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Higher education for times of climate crisis – critical awareness, purpose and community

Liam Phelan[a] and Matt Lumb[b]

[a]School of Environmental and Life Sciences, University of Newcastle, Callaghan, Australia;

[b]Centre of Excellence for Equity in Higher Education, University of Newcastle, Callaghan, Australia

Abstract

Climate change impacts cascade across scales and sectors, and present specific threats to education institutions and systems, including reduced educational access, participation and attainment by students. In this paper, we set out the pursuit of climate change mitigation and adaptation responses, grounded in commitments to equity and justice, as a renewed fundamental purpose for higher education. To this end, we suggest the understanding of public and private benefits of education that is typically applied to individuals may be usefully applied at institution and system scale. However, in the context of an accelerating climate crisis, adopting a renewed fundamental purpose will require institutions and systems to display critical awareness beyond the public-private benefits divide, towards an understanding of themselves as embedded in – rather than separate to – their broader communities and societies, and an acknowledgement of the particular interests that are foregrounded and privileged in the construction of their purpose.

Keywords

Higher education; climate change; neoliberalism; COVID-19; transition

> *Everything that you rely on every day – the systems, the technologies, and the conveniences that we have built our society upon – will fail you.*
>
> Rebecca Blunden, resident of Cobargo, New South Wales, Australia, in the wake of the September 2019-February 2020 bushfires, sharing her experiences of surviving through crisis to a public rally in Newcastle, New South Wales, Australia, 10 January 2020.

1. Introduction

In this paper, we explore the challenge for higher education institutions and systems adopting a renewed fundamental purpose for higher education: the pursuit of climate change mitigation and adaptation responses, grounded in commitments to equity and justice. The obvious context for this argument is the climate crisis that increasingly threatens life on Earth as is familiar to us

(IPCC, 2018; Phelan et al., 2013). We argue that adopting a renewed fundamental purpose will require higher education institutions and systems to develop new critical awareness and practices. This requirement is perhaps less obvious, but necessary because during recent decades neoliberalism's influence has increasingly held sway over public policy (Springer, 2016). Recognition of the public benefits of higher education has diminished in favour of education's individualised private benefits, and addressing climate change effectively and justly requires a perspective that understands climate change as a challenge requiring an engaged and collective response.

Two global-scale crises that have played out in Australia in the recent period serve to both illustrate the scale and character of the crisis climate change presents education systems and institutions internationally, and suggest capacity for effective responses to crises. The first is climate change itself, manifest as climate-implicated bushfires that ravaged much of Australia across a period of six months (ABC [Australian Broadcasting Corporation], 2020). We argue higher education is both directly and indirectly vulnerable to climate change impacts which cascade across scales and sectors. The second is the COVID-19 pandemic (WHO [World Health Organisation], 2020), which illustrates the capacity of higher education institutions in Australia and elsewhere to respond quickly to direct threats. Observations of the way universities have responded to COVID-19 bring into acute focus a sense of possible – but to now unenacted – higher education responses to climate crisis.

The paper proceeds as follows: In the following section, we open discussion of the ways climate impacts cascade across sectors in societies, thereby impacting education systems and institutions both directly and indirectly. In section three we discuss both the potential for, and worrying limitations to the critical role higher education might play in fostering societies' capacities to respond to social-ecological crises such as climate change. This is followed in section four by two contrasting illustrations of higher education practices that respond to climate change; the second, we argue, reflects critical awareness not evident in the first, by extending beyond the public-private benefit framing to an understanding of higher education institutions as embedded in – rather than separate from – their wider communities and societies that, we argue, is essential in this time of climate crisis. The conclusion suggests the current pandemic may offer some opportunities for reimagining purpose, policy and practice for higher education.

2. Climate change impacts cascading across sectors to education – indirectly and directly

Climate change is a globally coherent phenomenon (IPCC, 2018), one that has been in the making since the Industrial Revolution beginning in the

mid-eighteenth century (Phelan et al., 2013) and, whilst increasingly well understood since the nineteenth century (Arrhenius, 1896; Fourier, 1827; Tyndall, 1861), it has not been responded to effectively. Over recent decades, continuing efforts have been aimed at reducing anthropogenic emissions of carbon dioxide, the main greenhouse gas, which are generated through expanding fossil fuel-based economic activity (Phelan et al., 2013). Examples include negotiations through the UNFCCC at international scale (e.g., United Nations, 2015a), national and subnational efforts such as carbon pricing schemes (e.g., Jotzo, 2012), and other initiatives across the public, private and third sectors (e.g., Bloomberg et al., 2019), and communities (Transition Network, 2020). These efforts at multiple scales remain essential for resolving climate change effectively and justly. And yet, even as they are necessary, they are insufficient: year on year, atmospheric concentrations of carbon dioxide continue to rise (Global Carbon Project, 2019). The concept of the trillionth tonne (Allen et al., 2009) points to the stark need to reduce net greenhouse gas emissions to zero, and to do so promptly.

Climate impacts manifest comprehensively, if unevenly: no parts of societies are immune to climate change, including higher education. Yet some individuals and groups are clearly more vulnerable. The concept of climate justice (Schlosberg & Collins, 2014) attends to dimensions of climate change such as local impacts and experiences, and inequitable vulnerabilities that can be obscured in understandings of climate change as a global-scale phenomenon.

Further, climate impacts can cascade across sectors, and from one system to another, sometimes in myriad and surprising ways. A recent example of unprecedented and climate change-implicated bushfires in Australia is illustrative of how this can play out. In the epigraph above, Rebecca Blunden notes that, in a moment of crisis when climate-implicated bushfires threatened her community and many others in Australia, the systems she and others in her community relied on failed, falling like dominoes one after the other. Speaking to a public rally in Newcastle, organised to call for action on climate change even as the bushfires continued to burn elsewhere across the country, Rebecca spoke of people in her community first having to flee their homes in rural Cobargo in New South Wales to the coastal town of Bermagui. As the fires continued to spread, the road system they had used to flee was closed. The electricity supply went next, and with it the pumped water supply, sewerage and fuel bowsers. Then, mobile phone towers went, leaving Bermagui cut off from the wider world (Blunden, 2020). The indirect climate impact on educational access was left unconsidered in the focus on escape from immediate danger, but is easily recognised: the conditions Rebecca describes leave little prospect for students to participate in formal schooling.

Elsewhere, the fire-ravaged East Gippsland region in Victoria provides an example of how climate change can impact directly on education institutions and systems. Clifton Creek Public School was also destroyed by bushfires (Kinsella, 2020). This caused obvious and immediate disruption to access, participation and attainment in education for students at the school. There may be longer-term disruption too: in the aftermath of the school's destruction, attention turned to whether to rebuild the school, or instead require students from Clifton Creek to travel to the school at Bairnsdale, a larger town nearby. Ian Brownrigg, a local resident with a long association with the school, and also the captain of the local Country Fire Authority, asked rhetorically in the context of climate change-increased fire risk that 'We couldn't defend it [the school] here the other night, so can we defend it in the future?' (Brownrigg, in Kinsella, 2020).

3. Higher education, democratic and just social systems, and constrained capacity for crisis response

Attention to the public and private benefits of education is well established (e.g., Marginson, 2007). However, reflection on the destruction of Clifton Creek Public School suggests there may also be a community dimension to education that may be missed in a focus framed around, and limited to, traditional notions of what is public and private in relation to the benefits of education, where 'public' refers to benefits from a societal perspective, e.g., 'having sufficient trained doctors', and 'private' refers to those same benefits from an individual's perspective, e.g., graduating into highly remunerated employment as a doctor. But Clifton Creek resident Rebecca West keenly felt the loss of the school differently, in a way not captured by the private-public dichotomy, instead describing it as

> a unique school that gave children the chance to grow their own vegetables, tend to animals, cook and play musical instruments… It was devastating, really devastating, because my girls really love that school… I know my girls want to go back there, they don't want to go to a larger school in town, they want to stay at their small school, it is where they are comfortable (West in Kinsella, 2020).

In reference to the Victorian Government's commitment to rebuild the school, the state Minister for Education also noted the community benefits of schools: 'Clifton Creek Primary School is not only a school but a community asset… Schools are often at the heart of their local community' (Merlino, in Kinsella, 2020).

We argue that these moments from Australia's recent history can help to ask urgent questions regarding the purposes and practices of education systems. In an era of extreme individualisation in which discourses of market efficiency cement neo-liberal commitments to feed the 'restlesscapital' that seeks 'new opportunities for profit, new possibilities for commodification' (Ball, 2010, p. 134), we argue that it is more important than ever to continue to discuss why our formal education

systems look the way that they do, and from there, imagine them differently. Specifically, and noting that humans as a species have now become a key driver of global environmental change (Crutzen, 2002; Crutzen & Stoermer, 2000), we ask whether and how our current education policies and practices can be re-shaped to engage with human-caused collapse of environmental systems. We aim in this effort to do two things. First, to recognise the difficult task of reorienting structurally inequitable education systems and, second, to articulate imperatives for system transformation that include the existential threat for institutions. For, as Marginson (2011) notes, 'Nothing lasts forever and, every so often, nation-states and societies discover that they can live without the institutions they have inherited' (2011, p. 412).

Education is always teleological (Biesta, 2010), yet the values guiding the purposes of and practices within educational systems are often left implicit, with education policy functioning as an 'authoritative allocation of values' (Lingard, 2010, p. 132). Pedagogical, curricular and assessment structures are social practices guided by personal and political interests, yet these are not necessarily easily apprehended for debate and discussion. Historical analysis demonstrates that the purposes of and practices within systems of higher education have changed over time in response to shifting contexts, albeit holding recurrent trends and continuities (Carpentier, 2019). This suggests both promise and peril for articulating a renewed fundamental purpose for higher education as the pursuit of climate change mitigation and adaptation responses, grounded in commitments to equity and justice. There is arguable *promise* in that systems can be renewed in response to socio-political challenges and circumstances of crisis. There is arguable *peril* in that commonly it is interests of the most socioeconomically privileged that guide this renewal (Whitty, 2002).

3.1. Neoliberalism as a constraint on capacity to respond to crisis

Whether universities can be reoriented urgently towards responding in an equitable manner to the challenge of climate change mitigation and adaptation responses begins to ask the difficult question of why universities currently do what they do. The creeping neoliberalization of our institutions provides a key challenge. Neoliberalism is a term used in myriad ways in social sciences to describe a wide range of ideas and influences that have grown since the 1970s in response to a 'crisis of the Keynesian welfare state and lasting stagflation' (Giannone, 2016, p. 496). As Ward and England (2007) explain, neoliberalism can be understood variously as: an *ideological hegemonic project, a form of governmentality, policies and programs, and a state form*. As an *ideological project*, neoliberalism can be understood as a successful global class struggle since the 1970's to restore the domination of economic elites via an embedding of social aspects such as valuing individualisation, choice, market security and minimal government. As

governmentality, neoliberalism can be understood as a form of power expressed through a complex facilitation of 'governance at a distance' (Springer, 2012) that provides a way to govern humans via automatic self-regulation and correction in an adherence to entrepreneurial and competitive dispositions. As *policy and program*, neoliberalism refers to processes such as privatisation and deregulation in a reworking of the notion of 'the state', 'the market', and also 'public' and 'private'. As a *state form*, neoliberalism (or, again, more specifically neoliberalization) refers to an ongoing transformation in which states engineer their own restructuring and downsizing under the banner of economic competitiveness. We refer repeatedly above to 'neoliberalization' to hold on to view that neoliberalism is not a destination but an ongoing intensification of the embedding of commodification and market rule (Giannone, 2016).

For some, neoliberalism is described as 'open markets, free trade, the reduction of the public sector, the decrease of state intervention in the economy, and the deregulation of markets' (Torres in Morley et al., 2014, p. 464). For the purposes of this article, we foreground an articulation by Torres (2011) whereby 'Neoliberalism has created "a new common sense" that has percolated into all public and private institutions and thus, despite their own autonomy, into institutions of higher education' (Torres, 2011, p. 183). We explore below this new 'common sense' as a set of foundational dispositions and perspectives using the concept of social imaginary. Torres (2011) also notes the globalised character of this phenomenon:

> neoliberal globalisation, the most powerful model of gobalisation predicated on the dominance of the market over the state, particularly through deregulatory models of governance, has deeply affected the university. (2011, p. 185)

Certainly, *globalization* in general and *internationalization* in particular have become central to discussions regarding contemporary education policy and programming with a growing focus on the influence of international comparisons.

> Specific to higher education reform, neoliberal versions of globalisation suggest reforms for universities in four primary areas: efficiency and accountability, accreditation and universalisation, international competitiveness and privatisation (Torres, 2011, p. 189)

Embarking on a genealogical analysis (Tamboukou, 1999) of university systems is well beyond the scope of this paper, yet we might begin to question the arbitrariness of university practices to then begin to reimagine

their societal contribution. In his *History of Higher Education in Modern Europe*, Carpentier (2019) shows that economic, social, cultural and political rationales have always been present in the historical reformations of western higher education, yet with different eras seeing the balance between dimensions shift. Importantly, this historical analysis warns that the economic/financial rationale can readily 'develop hegemonically, weakening the cultural, political, and social rationales' (Carpentier, 2019, p. 14) with at times catastrophic consequences for institutions. Certainly, the contemporary western context sees widespread concern and debate regarding the purpose of education systems, including higher education (Connell, 2019). A fundamental challenge for a globalized landscape is increasingly recognised across many nation-state contexts where accelerating processes of stratification, marketization and instrumentalisation and/or credentialism ask difficult questions of universities as the main providers of higher education (Burke & Kuo, 2015). Naidoo and Williams (2015) draw on Slaughter and Leslie (1997) to show how

> The rise of the student consumer in HE [higher education] is part of a global trend away from the discourses, funding and governance arrangements based on the 'social compact' that evolved between HE, the state and society over the last century. (2015, p. 209)

There are important ongoing debates about whether the purpose of higher education should be vocational or academic, increasingly privatized or protected as a 'public good'. These are considerations with sub-themes of course, such as well-rehearsed critiques of the way 'employability' has increasingly shaped higher education institutions and practices (Moreau & Leathwood, 2006). These debates will arguably become intensified as nation-states enter recovery phases seeking economic growth and productivity gains in the wake of climate catastrophes and global health pandemics such as COVID-19.

Marginson (2007) points to conceptual weaknesses in our traditional notions of public/private (neo-classical economics and/or statist political philosophy) in a globalised system of institutions and higher education 'markets'. Identification of this conceptual weakness is important for our discussion of the challenge for higher education institutions and systems adopting a renewed purpose. Marginson (2007) recommends moving from legal distinctions of public and private in terms of ownership towards a focus on the social character of goods, proposing a two-fold revised conceptualisation of public/private in higher education that proposes '(a) units in national government that focus specifically on cross-border effects [and]; (b) global policy spaces – taking in state agencies, individual universities, NGOs and commercial agents – to consider the augmentation, distribution of and payment for global public goods' (2007, p. 307). This is, however, a difficult shift given that the concept of higher education producing private benefits has become firmly lodged in the social

‘imaginary’. Rizvi and Lingard (2011) define social imaginary as

> A way of thinking shared in a society by ordinary people, the common understandings that make everyday practices possible, giving them sense and legitimacy. It is largely implicit, embedded in ideas and practices, carrying within it deeper normative notions and images, constitutive of a society. (2011, p. 34)

As we have articulated above, a steady neoliberalization of systems (including higher education) has produced contemporary conditions in which a complex project of policies and programs guided by new state forms (Ward & England, 2007) sustains circumstances in which the practices of higher education (thinking, measuring, evaluating, supporting, knowing) are deeply imbued, via an hegemonic governance, with logics of individualisation, competition, and market rule. It is in this context that universities have been tasked with an important role in the post-2015 development agenda of the achievement of the Sustainable Development Goals (United Nations, 2015b). Yet if the discursive framing of contemporary higher education access policy and practice making is held in place by a ‘neoliberal [social] imaginary’ (Rizvi & Lingard, 2011) then where do we look for the tools that might hold the possibility of escaping a methodological individualism seemingly destined to undermine a global project of just climate change mitigation and response?

McGowan (2016) challenges us to think about the implications of a conceptual lack regarding ‘developing understandings of what the university is and is for, and of how [higher education] systems interact with and impact the rest of society’ (2016, p. 506). McGowan in this work also draws our attention to the rate of commodification and unbundling which undermines claims to quality on which the broad project of higher education rests. Universities and institutions like them tend to require both a place-based identity and a claim to the production of universal-mobile knowledge (Marginson, 2011). In this way, universities are suited to responding both locally and globally, yet as higher education institutions are hollowed out of any common public purpose, their capacity to respond is diminished, and they risk their very survival by undermining the social compact upon which their existence is founded.

At the moment of global-scale crisis wrought by COVID-19, we are being confronted to consider the ways our wellbeing is wrapped up in others’ wellbeing. And this brings light to a limitation of framing higher education in terms of the relative merits of public and private benefits. The act of framing higher education in these terms – of public and private benefits – emphasises higher education institutions as somehow distinct or separate from the broader societies of which they are integral parts. In a time of crisis, to which all are commonly yet differently vulnerable, the artifice of separation between the higher education sector and broader communities and societies does not serve us well.

4. Critical awareness for higher education: beyond private and public good to recognition of community membership

As noted earlier, no parts of societies are immune to climate change, and this includes the higher education. The stories from Cobargo and Clifton Creek are only two local-scale narratives, but climate change is a global-scale phenomenon, impacting locally everywhere. We suggest that critical awareness on the part of higher education institutions and systems as embedded within broader communities and societies, and similarly vulnerable, will be essential for resolving the climate crisis through just mitigation and adaptation. This will be important in terms of higher education institutions understanding climate change as a direct threat to their missions and existence, and in terms of higher education institutions enjoying a socially understood and supported purpose – a social licence to operate.

Our argument is that for all academe's wisdom, awareness of higher education as part of – rather than apart from – broader communities and societies is yet to be enacted at scale. The 'Climate Emergency Letter' (EAUC [The Alliance for Sustainability Leadership in Education] and ACTS [Australasian Campuses Towards Sustainability], 2020) is illustrative. Focussing on the United Nations' Sustainable Development Goals around Education and Climate Change, the letter is a worthy initiative. At the same time, it is an initiative that could allow for greater critical awareness of higher education institutions as embedded in broader communities and societies, and similarly vulnerable. Already, around 16,000 universities are endorsing the letter, directly and indirectly through associations in the lead up to the 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (or COP) scheduled for Glasgow in late 2020. The letter commits signatories to (i) mobilise resources for action-oriented climate change research and skills creation, (ii) carbon neutrality by 2030 or 2050 at the very latest, and (iii) increase environmental and sustainability education across curriculum, campus and community out-reach programmes, concluding with a 'call on governments and other education institutions to join us in declaring a Climate Emergency and back this up with actions that will help create a better future for both people and our planet'. Yet climate change remains framed as a general threat to all, rather than a threat that will play out particularly for education institutions and systems. In effect, the exhortation is for higher education to prioritise the public good over private goods, and as though climate change is not a direct threat to higher education.

In contrast to the limited scope of the Climate Emergency Letter, the broad field of education for sustainability comprises an impressive richness of diverse thinking evident in publications, plans and policy initiatives including the 1977 Tbilisi Declaration (UNEP [United Nations

Environment Programme], 1978) onwards through UNESCO and other international organisations of the United Nations at international scale, and through countless other initiatives at national and subnational scale (e.g., Phelan et al., 2015). The field has generated subfields such as environmental education, education for sustainable development, and climate change education, and continues to be a fertile site of productive scholarly research and publication for broader audiences (e.g., Grigorov, 2011; Thomashow, 2020). We do not propose to add here to that breadth of possibility; our focus is instead on a necessary precursory step to higher education making its potential contribution to resolving the climate crisis.

4.1. Shedding neoliberalism's saddlebags – a necessary precursor requiring critical awareness

Higher education has an important and urgent role to play in building democratic systems (Marginson, 2011) that can respond to an ecological crisis at a planetary scale with challenging spatial and temporal dimensions. Borrelli et al. (2019) remind us that other higher education frameworks are possible if we are willing and able to enter earnestly an

> exercise in "sociological imagination" to describe "another possible university" equipped with different epistemic instances, according to some "breaking" ideas as: "Meridian thought" (Cassano, 2005), "slowness" (Berg & Seeber, 2016), "multi-versity" (Braidotti, 2013), "decolonization" (Mbembe, 2016), "deparochialization of research" (Appadurai, 2013), "subversity" (de Sousa Santos, 2018). (Borrelli et al., 2019, p. 36)

To meet this transformative potential, we need changes to all practices, moving towards critical perspectives and beyond dominant 'development' discourses adhering to normalized neoliberal commitments (Misiaszek, 2015, 2019). To harness educational institutions as vehicles of change we need new frameworks to guide practices across higher education institutions that produce influential research but also researchers, policymakers, scientists, teachers and professionals with an ongoing concern for the production of 'education models which have the goal of ending all socio-environmental injustices and violence' (Misiaszek, 2019, p. 3). A global ecological crisis with educational dimensions will also require partnerships of unprecedented scale (Pherali, 2019) with a commitment to peace building as the likelihood of climate change-induced conflict grows.

As a form of critical theory of education, ecopedagogies can work to interrogate, for example, forms of 'environmental education' and 'education for sustainable development' as hegemonies facilitated by state agencies. Such agencies can appear to be developing pedagogy relevant to alleviating our mounting global ecological crisis (Kahn, 2010) yet actually hold in place an inequitable status quo that is currently on a trajectory towards climate

systems failure.

Whilst we would argue that teaching critical accounts of the historical formation of 'development' and 'environmental education' agendas and framings is essential, our argument here is broader than a focus on teaching and learning in conventional pedagogical spaces of higher education. We are interested in how 'ecopedagogies are inherently enemies of hegemony and neoliberalism' (Misiaszek, 2019, p. 7) drawing heavily on a Freirean-inspired problem-posing set of approaches. We view system change as a multi-dimensional project requiring frameworks that explicitly seek to overcome the anthropocentrism of classic pedagogical projects (Gadotti, 2010). We are interested therefore specifically in what this framing offers in terms of an anti-hegemonic toolkit to constantly foreground the urgency of pursuing climate change mitigation and adaptation responses, grounded in commitments to equity and justice, as a renewed fundamental purpose for higher education. We are looking to ecopedagogies to pursue the project of imbuing all higher education practice (be it administrative, managerial, evaluative, pedagogical, research, dissemination) with a problem-posing commitment that attempts to reframe normalized structures of meaning, orienting the gaze towards the climate crisis. We provide one illustration below.

Climate change is not only a generalised threat: climate change threatens education institutions and systems particularly. At the end of last year, in Australia, it was Clifton Creek Primary School that burned down. In response, the Victorian state government committed to rebuilding. But how might governments, and societies, respond when universities are otherwise forced to close their doors to students as climate change impacts manifest in myriad ways? This is primarily a problem because higher education serves a critical role in ensuring societies' capacities to respond to crises effectively and justly. Absent a social licence to operate, and in a context of a very changed climate, universities may struggle to make claims to financial and other resources that could surely be allocated otherwise. The current pandemic is illustrative in this regard. Over recent decades Australian universities have proved highly successful at marketing themselves internationally and attracting large numbers of international students. However, the pandemic has seen international student numbers – and revenues – drop dramatically; pleas to the federal government for financial support similar to that being provided to other sectors have fallen on deaf ears, leaving universities slashing contracts for sessional staff and laying off permanent staff (Zhou, 2020).

COVID-19 is a crisis that offers some insights into possibilities that even very recently seemed politically fanciful. Arundhati Roy (2020) calls the pandemic a 'portal', and one that offers the opportunity to remake the world. And this may be underway, even if unwillingly: in Australia and

elsewhere, governments that are ostensibly neo-liberal in outlook have been forced by the crisis to quickly shed their regular policy playbooks in favour of public policies they would have derided as pipedreams only weeks earlier. Examples include wage guarantees and moratoria on evictions for tenants in financial hardship. We agree with Roy that the pandemic is a portal, but only if we recognise it as such and act to 'remake the world' with commitments to equity and justice. For universities and higher education systems, perhaps we have an unexpected – and great – opportunity to rethink policies and practices in order to align our purpose with effective and just climate change mitigation and adaptation. Similarly to climate change, COVID-19 is both a general threat to all, as well as a threat particular to higher education institutions and systems.

Air travel provides a useful illustration of our thinking. In response to COVID-19 as a direct threat to students and staff of university communities, many universities internationally have suspended travel, consistent with health advice and government directives. With reference back to climate change, this is significant for two reasons. First, air travel is a major contributing source of greenhouse gas emissions, and unlike electricity supply, one without an obvious clean energy alternative. And yet, there is little scope for air travel in a net zero emissions world. Second, air travel – to conferences and for field work, is highly valued part of academic practice (Glover et al., 2019). Air travel constitutes a key activity in universities fulfilling their research and education missions, through researchers participating in conferences, visiting colleagues and engaging in field work, and taking students on field trips. More than business as usual, travel is typically understood as highly desirable because of the opportunities it can bring. Invitations to present at conferences can be highly prestigious, contributing to career advancement for academics. In the immediate wake of travel restrictions coming into effect in Australia, for example, numerous tweets by scholars pointed to the importance of conference participation for career progression (e.g., Wong-Brown, 2020). And yet, even as air travel is such a significant part of business-as-usual academic work, in the wake of travel restrictions scholars are continuing to do their scholarly work, finding ways to work around travel restrictions.

These reactions to COVID-19 demonstrate possibilities that were only a short time beforehand considered unimaginable, and now represent a potential new normal. The current ban on travel forced through COVID-19 invites reassessment of an earlier, proactive initiative aimed at limiting air travel in academic work, intended to more closely reflect a purpose aligned with effective and just climate change mitigation and adaptation. Beginning in 2017, a small number of individual scholars and institutions committed to limiting or ceasing air travel through NoFlyClimateSci, 'an experiment in speaking #ClimateTruth' (NoFlyClimateSci, 2020). As we continue to accelerate rather than rein in greenhouse gas emissions, the likelihood of

resolving the climate crisis is receding, rather than drawing nearer. Our argument is that in order to play a part in resolving the crisis, higher education institutions and systems will require a new critical awareness of the ways in which a neoliberal social imaginary holds in place a common sense of purpose and practice that endlessly dismantles just the sort of social-collectivist institution required to grapple with the climate crisis.

Evidence of a new critical awareness within higher education might include conversation around the appropriate place of air travel in fulfilling institutions' research and education missions. And there will be more to consider also. With this in mind, scholars and universities might refer to the provisions in the United Nations Framework Convention on Climate Change (United Nations, 1992) that governs international climate negotiations, and in particular, the reference to 'common but differentiated responsibilities'. In brief, this phrasing notes that while climate change is a collective problem, it is the industrialised countries that have, through their very industrialisation (a) contributed historically most to causing the problem, and (b) have the greatest financial capacity to adapt to climate change's impacts. As such, perhaps there is an opportunity for higher education institutions and systems in industrialised countries to reflect on both their comparative contributions to climate change – historical and current – and their comparative capacity to adapt.

This would necessarily be a major shift in higher education's understanding of itself: not separate from society, and with a role limited to observing, and rather as a key player, critically aware as a long-standing part of the problem, and potentially with an important part to play in resolving climate change. This shift would reflect higher education institutions and systems' awareness as a part of, rather than apart from, their broader communities and societies, and sharing the broader vulnerability to climate change impacts, however manifest. We suggest that frameworks informed by eco-pedagogies and applied to institutions themselves can facilitate interrogation of the practices that constitute higher education, to cooperatively acknowledge our historically formed collusion in systematic social and environmental injustices, and to urgently reimagine higher education in ways that respond appropriately to crises at global scales.

5. Conclusion

The COVID-19 pandemic is not the only time public health concerns have closed universities. Famously in 1665, Cambridge University closed its doors because of the plague ravaging nearby London. Isaac Newton was amongst the students forced to isolate at their homes for more than a year during that period. On his return to Cambridge, he reported developments in his thinking while away from campus spanning gravity, calculus and

optics. COVID-19 is an ongoing crisis. Yet at the same time, crises can offer opportunities for survivors' learning. Perhaps the COVID-19 crisis offers universities the opportunity to learn from their experiences, and apply those learnings to the climate crisis. Universities have understood their communities of students and staff as directly threatened by COVID-19 and, with immediate effect, many institutions have directed staff to limit air travel. Through doing so, and at very short notice, they have demonstrated – to themselves, and more widely – their capacity to carry on their teaching and research missions without the dependence on air travel that, until the crisis, was understood as necessary. As Biesta (2020) notes:

> The interruption of the normal order literally makes us think – whether we want it or not – which, as such, is a good thing. In this regard, it is actually quite appropriate to refer to the situation as a crisis, because in its original meaning, crisis is not a state of chaos, but a critical moment or turning point that calls for consideration and judgement (in Greek: 'krinein'). (p. 1)

As with climate change, COVID-19 presents a paradox of sorts: one the one hand, we're all vulnerable; on the other, the pandemic plays out very differently for people, with many more vulnerable than others. If we can recognise COVID-19 as a portal, then perhaps we can use this moment to take on effective and equitable climate change mitigation and adaptation as a renewed fundamental purpose for higher education, and imagine policies and practices that align with that purpose. The sustainability education field offers much in this regard. To do so, however, universities will need to understand themselves as part of the broader communities and societies they serve, and with shared vulnerability. On that basis, universities will need to enter earnestly into an exercise in sociological imagination to articulate pathways to other possible universities (Borrelli et al., 2019). These newly imagined other universities can be better equipped to contribute urgently and maintain relevance through the unprecedented crisis in which we find ourselves.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Liam Phelan is a Senior Lecturer in the School of Environmental and Life Sciences at the University of Newcastle, Australia. Liam convenes the Bachelor of Science and his research interests centre on environmental studies, sciences and education.

Matt Lumb is Associate Director in the Centre of Excellence for Equity in Higher Education at the University of Newcastle, Australia. Matt's work challenges hegemonic methodologies constructing policies, practices and evaluative projects of university equity and widening participation processes.

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