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iii. The lessons of Covid for climate pedagogy with young people: Learning to navigate urgency

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Covid, Climate and Crisis Pedagogies

The chapters in this volume give a rich overview of what might be called the ‘crisis pedagogies’ of the ~~Covid-19~~ COVID-19 pandemic: an urgent restructuring of learning around a radically altered situation beyond the education sector’s control. Schools worldwide have been compelled by circumstance to change: to refocus their attention on students’ basic needs in a time of crisis, to reimagine learning environments and relationships between pupils and schools, to confront the impacts of disadvantage and scarcity, and to deprioritise assessment and other external drivers in favour of compassion, community and emotional resilience. No such rapid response has yet emerged in relation to the far greater systemic challenge of climate change; yet the parallels are striking and the lessons valuable.

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The interactions between the pandemic and the climate crisis are multi-layered. Firstly, for many young people (and indeed adults) the pandemic is their first embodied experience of being subject to an entangled ecological and health crisis. This experience has made it clear in the starkest terms that humanity is not master of its own destiny, but an animal species within an ecosystem, at the mercy of other species such as the ~~Covid-19~~ COVID-19 virus. Simultaneously, it has highlighted the increasingly untenable nature of our role in that ecosystem, in that the structure of the global economy and society caused the pandemic, or at least created the conditions for it to flourish. The encroachment of humans on wildlife habitats, and the reliance of poor communities on exploiting wild animals, remains the most plausible route for viruses like Covid to make the species leap (Grehan and Kingston 2021); the frenetic rate of global trade and travel facilitated the virus’ spread; the inequality, poor health, overcrowding and fragile economies of many human communities confounded attempts to contain the virus and incubated new variants (Dorling 2021).

Secondly, the pandemic has also marked young people’s political identities in a manner that unavoidably intersects with climate change. Indeed, for many young people the two are tightly interlaced, dominating the landscape of their political maturation and offering lessons on the nature and challenges of human agency in the face of global crises:

I think before COVID, like I...we only saw the parts of world, the world we were told about - but when they were reporting the COVID across the world, they will also report in the way cities and countries are changing, like, the thing people saw most is like the wildlife back in big cities and things, like you didn't realise how damaged some countries were like up to that point. I think that now, like, people already think it's too big of an issue to fix, I think it's gonna be even harder to try and be like, yes it's the entire world, you're all in the same boat so we all need to help solve the thing. (Student D, focus group participant, York St John University, July 2020)

Young people are currently emerging as political citizens into a world dominated by wickedly intertwined global crises: the ~~Covid-19~~ COVID-19 pandemic and resulting economic recession, gaping racial and class inequalities highlighted by social movements like Black Lives Matter, growing political polarisation and resulting threats to democracy. Perhaps most critical of all, acting as a

multiplier of all other threats, is the climate and ecological crisis. The scientific consensus articulated by the International Panel on Climate Change is that the window for economic and social transformation to minimise the risk of runaway climate breakdown is only a few short years (IPCC 2019; Harvey and Tremlett 2021). Ainscough et al (2021) highlight that these risks are 'held together by a sinew of racial, gender, economic and political inequalities that simultaneously exacerbate each threat and block potential action to address them'.

Finally, the pandemic has demonstrated the scale and speed of transformation that is possible for human societies, once a situation has been defined as a crisis – challenging the idea that our response to climate change must be incremental and 'affordable'. Although the UK government's response to Covid has been widely criticised, it is impossible to ignore that sacred cows fell like a row of dominoes. Austerity, business as usual, the primacy of individual freedom, the relentless educational assessment system, were abandoned one after another. Long-term homeless people were housed overnight. Millions of people were granted a state income that did not depend on their work. Hundreds of thousands signed up as volunteers to bring complete strangers their shopping. In Neil Howard's words, 'the very system-logic of profit has temporarily been suspended; even more radically, it is being replaced by a system-logic of care' (2020: 7). This astonishing pivot to care in so many countries gave the lie to the idea that there was anything inevitable or necessary about neoliberal economics, or indeed about any of the tenets on which society is built – all were revealed *as having been choices all along*. The inadequacy of the policy response to the climate crisis – a far greater threat to humanity than Covid-19/COVID-19, on any metric – was thus thrown into stark relief. It became clear that, as Greta Thunberg told world leaders at the 2021 Austrian Climate Summit, 'The climate emergency has never once been treated as an emergency.'

The pandemic and the climate crisis are different issues – or 'hyperobjects', to use Timothy Morton's (2016) term for super-complex, global phenomena which interact with every other feature of human existence – but they share certain key characteristics. Both require urgent, systemic responses which involve making unprecedented demands on all organisations and individuals. Both have complex dynamics, entail unpredictable costs, hit the most vulnerable hardest, and render the long-term future more uncertain. All of these factors make them challenging territory for educators, but perhaps the most problematic is that of *urgency*. Education is a quintessentially slow, long-term process which many educators acknowledge to be inherently 'weak' in the face of achieving concrete, immediate outcomes (Biesta 2009). Yet the need for urgent action on climate has meant that climate education often starts from the imperative to bring about rapid change. [In responding to this urgency, climate education has therefore much to learn from the pandemic response.](#)

Crisis response and the curriculum

The sense of urgency generated by climate change and parallel crises can lead to a sense among many young people of a future that is very nearly foreclosed:

We saw online that people in Iceland held a funeral for a glacier today, but who is going to do that for us? Don't they see that we will be underwater soon and our country will be gone? No one cares. How can you grieve for ice and ignore us? (Teenager, Maldives, in Hickman 2019)

It's normal for us now to grow up in a world where there will be no polar bears, that's just how it is for us now, it's different than it was for you. (10-year-old, UK, in Hickman 2019)

I think that for me, it massively affects like my health and my wellbeing just purely from like worrying about it. [...] It makes it feel so bad that we're doing this to our planet. [...] And I think it's so scary and worrying that we're actively doing it." (Student D, focus group participant [in research study on ecological justice in education](#), York St John University, July 2020)

The 'ecological grief' and 'eco-anxiety' of young people, explored by Hickman (2018, 2019), are increasingly widely recognised within education. However existing approaches to education for sustainable development in the English National Curriculum largely confine themselves to a factual understanding of the greenhouse effect and the pros and cons of different potential remediation policies. For youth-led climate campaign Teach the Future, this falls far short of meeting either these emotions or the urgency of the ecological crisis:

All students should learn about the climate and ecological emergency regardless of the subjects they choose. Sustainability should be treated as a key principle in education (like Equality), woven throughout all subject areas. Learning about the climate emergency should be liberated from its current subject siloes (e.g. optional Geography and a small bit in science at GCSE) (Teach the Future 2020)

It is vital to recognise that many UK schools, recognising the importance of climate education, are going far beyond the National Curriculum's minimum requirements. Calls for systemic integration of 'sustainability as a golden thread through education' (Teach the Future 2020) pose, however, profound philosophical and pedagogical challenges to educators. Teach the Future's own research found that 75% of UK teachers feel inadequately trained to educate young people about climate change. Even in Australia where climate change is rendering many areas uninhabitable (Nogrady 2020, McGuire 2020), as late as 2014, 80% of teachers were either unaware of Education for Sustainability or lacked understanding of it (AESA 2014: 14). Indeed 'training' seems a very small word to cover the kind of reassessment of priorities, goals and practices that might be commensurate with preparing children for lives in a time of great unpredictability – for a time in which crisis is normal. There is tension between ecological crisis, young people's sense of identity and the core beliefs which education seeks to promulgate, for example, that working hard brings a bright future (Verlie 2019). The resulting cognitive dissonance, and responses of justifiable grief and anxiety, can make ecological crisis almost 'unspeakable' for many educators.

In determining how the education system can transform itself on a scale commensurate with the scale of the climate emergency, the 'crisis pedagogies' of Covid may offer some crucial lessons. The effects of the pandemic, which are still working themselves through the education system, are complex, multi-layered, and often contradictory. Yet despite the overwhelming challenges the Covid crisis has presented to schools, the dramatic situation enabled many to place compassion and basic needs at the centre of their practice, as articulated by Matthew and Barry Carpenter's 'Recovery Curriculum' (2020). Chapters in this volume mirror some of the above observations in relation to schooling: some teachers have felt themselves liberated from the constraints of assessment (Spicksley et al); many educators have discerned the potential of the Covid moment to reimagine the purpose and organisation of education in partnership with young people, local civil society and social movements (Ralls et al).

Generating paradigms of climate education

The remainder of this chapter braids together educational literature with my own 18 years of storytelling and drama practice and research in youth theatres, schools, youth activist groups, and universities to discuss the considerable learnings from the ~~Covid-19~~ COVID-19 crisis for climate education. I will trace four paradigms which can be discerned in educational responses to climate change, and examine the additional layers of understanding the pandemic has brought to each.

This typology of paradigms is offered as a point of departure; it is an unavoidably situated attempt to distil a large body of thinking and practice into a tool which teachers and other educators can use to reflect on their practice. The boundaries between paradigms could be drawn differently, and many educators will blend them in complex ways. While they draw on practice in a wide range of educational settings, my own educational career has been limited to the North of England, and readers working and researching within other contexts will certainly identify gaps and alternative perspectives. Indeed, as the climate crisis deepens over coming years, further work will be needed

across all levels and sectors of education to strengthen educators' understandings of the models and discourses which shape their approach to teaching about it. These four paradigms represent a range of relationships between the 'hyperobject' of climate change and the processes which take place with a classroom community of human adults and young people.

Our starting point is the behaviour change approach which I call (after an influential government campaign) the 'Do Your Bit' paradigm, by now deeply embedded in climate communication and education. As the youth climate movement has responded angrily to such individualist and incrementalist approaches, particularly since the school strikes from 2018 onwards, a radically truthful but often problematic 'Apocalypse Soon' paradigm can be seen influencing some schools' climate education. Teachers seeking to give pupils a more immediate and encouraging access point to climate and ecological issues may de-emphasise the alarming global picture in favour of building children's agency through 'Microcosms and Manifestos', using school life as the main vehicle for learning. In certain innovative pockets of the education system, such approaches are being developed and amplified into 'Emotionally Reflexive Pedagogies' based on the practices of social movements for building healthy and sustaining cultures of change.

The four paradigms are ordered not historically but in order of increasing emotional literacy and systemic thinking. These explorations help me build the argument that, while the urgency of the climate crisis should motivate schools to re-order substantially their educational priorities, their guiding aim should not be rapid behavioural change but nurturing in pupils a meaningful, active hope, comfort with uncertainty, and ability to contribute to their resilience of their communities. In conclusion I will look at the particular role of *story* in this task, and argue that it needs to be the heart of crisis pedagogy.

The practice experience on which I reflect to inform my perspective includes:

- Working as advisor for a local authority on schools' environmental practices (2003-2007)
- Freelance practice as a storyteller in education, working with schools, teacher training institutions and other educational settings on projects related to environmental and community issues (2007-2015);
- Intensive doctoral practice-based research on storytelling with adolescents in secondary schools, youth theatres and mental health settings (2013-2017, see Heinemeyer 2020);
- Drama projects on climate change in four different youth theatres (2018-2020);
- Involvement in arts and community outreach with youth climate activist groups (2018-2021).

As supplementary evidence I draw on focus groups conducted by myself and colleagues Clare Cunningham, Jude Parks, Silvia Szilagyi and Ana Castaneda Martin with 23 York St John University students in July 2020, enquiring into their expectations and emotions with regard to ecological justice. As young adults reflecting back articulately on their experiences of both school and university primarily during the 2010s, their insights may help us to discern the outlines of the dominant recent paradigms in education, and their emotional impact on young people.

Four paradigms of climate education and the lessons of CovidCOVID-19

Do Your Bit

Since the late 1990s, many UK schools have participated in campaigns to promote everyday 'behaviour change' towards actions with less impact on the climate and environment. High-profile examples include the schools programme of the UK government's 'Are You Doing Your Bit?' campaign (1998-2000) (Department of Environment, Transport and the Regions 2000), Northern Ireland's 'Being Greener At School' campaign (NI Direct, n.d.), the Woodland Trust's Green Tree Schools Award (Woodland Trust, n.d.), and the Green Schools Initiative (GSI n.d.). Schools are provided with resources and activities to involve their pupils in recycling, energy saving habits, walking and cycling to school, tree planting, food growing, and paper use reduction.

Such campaigns owe their theory of change to what Elizabeth Shove (2010) calls 'the holy trinity of attitude, behaviour and choice' derived from social psychology (Shove 2010). The assumption is that people's attitudes drive their behaviours and choices, conditioned by their social context and limited only by factors such as cost or awareness. Much social science research on attitudes to climate change carries 'an implicit assumption that people *lack* something, be it motivation, care, or concern; and the key is to uncover the *barriers* that may magically unleash the kind of responses we so urgently need' (Lertzman 2018: 27). Indeed a sense of urgency certainly does underlie this paradigm – a desire to see immediate change in the immediately visible arena of lifestyle and individual behaviour.

The premise behind the UK Government's high-profile 'Are You Doing Your Bit?' campaign was public attitudes research, which found that a high percentage of people felt distanced, confused, helpless and apathetic in relation to climate change and the green movement (DETR 2000). These were articulated by the campaign as 'barriers to change', which could be overcome through an inclusive, friendly, practical and simple message. Indeed, this and subsequent campaigns have undoubtedly given more people a starting point from which to consider their own involvement in combating climate change.

Nonetheless, the campaign's core proposition to the public, that 'Every little thing I do makes a difference' (DETR 2000), which has taken a firm grip on educational campaigning on climate, needs to be critically evaluated. It can give rise to a sense that the only levers at people's disposal to mitigate climate change are at the level of individual consumption decisions, such as which form of transport to use, or which product to buy. Further than that, Ryan Myhill (2021) highlights the role of industry in constructing discourses of personalised responsibility for environmental problems which are in fact largely effects of their own business models (e.g. funding and development of anti-plastic-littering campaigns by companies who created the disposable plastic packaging industry). For example the popularity of the compelling idea of the personal 'carbon footprint' owes partially or largely to marketing campaigns by fossil fuel company BP in the early 2000s. (Kaufman 2021), a rhetorical shift that places the onus for change on the individual consumer rather than on industry.

Students in the 2020 focus groups, in accordance with this discourse, did locate much of the responsibility at their own doors. Yet they frequently articulated their frustration and lack of faith in this lifestyle approach to achieve the necessary change:

"During the Covid [pandemic?] I've been setting up litter picks with me and my mates because we've had nothing else to do. [...] And you're just doing it over and over again and then you start seeing information about, you know, plastic bottles - you know it's ultimately going to landfill anyway, that's what, that's what I think confuses me mostly is, is my own kind of annoyance that - that affects me more than confusion. Every time that I do try and do something to help, it doesn't seem like it's helping. And it just kind of grinds you down." (Student D)

"I know there's loads of little things that you can do by just getting rid of plastic straws but sort of at the same time because like I just said it doesn't have much of an impact. [...] I don't know what I can do now that will change even my lifestyle or the lifestyles around me." (Student M)

"What difference does it make when the person next door is just going to chuck stuff in the normal bin. Even if it was like 5000 of you, etc etc, if you think about it doesn't really make a difference. Everything is just too big now. Any, any small thing to do won't make a difference. A big initiative might make a small difference, but the majority don't care enough to make a difference." (Student Y)

Such feelings of helplessness, confusion and disillusionment were also identified in the DETR's (2000) research and interpreted as 'barriers to action'. An alternative interpretation, however, is that they are rational responses to people's perception that resolution to the climate crisis is impossible without fundamental reform of global economic and political systems. Several York St John students in the above study talked of the need for change to come from wealthy elites and business interests:

"It's that, it's the 1% of people that are being extremely selfish because they don't want to lose out, that is causing a lot of people to think, Oh well, there's nothing I can do, so therefore, why should I care. It's not coming from - it's not coming from the majority of people, it's something that is put in place by people who are driven by greed, who have no kind of empathy for anything else." (Student D)

"I think everyone has a basic understanding of environmental issues and it's kind of you either believe the world is flat or you will understand that it is boiling. Yeah. The difference is the people that then go, Well, what needs to happen to stop the Earth from boiling is we shouldn't use plastic straws. Like, you could eradicate the world of plastic straws and it won't make a bit of difference compared to what companies are doing." (Student A)

That this is a widespread view among young people is evidenced by the vast scale of Fridays for Future (n.d.) and other school climate strike movements, in which school pupils demand rapid government and corporate action. An estimated 1.6 million children worldwide took part on a single day on Friday 15th March 2019 (Marris 2019).

The pandemic has acted as an object lesson in the relationship between individual behaviour and systemic phenomena. During the Covid pandemic, young people were asked to change significant aspects of their behaviour: to wash their hands carefully, wear masks, distance from their friends, and stay at home when they had symptoms. These actions, however, were not invested with the ability to end the pandemic; by and large, it was explained to young people by schools and the media as a 'wicked problem', replete with complex global interdependencies and impossible tradeoffs (Rittel and Webber 1973). Young people became aware of the different levers within governments' control: imposing travel restrictions and lockdowns, paying furlough so people could stay at home. Young people connected to social movements active during this period have also learnt that class and race inequalities undermined efforts to limit viral spread, that many people suffered from lockdowns, and that community solidarity and redistribution were essential to combat this suffering. In short, they have had a lesson in systems thinking.

By analogy, it is clearly valuable that children learn behaviours which, if adopted by most individuals, will help to some extent to mitigate climate change. But by presenting these to children as 'the solutions' to climate change, we treat environmental degradation as a side effect of our economic system rather than the very core of it. We deny them the opportunity to understand the 'wickedness' of the problem and set them up for disempowerment and confusion. We cannot ask children to 'do their bit' to restructure just-in-time distribution systems, regulate hedge fund investors, strengthen emasculated international institutions, end fast fashion or manufacturing practices of planned obsolescence, challenge the grotesque levels of inequality and corruption which force people to exploit their land unsustainably, or reverse the global economy's dependence on endless growth in consumption. Children may lack this vocabulary, but most have some awareness of the complexity of the system which generates climate change, and the inadequacy of individual behaviour change in the face of this. To begin an honest dialogue with young people about climate, we need to find developmentally appropriate ways to teach systems thinking, and seek routes to agency which focus on developing alternative systems, even if in microcosmic forms.

The rarely questioned language of 'sustainable lifestyles' and 'doing your bit' has become one of what Arran Stibbe (2021) calls the 'stories we live by' in relation to climate action. Its dominance within many educational initiatives is, at best, an inadequate response, and at worst a slap in the face to young people who are grappling to understand what system change might look like.

Apocalypse Soon

Partly as a justified counter-reaction to such incrementalist approaches, some educators have responded to the urgency of the climate emergency, and the system failure it represents, by embracing the darkest fears of the climate movement as their key focus.

In 2019, the headteacher of one of my local primary schools decided to show David Attenborough's scientifically rigorous and deeply alarming documentary, 'Climate Change – The Facts', made to jolt an adult audience into action, to all pupils from age 4 to age 11. On one level, this was a sincere and well-motivated answer to the climate movement's first demand: Tell The Truth (Extinction Rebellion n.d.). On another, it was a potentially traumatic experience for very young children, which suggests an educator somewhat adrift from her usual pedagogical principles. It presented them with an unmanageable burden of knowledge about their possibly blighted futures, and offered them no avenues for action which seemed proportionate to the situation. The initiative was not embedded in any long-term process of reorienting the school curriculum around environmental resilience, or exploring pathways to alternative futures on a local or global scale.

Challenging this approach is not to disagree with the rigorous scientific basis of the information presented. Even the central projections of climate models show that significant tipping points are imminent or have already been reached, and the 'runaway' phase of climate change may be commencing (Ripple et al 2021). Nonetheless, it is hard to imagine seasoned teachers taking this approach to any other important issue – showing children graphic footage of people dying of Covid to persuade them to maintain social distancing measures, say, or images of brutal racist attacks to persuade them of the importance of antiracism. On these issues, the truth is told to children in a developmentally appropriate manner, integrated into their experience of school life, on a scale which they can comprehend and in pace with their emotional intelligence. The stark contrast should tell us that we are dealing with an issue about which the adult practitioners involved have not worked through their own feelings and opinions, and are rather firing truth cannons into the next generation in the hope that this will catalyse them to somehow solve the problem.

The narrative of the 'Apocalypse Soon' paradigm is near-future-focused and might be boiled down to:

- A terrible event may happen in the near future
- Afterwards everything will be different
- It's adults' fault
- Young people will have to solve it / learn to survive
- Be very angry about it while there's still time

This is a caricature in several important ways, suited to a placard but not to a pedagogy. Firstly, climate breakdown is not an event which either will or will not happen in some future moment, but a complex spectrum of processes which are already well underway. Its severe consequences are already being experienced by Black and Global Majority communities in particular (Miller 2017; Adekola et al 2015; Serdeczny et al 2017). Secondly, rather than being the fault of 'adults', the responsibility for climate crisis is complexly divided between over 7 billion intertwined human actors, with some powerful individuals and groups having a great deal of agency and some very little. In our research with York St John students, most of the 23 respondents were well aware of these complexities; indeed none blamed 'older generations' for the climate crisis, more commonly attributing responsibilities to 'corporations' and governments. Thirdly, while the climate and ecological crisis will continue to transform societies, bringing great conflict, insecurity, suffering and upheaval, the transformation is not uniformly catastrophic and may bring positive change in places. Young people's creativity, interests, talents, cooperation, and sense of purpose will be called upon in ever greater measure and they will, to varying degrees, create new structures and ways of being on scales from the hyper-local to the global.

Within youth theatre practice, with its focus on giving voice to youth movements, the catastrophic paradigm is widespread. Many currently available playscripts for young actors, such as *Don't Worry Be Happy* by Kevin Dyer (2010) and *This Changes Everything* by Joel Horwood (2015), dramatize the demands and fears of the youth climate movement, featuring groups of young people trying to ward off an apocalyptic event or navigate dystopian near-futures. While these are wittily scripted and dramatically compact, they can cement the impression of the future of as a rapidly closing tunnel. Youth theatre practitioners may need to undertake a process of reconciling themselves to the gravity

of the situation and its implications for their own lives and identities, before they can provide sensitive guidance to young people.

There are limits to people's ability to engage constructively with visions of a foreclosed future. A glimpse of one likely consequence of the local primary school's approach was given by Student F in the YSJU research, when she recalled a similar experience involving Al Gore's 2006 climate documentary, *An Inconvenient Truth*:

I mean we all watched the Al Gore thing in school, I remember, and after half the class walked out saying that it was a load of rubbish. And we had all the facts, given in front of us. It was because they weren't willing to learn it. They didn't see it as a real issue.

Another interpretation of this response was that Student F's classmates couldn't afford to see climate change as a real issue – that they could not spare the emotional energy to cope with it.

Another way I have frequently observed such resistance to manifest itself in youth theatre practice is through a 'brittle' form of dystopian humour. Young people confronted with the climate crisis and asked to 'make theatre about it' often create satirical sketches of hopeless situations, parodies of despair. On one memorable occasion, a group of 13-year-olds portrayed a group of discarded plastic bottles in a gully. Like characters in a Samuel Beckett play, they talked in a desultory way about the millennia they had watched pass by them and the humans that no longer inhabited the earth. These are valid emotions to explore in youth theatre, but it would be irresponsible pedagogy to leave young people in that moment of futility.

The 'Apocalypse Soon' discourse is certainly an appropriate *call* for young people to make of the education system, but it is an inadequate *response*. It remains stuck within the limited thinking that treats the climate emergency as a terrible but bounded problem to be averted, leaving the rest of the curriculum more or less untouched, rather than acknowledging with Perpetua Kirby and Rebecca Webb (2021) that 'the subject-matter of climate change is intrinsically unbounded, reaching into every fissure of human experience, including our co-existence with the non-human'. Like the Covid pandemic, the climate crisis must be allowed to affect not just the curriculum – what is taught in schools – but also modes of learning and the very shape and purpose of school life.

Kirby and Webb (2021) describe a conversation that arose in their research on climate pedagogy in UK schools, in which 9-year-old Sophie asks her teacher, "Is it true we've only got ten years to save the planet?" They call for a 'thing-centred' pedagogy which takes seriously questions like Sophie's – indeed, which makes such questions the jumping-off point for re-centring education around the subjectification of children as citizens in a time of enduring deep uncertainty. A 'thing-centred' pedagogy, as opposed to a 'child-centred' or 'teacher-centred' one, pivots around issues and questions of absorbing mutual interest and enquiry. Proceeding from this, Kirby and Webb envisage that responding to the urgency of climate change will in fact entail a wholesale reorientation of schools' main drivers (e.g. subject boundaries, rigid curricula, league tables, competitive assessment), which are themselves bound up in destructive late-stage capitalism:

An unbounded thing-centred pedagogy must therefore enable Sophie to engage with the multiple ways in which she experiences climate change, including how it extends deep within and beyond her. This allows her to embrace the ontological uncertainties of it. Paradoxically, this requires Sophie and her teacher to slow down in order to respond swiftly to rapid climate-related changes in the twenty-first century. Sophie's subjectification therefore extends beyond the pedagogical to the political, where she (and her teachers) are enabled to take up further transformational possibilities to reconfigure an existing order of things, with the option of saying "no" to orthodoxies of practices, including those of the school, that induce climate change. (2021)

Once more it is salutary to learn from how many quarters of the education system have dealt with the **Covid-19** pandemic. In a situation of deep uncertainty, with no clear sense of when or if 'normality' would return, it was impossible to ignore the consequences of prolonged disruption for young people's wellbeing, and so there was little pretence of trying to keep things as they had been before.

The stringent assessment system was deprioritised in favour of supporting young people's basic needs and maintaining community resilience: a UN report (2020) notes that it has catalysed rapid developments in many countries in flexible learning, inclusive and blended learning methods, and innovative assessment approaches.

The education system may need to make a subtle shift, from asking, 'How can we educate to prevent the impending disaster of climate change?' to 'How can we help young people to design new ways of coexisting, working, collaborating and thriving in an era of climate change and resulting social upheavals?' This does not, of course, mean abandoning learning about basic sustainability measures; everything we do to mitigate the climate crisis will improve our chances, and many of the same measures which will limit climate change will also increase people's ability to adapt to it. Putting solar panels on the school roof and establishing a floodwater-absorbing, food-growing school garden will both reduce emissions, and increase the community's resilience to shocks in the energy, weather and food systems. Even more importantly, it will act as a living laboratory for young people to practice the skills their lives may demand of them. We need to learn from existing climate-frontline communities so as to equip young people with skills for the long haul, to live well in times when crisis is normal.

Manifestos and Microcosms

A desire to integrate learning about sustainability more systematically into school life, in a way that empowers pupils and builds what Jensen and Schnack (1997) call their 'action competence', has motivated many educators to use schools' own environmental performance as a focus of learning. Within such initiatives, the school site acts as a microcosm of wider society and staff attempt to engage students collaboratively in developing and enacting a manifesto for change. This approach is relatively well established, but in the current moment it particularly resonates with Powers et al's (2020) contention that the pandemic has proved the value of project-based, multi-age and collaborative learning as a way of cultivating community, developing self-directed learners and addressing their social and emotional needs.

The archetype for such approaches is the Eco-Schools accreditation initiative of the international Foundation for Environmental Education, initiated in the aftermath of the 1992 United Nations Conference on Environment and Development, which now operates in 70 countries and claims to engage 19.5 million young people worldwide (Eco-Schools, n.d.). Its UK branch was founded in 1994. Eco-Schools puts heavy emphasis on the democratic or steering role of the eco-committee of students and staff, formed to audit the school's environmental impact, develop an action plan for improvement, engage staff and fellow pupils, and monitor the project's progress. Such initiatives have the potential to be a collaborative, multidimensional, positive and age-appropriate approach for young people, and to act as a powerful learning experience in relation to system change.

The limitations of the approach perhaps lie, ironically, in its resolutely positive focus on quick, achievable change. As the UK Eco-Schools website acknowledges, a single member of staff known as a 'champion' is often pivotal to the implementation of an Eco-Schools project (Eco Schools, n.d.). While the school's action plan is instructed to incorporate 'curriculum links', it rarely involves any challenge to the fundamentals of what most teachers teach and how they do it, which would be a much longer-term and more politically controversial task. Therefore, teachers guiding Eco-School Committees are understandably motivated to use the limited time available to them to give children hope, by focussing on those areas of consumption where observable impact can be achieved, rather than through investigating the complex and 'wicked' nature of climate and ecological crisis. Thus Salome Hallfredsdottir finds that in Icelandic schools accredited as Eco-Schools, children are more likely to engage in 'sustainable behaviours' such as recycling, but that there is little or no impact on their 'understanding of environmental issues as conflicting interests' (2011:2).

This presentation of environmental problems as readily solvable can, in my experience working with young people, lead to rapid and crushing disillusionment. As a facilitator at a 'Student Conference' in

2019, I witnessed group after group of children aged 9-14 discussing their experiences of participating in environmental initiatives at school. The issue of greatest concern to many, and one where they felt their school ought to be able to make a difference, was the use of disposable plastic. Having watched documentaries about this issue, they were aware of its vast magnitude and devastated by its impact on wildlife. "We will just be drowning in plastic by the time I am an adult, there will be hardly any animals left", said one little boy, to vigorous nodding around the circle. Yet their eco-committees' efforts to eliminate plastic from school had rapidly hit against brick walls: catering contracts into which the school was locked, special offers on bottled drinks at local shops, the inability of many classmates with low-income families to persuade their harassed parents to buy less packaged food. One girl described standing in tears beside the playground bin, after spending a term of making awareness-raising posters and newsletters, watching fellow pupils throw handfuls of plastic into it. She knew the school's actions could at most be a drop in the ocean, and even that drop had slipped out of her fingers. This feeling of failure had not been contextualised by any lessons investigating the packaging industry or government waste policy, or any exploration of action the children might take to challenge such factors.

Such experiences raise profound questions in relation to schools' eco-initiatives: does the rhetoric around 'empowering' children often mask a shifting of the burden for change onto them? The tendency of policy responses to societal crises to impose the greatest costs on the young has been suggested by the Covid pandemic's disproportionate impact on children's mental health (Royal College of Psychiatrists 2021), education (Ofsted 2020) and financial wellbeing (Child Poverty Action Group 2020). In the case of climate change the intergenerational injustice involved is likely to be much starker. For whose benefit is the framing of environmental issues as discrete from structural forces? Are teachers committing sufficiently to walking the hard road of changemaking alongside children, of providing emotional and intellectual support to them at every step of the way?

Student N expressed a frustration with the siloing of climate change in her university education. She felt it had done little to prepare her to help build a more sustainable community or society:

We just did a module about like, you know, climate change, activism in theatre, you know, so we do talk about it, but I still feel that I don't feel any more equipped on how to help the issue or, you know, I just feel... We did talk about it and I know a lot more of its effects. But still, you need more knowledge than 'don't produce plastic, don't shop as much'.

Student D put it more strongly:

This university is very 'all talk no action', every time they put up a nice pretty poster about something, but they don't do anything about it. Say we support you and then don't do anything.

What the 'crisis pedagogy' of Covid may have to offer those adopting 'manifesto' approaches is the image of teachers sometimes literally pounding the pavements of their local communities during lockdowns, bringing food parcels, worksheets and courage to children isolated in struggling households. One in five UK schools set up a food bank during the pandemic and schools became key providers of support services to local families (Butler 2021). When people were suffering the impacts of global crises and national policies, many schools put their own communities' needs first, investing not what the government dictated or the curriculum required, but what was *necessary* to maintain people's resilience. Their actions seemed to reach towards what Deborah Ralls and colleagues (in this volume) call a 'social solidarity urban economy'. Similarly, schools' approach to climate needs to start from an understanding of the intersection between the local and the global, and a readiness to leave their comfort zone and do what is necessary rather than what the curriculum appears to make possible. The relational pedagogy which might build children's ability to create local solutions to climate change requires forms of collaboration that are as high-stakes for the adults involved as the children.

Emotionally Reflexive Pedagogies

In response to some of the myriad challenges explored so far, a developing area of climate pedagogy is taking inspiration from what Jo Hamilton (2019) calls 'emotionally reflexive methodologies' for approaching the issue of climate change in groups:

By "emotional reflexivity" in this context, I mean developing an embodied and relational awareness of how people engage with and feel about an issue, how this influences the actions they take, the stories they inhabit and perceptions of their individual and collective change and agency (pp.154-5)

Hamilton's research finds that the psychosocial understanding underlying such approaches as Joanna Macy's 'The Work That Reconnects' (WTRN n.d.) or the Transition Network's 'Inner Transition' (Transition Network n.d.) can enable people to sustain and deepen their engagement with climate change for the long haul. Many of these groupwork approaches are aimed at adults involved in climate issues as professionals, scientists or activists. Yet they follow several principles of great relevance to education.

Firstly, they involve an emphasis on emotional honesty and emotional literacy. There is a direct parallel with children's need for open discussion around their challenging questions and fears about how the Covid pandemic might unfold, not just information about individual action they could take to protect themselves (Bray et al 2020). As Bray et al (2020) found in their research with 7-12-year-olds during the pandemic, 'empty reassurances without appropriate facts and information can result in children being left to "fill in the blanks", using their imagination and snippets of information gleaned through different channels'. Cambry Baker et al (2021) highlight the need for parents and teachers to have empathic, validating, supportive, action-oriented conversations with children in relation to climate, in which negative emotions such as despair or grief are not denied or silenced. Their study of teachers, parents and young people found that this resulted in more resilient children less likely to engage in climate denial, experience distress or other uncontrolled emotional responses, and more likely to feel what Ojala (2012) calls 'constructive hope' – 'a motivational force that occurs through positive reappraisal and trust in others (meaning-focused coping), rather than hope based on denial' (Baker et al 2021: 688). Constructive hope may be a vital resource to children in the face of 'long term, hard to solve stressors' (Baker et al 2021: 688), whether pandemics or climate-induced crises.

Secondly, they allow space for uncertainty and dissensus, recognising the 'wickedness', tensions and conflicts that any responses to climate change entail. Kirby and Webb (2021) emphasise that schools need to resist the temptation to offer children pat solutions; rather they need to accommodate dissensus, explore the diverse ways in which children's lives intersect with the climate crisis, and become comfortable with their own uncertainty. Indeed, teachers who can admit to not knowing the answers to some problems will be much better situated to implement an authentic 'thing-centred' pedagogy that helps children to develop as democratic subjects.

Within formal education in the UK, these influences have manifested in new resources such as ThoughtBox's Climate Curriculum for primary and secondary schools, an emotionally literate, interdisciplinary, in-depth scheme of work 'for the climate strike generation' (ThoughtBox, n.d.). There is great resonance between the honest and vulnerable stance which ThoughtBox suggests teachers might take to climate, and the 'Recovery Curriculum' developed by Barry Carpenter and colleagues (Carpenter and Carpenter, 2020) to help children come to terms with the losses, developmental setbacks and traumas of Covid. In both cases there is an invitation to teachers to interact with their students as rounded individuals, with families and worries of their own, unable to give concrete answers as to how the crisis can be ended, but ready to share wisdom and experience which might guide young people through it.

Indeed, the most frequent call from students interviewed in the York St John focus groups was for informal 'spaces' in campus life for students and lecturers to come together as citizens of the university, explore their knowledge and feelings around climate and justice issues, reshape the curriculum together, and share opportunities for learning and taking action. The precise form they suggested varied from one student to another, but they seemed to reach towards ways of facilitating forums for emotional honesty, mutual enquiry and the development of active hope.

As educators we have been ‘gathered around the thing’ of Covid for some time now – accepting that we need to simultaneously do what we can to combat it, cultivate solidarity, create new forms of sociality and learning, and learn to live with its impacts. We need to take the same approach to climate. In a time of deep uncertainty, education needs to develop a crisis pedagogy which is, itself, deeply comfortable with uncertainty. In the words of journalist Katherine Wilkinson (2021):

So, what can I do? I wish I could counsel my 16-year-old self that the only simple answer is to form a relationship with the question, let it work on and with you, and begin to live life as a response.

Conclusion: Stories and active hope

The Covid pandemic gave rise to ‘crisis pedagogies’ based on a greater sensitivity to young people’s emotional and developmental needs in most quarters of the education system, and a readiness to turn normal practice upside down to meet them where possible. In contrast, the urgency and overwhelming nature of the climate crisis can provoke responses in educators ranging from a false briskness, to despair and guilt, to a desire to pass on the mission to somehow ‘solve’ the problem. In turn this can generate responses of anxiety, grief, denial, frustration, and disillusionment in young people.

This article has rather made the case for learning from the educational experience of the Covid crisis to develop a ‘long-haul’ pedagogy, starting from an open-ended readiness to walk alongside young people and reshape school life around building their collective resilience. A key task is to pass on our wisdom about how to live well in a world in crisis, replacing narratives of inexorable destruction with narratives of alternative possible paths. Wisdom acquired both from our own experience of adapting to challenge, and that of others whose experience at the climate frontlines (primarily in Global Majority countries) can light the way. Active hope will not arise from abstract principles, but through exposure to real examples – stories — of solutions and alternative futures.

Stories, with their ability to embed information, ideas and conflicting motivations within an emotionally engaging context, are also widely recognised as a gateway to understanding of complex issues (such as climate change). In a long-term collaboration exploring the humanities curriculum through storytelling with three secondary classes including young people with a range of learning needs, teacher Sally Durham and I found the students to be ‘cleverer within the story’ (Heinemeyer and Durham 2017).

(O)ur observations of the pupils’ responses support the arguments made by Bruner (1986, 1996, 2006), Daniel (2012), Goodson et al. (2010), Prentice (1998), Roney (2009), Rosen (1988, 1993), Ryan (2008) and Zipes (1995, 2004) for storytelling, ranging from the higher level of language pupils employed during storytelling, to the expression and thinking skills it generated, to its ability to engage even usually unmotivated young people, to improved relationships and communication between teachers and pupils, to the nourishment of pupils’ imaginations and empathy, to the value of narrative communication as a life skill.

It is for these reasons that we might want to consider *stories* as a central pillar of our teaching, and the learning and cultivation of new stories as a form of continuing professional development. For example, we can share (and base our teaching around) the stories of communities who are already innovating ecologically restorative ways of producing food and energy in conditions of drought and extreme weather (Practical Action n.d.); the stories of local economies transforming themselves from the ground up through cooperative sustainable businesses (TASC 2020); and the stories of environmental defenders successfully challenging unjust and destructive industries and creating alternatives (Mothers of Invention n.d.). Such stories of hope are often exceptions to wider global trends, and honest dialogue requires that the full picture be explored with young people. Thus, equally importantly, we can work with stories which honour and mourn what is lost through ecological change and degradation, and make sense of what these losses mean for communities – such as ‘Insecure’, the elegiac short film made by an intergenerational group on the rapidly eroding Yorkshire coast (Parson et al 2021).

ThoughtBox's Climate Curriculum and similar emotionally literate resources draw extensively on such true stories. Drama practitioners could move on from playscripts about dystopian scenarios in favour of the more complex and challenging work of creatively exploring the bumpy pathway to imperfect utopias. Simultaneously, we can curate lived 'stories' in pupils' lives, through active engagement in the microcosms of school and local community, not as added extras but as key formative experiences to which teachers and pupils are equally committed. The success of the enquiry-based, multi-age, collaborative learning model developed by the elementary school SPARK (Powers et al 2020) in maintaining a lively learning community throughout the Covid pandemic illustrates the relevance of such approaches to weathering disruptive crises.

Not all of these stories need be directly related to climate. ~~:-but~~ We can view the whole curriculum through an ecological lens, considering both the social ecology of the classroom community and the wider ecology within which it is embedded. This is simultaneously a formidable pedagogical challenge, and a very basic human gift, requiring not expert knowledge but a readiness to engage in the mutual curiosity and enquiry central to a 'thing-centred pedagogy' (Kirby and Webb 2021). It also calls on a strong sense of commitment to the task; while the enforced switch to isolation and online learning made the crisis backdrop of Covid impossible to ignore in education, letting the climate crisis reshape education requires a much more conscious effort of will and reflexivity.

Just as the 'emergency children's literature' of the pandemic (Duckels and Ryder, this volume) helped narrativize and thus make sense of the 'chaos narrative' of the early months of the pandemic, children will need support to narrativize their experiences of multiple crises as climate change accelerates. Their sense of purpose and identity, and their ability to contribute to climate solutions, depend on it, which makes emotionally literate climate education just as fundamental to climate adaptation as ensuring clean water supplies or building well-insulated homes. A key challenge is perhaps that not all teachers are comfortable in the role of storyteller (Heinemeyer and Durham 2017). A storyteller may presents herself to her listeners as a rounded human being who has experienced and perhaps suffered, and is thus a vulnerable figure. She chooses which stories to tell based on the needs of her listeners, rather than following a set of externally imposed learning objectives or schemes of work. The slowness and open-endedness of such processes may run counter to some educators' instincts as to how to respond to an urgent problem. Teachers may even, at times, need to work under the radar of school policies and accountability structures – but the task is, indeed, an urgent one and cannot wait for permission to be granted.

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