkhaladze, 2017). The LEDS seeks to assist Georgia's transformation to a low-emission economy through a variety of means, including establishing targets and appropriate policies, and laying out the requisite legal frameworks (Pkhaladze, 2017; OECD, 2021).

Regulation system completion and alignment is an area that the OECD has identified as a place of opportunity for further growth for Georgia (OECD, 2021). Georgia has several mechanisms directing prevention and energy efficiency policy at the national and sectoral levels. Adoption of pending policies and initiatives, as well as the implementation of energy efficiency output or other environmental factors, may aid in

the development of SMEs) markets for green products and services (OECD, 2021). At the same time, SMEs which don't engage in digital are placing themselves in an increasingly vulnerable position (Good Things Foundation, 2019), and this is true for Georgia. Therefore, researching how widespread digital skills and entrepreneurship skills are working (or not) in the country is vital.

While new technologies create new jobs and development opportunities, they also increase the demand for digital skills and competencies. In turn, in the context of Georgia, the benefits of expanding the digital and entrepreneurial skill base in Georgia offer unparalleled economic opportunities. Addressing the gaps in capability across sectors and segments within Georgian society is crucial for everyone to adapt and benefit from technological advancements. Much like other countries, Georgia faces a challenge between the abilities, skills and knowledge of young people entering the workforce and the attributes that employers are seeking. At some level this could be in part due to the sheer generational skill divide within Georgian society today: as the older generation remains in the workforce and has greater workplace decisions, the younger generation is at a disadvantage as digital skills and entrepreneurship aren't that well known among older demographics. Expanding such capabilities is not limited to the workplace or professional spaces. It allows individuals to participate on social and civic levels within society. Within Georgia, a significant number of governmental services operate online, including the transport system, online banking and so on. Therefore, digital competencies become an essential skill to ensure effective participation within Georgian society in the present day and the future.

Entrepreneurship and digital skills are dynamic fields that lead to job creation, economic development, and creativity. At the same time, digital competencies and the building of complementary skills such as complex problem solving, critical thinking and creativity are imperative to creating the versatility needed for the modern and future requirements for the workforce. Going forward, when trying to equip the next generation with complementary soft skills, it is also crucial to develop analytical and rational thinking practices, especially in the case of problem-solving and decision-making capacities. Moreover, with the increase of the platform economy, soft skills for digital entrepreneurship are ever-more important for individuals to benefit from the digital economy (UNCTAD, 2019).

A fundamental component of the digital capability within countries is their digital infrastructure. Countries which have good infrastructure and also have the required capabilities will be able to take advantage of the development opportunities offered by technological advancements. It is imperative to fund capacity-building activities to reduce the digital divide, and this is something Georgia has been undertaking. The Ministry of Culture and Monument Protection of Georgia discovered that the artistic industries in Georgia have a favourable development market, resulting in increased production of higher-quality, competitive products/services (the Ministry of Culture and Monument Protection of Georgia, 2016), of which digital showed incredible opportunities. The Ministry of Culture's flagship plan, the Culture Strategy 2025, intended to create a supplementary public policy to develop cultural industries through a range of mechanisms. In 2018, the Georgian government founded Creative

Georgia, a new public body to focus on maximising the impact of the cultural and creative industries. Under this lens, Creative Georgia's main aim was to help with public awareness programmes, the production of new educational opportunities, the advancement of creative incubators, and export stimulus, among other items.

Georgia faces many barriers in truly appreciating and promoting the full potential of emerging digital skills and entrepreneurship. The country's unemployment and poverty rates are already high, and growing industries are more vulnerable and hence need more assistance. At the same time, the country's low cultural intake highlights internal geographical and social imbalances, with Tbilisi, the capital, attracting special interest. Furthermore, since technology, culture and the creative economy are often insufficiently connected, there is a difficulty with communication, and micro- and small companies continue to face major financial difficulties.

Georgia faces many obstacles in building an entrepreneurial environment, according to a study on start-up funding released by Tbilisi's Business and Technology University (BTU). This involves fine-tuning the legal system and implementing flexible taxes, establishing/improving start-up infrastructure, commercialising research and development, and creative ventures, providing foreign market access, having quick access to capital, and acquiring entrepreneurial skills and competencies (Lashkhi & Obgaidze, 2018). Overall, we can see a low degree of understanding of digital skills and entrepreneurship in Georgia, as well as its potential (Farinha, 2017). There is a strong need to further innovate business education and skills. Nonetheless, organisational and leadership capabilities, as well as the ability to respond to business shifts and demands, are missing in arts education and training. Lifelong learning is in high demand in Georgia's arts and cultural spaces. At the same time, there is a strong desire to broaden the scope of current public programmes across the country.

In Georgia's school environment, applying and improving creative thought, innovation and digital capabilities is a big challenge. Entrepreneurial skills remain under-appreciated at both the vocational and formal educational stages, and there are few chances to learn them (Lashkhi & Obgaidze, 2018). Entrepreneurial research has been effectively incorporated into the undergraduate and postgraduate curricula at BTU. However, the country's shaky and unsystematic skill-based technical education stands for limited resources and non-systemic services (Lashkhi & Obgaidze, 2018). Business incubators and accelerators are the most successful way to learn how to run a business. In this regard, the world's biggest accelerator, 500 Entrepreneurs, has already started operations in Georgia; in addition, the US Embassy and Georgia Innovation and Technology Agency (GITA) are funding a Venture Elevator scheme, as well as other pre-accelerators, to aid start-ups in thriving internationally.

There is a tremendous opportunity to unlock Georgians' potential by engaging with their digital and entrepreneurship talents. On the other hand, the gap between policy and civil society must be addressed first. Simultaneously, at all levels of society, a broad-based curriculum campaign emphasising creativity, critical thinking and digital skills is needed.

Elene Toidze, Head of the Creative Industries at Creative Georgia, noted:

> *Developing technical and entrepreneurial capabilities would provide Georgia with unrivalled prospects at all levels of society. Creative Georgia, in cooperation with the British Council, is working tirelessly to ensure that Georgians truly realise and understand their potential in this room through mechanisms such as Creative Spark. Education has the ability to stimulate growth and still increase competitiveness.*

For this essay, I carried out my research in Georgia, conducting organised interviews with cultural practitioners, government officials, and various sector bodies to gain a thorough understanding of the problems that exist on the ground. I conducted five organised interviews with significant stakeholders. In addition, I developed a questionnaire to investigate the challenges Georgians face in terms of digital and entrepreneurship skills. The questionnaire was created and distributed through a variety of networks (business, academic and social). The questionnaire is available in both Georgian and English, and it includes several qualitative and quantitative research options. A total of 62 people took the time to fill out the survey.

When asked, 'How important do you think digital skills are?', 96.7 per cent of respondents said, 'Very important'. When asked, 'How important do you think entrepreneurship skills are?', 46.7 per cent of respondents said, 'Very important'. Following that, 33.3 per cent chose 'Important', while 16.7 per cent chose 'Medium importance'.

The levels of digital skills among all the participants were interesting; 100 per cent of participants said they had a medium or above level of skills. When these figures are broken down, 40 per cent of participants believed they have advanced digital skills, while 60 per cent believed they have medium skills. However, entrepreneurship skills fared very poorly in comparison, with 20 per cent of all participants not understanding what entrepreneurship skills meant. Only two participants claimed to have advanced entrepreneurship skills, while ten claimed to have only basic entrepreneurship skills. The most significant challenge that regular Georgians face when it comes to digital and entrepreneurship skills is a general lack of understanding, which was mentioned by 70 per cent of all participants. The second most significant barrier was a lack of funding, which was noted by 67.8 per cent of participants, closely accompanied by social stigma or problems, as well as a lack of government support.

Not understanding both terms and the wider context around them means that Georgians have yet to fully realise their full capabilities. At the same time, it also has a direct impact on how people communicate and collaborate in all parts of their lives. From a perspective of business or education, having outdated ways of operating could lead to siloed ways of working and tunnel vision, even if there is interest in being globally focused. Moreover, it has a direct impact on people and organisations not being able to access resources or opportunities, including even financial aid. In addition, while generally digital skills are understood more, there remains a generational gap. Younger Georgians are much more comfortable compared to, say, the older generation. This is a wider challenge:

within the working demographic, the older generation is more likely to be in work. If the older generation cannot understand digital or being innovative, then they won't be able to connect with new audiences, for example.

The financial impacts and reality are a serious one in Georgia, as you can't create something out of anything and goodwill only gets you so far. The National Statistics Office of Georgia found that 20.1 per cent of Georgia's population is under the absolute poverty line, according to the latest data of 2020 poverty indicators (National Statistics Office of Georgia, 2021). More to the point, the average wage is $400 a month (Agenda.ge, 2021), meaning that the opportunities and risks regular Georgians are willing to take can be limited. In addition, from a cultural perspective, going it alone to be an entrepreneur can easily be misunderstood among the population, as the term entrepreneurship itself is not widely understood. Likewise, innovation remains a challenge within Georgia. For one participant, they noted that: '[The] Georgian education doesn't foster innovation. We need more educational opportunities that foster creative thinking, especially at a vocational level.'

The foundation of widespread digital skills remains a challenge within Georgia. Another participant argued that:

> *Even though there are special state investments to support entrepreneurship, they focus often on medium and large businesses, tourism and agriculture and or digital businesses and start-ups. And the problem with digital and innovative businesses might be that Georgia still lacks the foundation and necessary skills needed to really act as a snowball and activate the digital start-up ecosystem within the country. This ecosystem is still in its initial stage and lots of work needs to be done in this direction. Also, I think there is a lack of interdisciplinary connections and experiments that would spark new innovative and creative ideas.*

At the same time, education remains an untapped resource in ensuring people within Georgia have the digital skills they need. For one participant, they noted that:

> *Education plays a vital role in the prosperity in Georgia. Being able to foster digital skills and entrepreneurship, offer opportunities of innovation, can allow our country to build better mechanisms to be a low-carbon economy.*

Moreover, a low-carbon economy is the future for Georgia. Within this, one participant noted:

> *Digital skills and entrepreneurship are a very important part of this as it allows for the diversification of our society. I think especially for SMEs it can be a challenge.*
>
> *Georgia has undertaken a range of reforms to modernise and revitalise our economy, with the understanding that both pollution and climate change are top threats to our development. A core part of this is applying opportunities to finance for climate action, it benefits the environment, creates business opportunities including job creation. In turn, contributes to both a stable and inclusive economic growth of Georgia. However, without a population that has knowledge of digital and entrepreneurship skills, we will never be able to keep up. Both of these skills remain core to climate mitigation efforts and also efforts to become a low-carbon economy.*

It is clear to see there is a significant understanding of the role of climate change among Georgians. However, the impact and effect that innovation skills (low levels of entrepreneurial skills) could have on Georgian society haven't been fully realised. There remains a need for higher digital skills, at some level – greater elite options for professional qualifications perhaps. Forging better business opportunities, for example business education at the university level, would help Georgia fully realise its impact.

In terms of soft power vehicles, the British Council in Georgia is a successful example of international collaboration in improving digital skills and entrepreneurship in the region. The Creative Spark programme is a five-year project supported by the UK that aims to develop Georgia's entrepreneurial skills and creative economy by fostering international university and institutional collaborations (British Council, 2019; British Council, 2021). The programme also emphasises English language skills, career quest, brand development and creative thinking (British Council, 2019). As a result of this (British Council, 2019), the programme established 35 international institution partnerships, including with Henley Business School and others.

Within Georgia, a lot of infrastructure is already online. From transportation services to online banking and even telecommunication service terminals, everyday life requires digital skills. It is clear that digital skills are understood within the younger generation; nevertheless, challenges remain among the older generations. Across the whole cultural and creative industries sectors, digital skills are in high demand, as entrepreneurship skills would be if they were better understood.

Concluding thoughts

Embracing the power of education is vital if we want to fully realise the commitments of the Paris Agreement. Since the beginning of the pandemic, increased engagement in a virtual setting has only strengthened the need for digital skills. The pandemic has shifted how we work, live and interact with one another: we now do it all online. More than ever businesses and consumers were able to 'go digital', which has mitigated some of the effects of the pandemic. Yet, without digital, and in turn, entrepreneurship skills, this would not have been able to happen.

Grand climate change mitigation goals are all well and good on paper, but if the gap remains between such goals and real-world promises by countries, then we will get nowhere. Ensuring that power comes from green sources and supports the green economy will be vital in ensuring that countries build back better and in a capacity that enhances resilience to climate shocks. Doing so has the power to foster prosperity among populations as well as enable the transition to a low-carbon economy, offering a diversification of income as well as better education opportunities. This can be seen in the case of Georgia. It is clear, from this questionnaire and the literature reviewed, that Georgia is on the right path.

Climate change affects us all, and closing the gap can only be done if we cement understanding of what climate change is and how digital skills could create necessary solutions to this challenge. The problem lies in insufficient digital skills and entrepreneurship skills, which then hinders the unleashing of these skills to benefit a transition to a low-carbon economy. The digital economy and the skills required to thrive are not necessarily

understood under the lens of education, climate change and soft power. The digital economy will face some challenges before it can be fully welcomed as a climate change mitigation mechanism.

Georgians are more digitally savvy than ever before, yet there are gaps in creative thinking and innovation skills – specifically entrepreneurial skills. These play a crucial role in fostering innovation and establishing new businesses while offering economic benefits that can be seen across the whole of society. Software skills are essential for a lot of the work of the 21st century, but individuals need a variety of skills. The use of recent technology and skills will help climate change mitigation, as the population will be more empowered and have more of a voice to articulate their wants and needs. As an added value, the fortification of digital skills within Georgia will also increase Georgia's level of desirability and overall soft power impact.

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Concluding remarks to The Climate Connection Cultural Relations Collection Special Edition

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The 2021 United Nations Climate Change Conference (COP26) will take place in Glasgow, the 'second city' of the British Empire, and be hosted by the UK, the birthplace of the modern fossil economy. This moment therefore provides pause for looking back at the historical roots of the current global climate emergency. Since 1995, with the notable exception of 2020, the COP has provided a vital opportunity for global leaders and decision makers to meet and deliberate on how to jointly govern our common atmosphere. Yet the COP is much more than just a gathering of high-profile figures. The deliberations and decisions made at the COP are a result of and testament to the commitment of thousands of people – scientists, public servants, administrators and others – who are hard at work behind the scenes in between the annual COP meeting. After all, there is only so much progress that can be achieved during the two weeks that the COP tends to last. The biannual Subsidiary Bodies meetings and the Intergovernmental Panel on Climate Change (IPCC) process are perhaps the clearest examples of these crucial interactions constantly taking place in the background. These backroom meetings, conversations and exchanges of information between state delegations, international organisations and the United Nations Framework Convention on Climate Change (UNFCCC) Secretariat all depend on mutual trust, understanding and observance of certain rules. In essence, they are cultural relations.

Similarly, it is not only public officials and diplomats that gather at the COP. The global climate is too important to be left to state governments and international bodies alone. That is why each COP invariably spurs a blossoming of civil society activity both in the run-up to and during the conference itself. Marches, workshops, meetings, sit-ins and 'die-ins', speeches and many other forms of civic engagement (and sometimes disobedience) are offered during various side events and alternative summits organised by the likes of the Climate Action Network, 350.org, the Indigenous Climate Network, the Climate Justice Alliance and Extinction Rebellion. These bring together activists, academics, policymakers, business leaders and other members of the public, often with the explicit goal to further the principles of climate justice and human rights. These, too, are cultural relations.

What this means is that global climate governance is actually underpinned by cultural relations. If we want to address the planetary emergency of our atmosphere, we will need to rely on cross-cultural exchanges to foster mutual trust and understanding – not just during COP meetings, but throughout the next decade or so, which according to the IPCC will be absolutely crucial in determining the extent of irreversible changes to the Earth's climate system. In other words, we argue that the climate emergency is, in many ways, also a cultural emergency. It is a common misconception that the deployment of technology, funding and science will do the trick to solve the climate conundrum. In reality, these are just tools at our disposal – cultural relations can help us use them both more effectively and equitably.

Indeed, the sticking points of global climate negotiations – beyond the usual and more technical bickering over access to funding and technology – have long been about the historical responsibility of certain countries for emitting the bulk of greenhouse gases. These countries, like the UK, are

predominantly in the Global North, meaning that international debates often descend into arguments over the compensatory or corrective measures these countries should take given the disproportionate effects of climate change impacts on countries in the Global South. The right to development of many countries in Africa, Asia, Latin America and the Pacific is seen as a *sine qua non* for their governments, while leaders from the Global North insist that this development must be rooted in sustainability rather than focused on economic growth alone (which is not to say they do not often pursue this latter strategy, themselves). From this complicated dynamic emerges a picture of global inequality, not simply as part of a North–South divide, but also within regions and countries. With these inequalities, climate justice emerges as an important goal for making international climate governance more legitimate and effective.

The question this collection of essays has tried to answer is: how could cultural relations contribute to solving the seemingly unsolvable impasse when it comes to addressing the climate emergency? If, as we argue here, the success of the UNFCCC at least partially depends on the extent to which cultural relations can foster a climate [sic] of trust and mutual understanding, thus helping to resolve the issues of global climate injustice, then the arguments found in this collection's six essays can point us in the right direction towards resolving the thorny question of climate inequity and injustice. Below, we tease out how each of them does so.

Carla Figueira and Aimee Fullman's contribution approaches issues of justice in at least two different ways. First, they argue for cultural relations and co-operation that are 'fair, inclusive and diverse', recognising that national cultural institutes often carry colonial or imperialist baggage that needs to be openly recognised and addressed. This does not only refer to issues of climate change. The authors invoke the global COVID-19 response as an example that lays bare the long-standing inequities between wealthy and poorer nations when it comes to access to financial, technological and cultural resources. Seen in this way, the pandemic offers a lesson on how not to address a planetary crisis. Second, Figueira and Fullman touch on the issues of intergenerational (climate) justice, observing that much of the climate change programming in the West is aimed predominantly at young people, whose lives are bound to be most impacted by climate change in the long term. However, they caution against a limited, unidimensional strategy of this kind and instead argue for a holistic approach reflected in diverse audiences, geographies, types of engagement, and programme and partnering models (Fullman, 2012).

Nina Schuller stresses both the importance and the potential of digital technologies for promoting equal participation in creating our 'shared imaginings' of a sustainable world. More specifically, she places emphasis on the issue of knowledge making and translation as it relates to climate discourse, trust, knowledge and action. Similar to the insights by Figueira and Fullman, Schuller recognises the importance of building trust upon which, as suggested by a number of studies, the acceptance and use of climate knowledge is predicated. Yet, the author also points to the unequal politics of translation and knowledge production, with corporations based in the Global North, like Wikimedia, as well as some national governments holding disproportionate control over what kind of

climate knowledge is accessible on the web, and how it is translated. This kind of digital or data colonialism reduces epistemic diversity and undermines the intercultural trust necessary for effective global climate action.

Closely related to these insights, Jessica Gosling underscores the value of digital skills in mitigating climate change. It is hard to imagine a global co-operative effort to address the climate crisis without different parties being able to use communication technologies in an equitable manner. However, Gosling observes that digital competencies and access to new technologies are far from evenly distributed among nations. This is particularly problematic for developing or rapidly industrialising countries, where these skills and resources are not only vital for enabling their meaningful participation in global climate governance, but also act as one of the foundations for building economic and social prosperity. Gosling also notes that a climate-just future requires all citizens to be able to 'have more of a voice to articulate their wants and needs' – an ability for which, in this day and age, digital skills are of crucial importance. Thus, she concludes by emphasising the vitality of education, including digital education, entrepreneurship and soft skill development, for realising the commitments enshrined in the Paris Agreement in an equitable manner.

Charlotte Nussey highlights the important connections between climate justice, culture and education. 'Culture' can be used to exclude or oppress when not understood in terms of multiple forms of knowledge, while cultural expressions of climate change that centre historically excluded and marginalised voices can serve to increase our collective knowledge, flatten hierarchies and challenge taken-for-granted categories. Nussey highlights the way in which cultural and artists' acts of protest, from the work of artist-poet Kathy Jetñil-Kijiner to the Kenyan Green Belt Movement, help embed climate change within communities and highlight often-intersecting forms of inequality and exclusion. This echoes the work on intersectional climate justice and argues that climate justice is also a matter of racial justice, gender justice and others.

The essay by Chloé Germaine Buckley and Benjamin Bowman speaks directly to issues of climate justice given its focus on the Youth Strikes for Climate. As others' essays have highlighted, climate justice as presented here and by young people is intersectional, drawing links between the climate emergency and racism, colonialism and patriarchy. For Buckley and Bowman, the climate strikes are a global conversation, and this conversation is concerned with dissent, solidarity and justice. The climate strikes, read as cultural exchange, allow young people to listen to one another, share experiences and uphold each other's voices. As for what is next, Buckley and Bowman argue that people, including adults in power, should engage in dialogue with youth, who will ensure that justice is at the centre of efforts to address the climate emergency.

In his essay on the emergent energy humanities, Sam McNeilly convincingly argues that cultural relations can help ensure that individuals, communities and institutions place justice at the centre of global efforts to transition away from fossil fuels. Much of the work that McNeilly draws on, such as the writing of Ken Saro-Wiwa, speaks to, or actively calls for, environmental or climate justice. In the essay McNeilly suggests possible ways to move towards a future free of fossil fuels, but cautions that the shift to renewable energy is itself not inherently just, rather it must be won. Like other essays in the collection, McNeilly stresses the importance of education, in this case in the democratic, and just, energy transition.

As we have shown above, questions of equity and justice in cultural relations are interwoven into all the essays in this collection. Authors have pointed to issues of intergenerational justice, the intersection of culture, politics, education and technology, different levels of access to education and other resources among and within nations, and the unequal nature of climate knowledge production itself. What emerges from these contributions is an extremely complex picture of what we know, how we think about and how we co-operate to solve the climate emergency. There may be many challenges ahead, but the authors and editors of this collection share the hope that cultural relations, if done the right way, can help foster a global ethics of care for the planet and all its people.

While the G7 Summit held in the UK in June 2021 saw reaffirming goals of reducing global warming, it also failed to reach climate finance targets needed by countries in the Global South, those at the sharp end of climate change's impacts. COP26 will be an occasion to do better than that. Regardless of what happens behind the closed doors of COP negotiation rooms, we can be certain that the vibrant cultural exchanges between different people and cultures held in Glasgow this November will continue to foster the inclusive and diverse cultural relations we need to address the global climate emergency.

To find out more about the Climate Connection, please visit:
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