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International student mobilities in a contagion: (Im)mobilising higher education?

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Abstract

This article reflects on the possible effects of the COVID-19 pandemic on international student mobilities and higher education systems. Celebrated as a 'success' story of a mutually beneficial globalisation, international higher education as we have known it is unravelling and reassembling. We offer an overview of the material changes and public discourses that are reframing student mobilities and higher education from three Anglophone positions involving Australia, Singapore, and New Zealand. The authors interrogate the amplified role of digital infrastructures in remaking international higher education, through border management practices and digital learning strategies. We outline changes at the urban scale that are starting to take hold from the stasis in student mobilities. We also speculate on emerging modalities of international higher education and their accompanying economies of opportunities and vulnerabilities. Our reflections take seriously calls to understand the wide-reaching implications of an invisible, border-crossing microbe, and interrupt the impulse to resurrect what came before the pandemic. It is in this spirit of thoughtful reflection to stop rebuilding 'more of the same' that we interrogate novel border rationalities and market making, which are being called on in work to govern space–time and subjects in a fragile post-COVID world.

KEYWORDS

digital infrastructure, higher education, international student mobilities, market making, subject making

1 | INTRODUCTION

Alongside tourism, international higher education was among the first major global sectors to be significantly impacted by the declaration of the COVID-19 pandemic on 11 March 2020 by the World Health Organization. By the start of February 2020, travel restrictions were starting to reduce the steady flows of international students. Further disruptions followed as higher education organisations quickly pivoted to delivering education using digital platforms. International students who were already in, or managed to reach, their study destinations found themselves learning remotely. These spatial impediments to mobility and social interactions remain, eroding the prospects of international higher education returning to business-as-usual. Celebrated as part of a 'success' story of globalisation (Marginson, 2020), those in universities face the urgent task of reimagining alternative futures for themselves.

This article is a reflection on the current and future possible effects of the COVID-19 pandemic on international student mobilities and the higher education

systems that have sustained these flows. Focusing on the Asia-Pacific nations of Australia, Singapore, and New Zealand we examine institutional responses to the pandemic, reconfigurations introduced by and through digital infrastructures, and their effects on embodied and experiential dimensions of learning. We also discuss anticipated changes to the political economies of internationalised higher education. In developing these reflections, we draw on our insights as subjects within these higher education systems, as well as on our experiences of studying international higher education in the Asia-Pacific region for the last two decades. Our collective view is that neither the COVID-19 pandemic nor responses to it by universities and governments completely remake higher education and nor do they offer a tabula rasa for future making. Rather, pandemic responses are being rearticulated into modalities of international higher education that are products of shifting political rationalities, technologies, and projects—most notably, globalisation and neoliberalisation. While recognising the likely persistence of these political-economic forces, we question the drive to rebuild more of the same through novel border rationalities and market-making in a fragile post-COVID world. Rather than restricting ourselves to returning to a world we knew before, we urge more critical reflection on the logics of governing space–time and subject making in fulfilling the potential for greater equity and sustainability in higher education.

The focus on Australia, Singapore, and New Zealand offers a particularly fruitful avenue for examining the pandemic geographies emerging in international higher education. All three countries are significant Anglophone destinations for international students in the Asia-Pacific region. With strong government support for the globalisation of higher education, the policy fields in all three countries have, since the late 1990s, supported the recruitment of international students and facilitated interlinkages with high-skilled migration (Collins & Lewis, 2016; Sidhu et al., 2011). Each country's central government has developed a qualitatively different model or brand of international education: Australia and New Zealand focus primarily on the generation of revenue through tuition fees. Singapore's approach depends far less on full fee-paying international students, and instead positions international student mobility within broader national aspirations to be a global knowledge hub. Despite these differences, leading universities in all three countries have placed a premium on success in international ranking exercises and market themselves and their cities/nations as desirable places to study. The global interconnectedness of their economies brings a reliance on student mobilities, migration, and tourism, rendering all three susceptible to the impacts of a long-lasting global pandemic.

Key insights

Remaking international higher education via digital infrastructure and remote learning can only be successful if it addresses the centrality of embodied and experiential dimensions of learning. Travel restrictions and health concerns may lead to increasing regionalisation of international student mobilities. The rapid digitalisation of universities during the COVID-19 pandemic may accelerate their further commercialisation and privatisation. Institutions and governments seeking to rebuild international higher education through and after the COVID-19 pandemic need address social justice and sustainability challenges.

All three countries' governments have, however, been relatively successful at responding to the pandemic, using border controls and enforcing national and/or local lockdowns. New Zealand embarked on an elimination strategy, instituting a 'hard' (Level 4) lockdown while Australia's policy of slowing the spread of the virus ('flattening the curve') involved closing all non-essential services, limiting physical gatherings, closing facilities, and encouraging self-isolation. Singapore introduced a 'circuit breaker' comprising a series of partial lockdown measures (the closure of non-essential workplaces and the use of home-based learning) among other safe distancing regulations managed by deploying 'safe distancing ambassadors.' In comparison with major destinations for international higher education in the Northern hemisphere (particularly the United Kingdom and the United States), Australia, Singapore, and New Zealand would appear better positioned to weather the storm of the COVID-19 pandemic.

We next address the fundamental role of digital infrastructures in responding to the COVID-19 pandemic in higher education institutions and at the border. Then we consider both the implications of remote learning in particular for embodied and experiential dimensions of learning and the impact of reduced student mobilities on the locations, places, and cities that sustain universities. The article concludes by reference to the reconfiguration of international higher education in present and post-pandemic times, and draws attention to the implications

of rapid digitalisation of universities and the future of international experiences when travel is restricted. We consider too the implications for equity and sustainability for a sector that has relied on global mobility.

2 | DIGITAL INFRASTRUCTURES

We use the term digital infrastructures to encompass both the digital platforms of contemporary higher education and the digital technologies that underpin contemporary border control. The digitalisation of higher education entails the incorporation of new technologies into the delivery of educational content. Digitalisation also involves the management of students and academics or members of faculty, along with marketing, engagement, and other administrative functions (Williamson, 2019). Digital platforms streamline the delivery of lectures, assessments, and other content and allow for a templating of good pedagogy, even as they raise questions about equity of access and the financialisation of higher education (Mirrlees & Alvi, 2020). Digital infrastructures are also pivotal to contemporary border controls (Lin et al., 2017), governing the mobilities and experiences of all migrants. The mobilities of international students are also enabled by and subject to regimes and technologies that identify, collect data on, and categorise legitimate and illegitimate forms of movement and conduct (Waters, 2018). As we demonstrate here, digital infrastructures in both spheres—higher education and border control—have been instrumental in responses to the unpredictable outcomes of the pandemic. They have enabled learning at a distance and the management of biomedical risks of mobile students. These infrastructures have also been directed to identify opportunities for new spaces of market making in international higher education.

The onset of the COVID-19 pandemic in early 2020 represents a significant challenge to both Australia's and New Zealand's commercially oriented approach to international higher education (Collins & Lewis, 2016). Restrictions on travel to and from or through China in early February produced significant disruptions. An estimated 106,680 of Australia's new and continuing Chinese students, many celebrating the Lunar New Year with their families, were forced to make alternative plans, with many calling on the services of education and migration agents to make use of third countries as clearing houses (Haugen & Lehmann, 2020). Approximately one third succeeded in returning to Australia only to find campuses in lockdown shortly afterwards. Initial migration data from New Zealand suggest a similar pattern; the number of international students from China was 29.8% lower in March 2020 than in March 2019 (MBIE, 2020). New Zealand hosts some 28,000 international students across the universities (among 110,000 across all sectors) with 43% coming from China alone (Universities New Zealand, 2019). Of the 442,000 international students studying onshore in Australia, 37% or 165,000 are from China. Australia's research-intensive, Go8 [Group of 8] universities are particularly vulnerable as Chinese student numbers represent some 65% of their international student cohort. The estimated revenue earned for Go8 universities from the Chinese market is in the vicinity of AU$1.1 billion (Marshman & Larkins, 2020). The closure of international borders stalled the international study plans of Singaporeans, redirecting many to consider local university options (Davie, 2020a). There are encouraging anecdotal signs that the city-state will maintain its reputation as an attractive study destination and international education hub. Anchored by well-ranked 'global universities', Singapore is seen as a relatively 'safe' study destination, not only in terms of public health governance but also politically and culturally, in contrast to the dangers encountered by 'Asian' students in the United States and the inhospitality experienced in Australia (Cham, 2020). With the easing of border controls, Singapore's international students have started returning, while being subjected to strict testing and quarantine measures. Reciprocal short-term student exchange programmes, though, have stalled.

Digital infrastructures of E-learning were introduced in Australia, Singapore, and New Zealand over the last two decades as part of national and institutional strategies (Cunningham et al., 1998; E-Learning Advisory Group, 2020; Koh & Lee, 2008). 'Blended learning,' 'flipped classrooms,' 'flexible access,' and 'adaptive content' have been staples of university teaching and learning strategic plans. Although the pre-pandemic rollout of digital learning infrastructure had been gradual and uneven, these strategies have enabled the adoption of online teaching as an emergency response to the pandemic lockdowns across all countries. The rapid reconfiguration to remote learning has also revealed several frictions reflecting social (in)equity related to, for example, student access to computing equipment or bandwidth capacity in particular communities. Universities have responded by taking on technology-provider roles, distributing free loan laptops, and facilitating internet access with telecommunications firms (Finkel, 2020; Martin, 2020). Pandemic-driven remote learning has also resurrected existing questions about the appropriateness of an online medium to facilitate the debates, dialogues, and interactions vital for active learning. There are also significant questions about the

extent to which online learning can provide the kinds of environments needed to facilitate and encourage such exchanges as part of active learning. Concerned about student disengagement and well-being, some universities have also deployed algorithm technologies to track student participation in online classes and resources (Gerritson, 2020). Thus, even as lockdowns ease and campuses partially reopen, technology-mediated learning has become normalised beyond the pandemic.

Digital infrastructure and data sharing capacity sit at the core of institutional attempts to manage the pandemic response and in claims to restart international student mobilities. As large organisations, universities have been tasked with contact tracing on their campuses and, as a result, have often developed their own bespoke monitoring systems. At the National University of Singapore, for example, all faculty and students were assigned to five 'self-sufficient' activity and residential zones, and the use of a mobile platform app (NUSafe) was made mandatory in order to track on-campus movement and ensure compliance with the zoning strategy. Digital surveillance technologies in the form of nationwide mobile apps that allow people to 'check in' at non-home-based locations have also become ubiquitous. These are not without difficulties, however. Singapore's development of potentially mandatory wearable devices and tracking app (TraceTogether) galvanised a series of online petitions to raise privacy concerns (Hallams & Haines, 2020). Australia's purchase of the contact tracing app (COVID SAFE) revealed difficulties in exchanging Bluetooth handshakes with iPhones when people moved around with phones in their pockets. Key government authorities failed to communicate these problems with developers and members of the general public, eroding public trust (Taylor, 2020). Meanwhile, internal border closures by state governments in Queensland, Western Australia, Tasmania, and the Northern Territory initiated under various kinds of Public Health and State of Emergency legislation curtailed free movement within Australia for the first time in over 100 years. Similar geographical restrictions were introduced in New Zealand during its initial lockdown, and as this article was being finalised, the major education hubs of Auckland and Melbourne had been placed under exceptional lockdown restrictions due to local outbreaks. Early proposals for 'travel bubbles' between 'safe' countries to restart student mobilities have been postponed (Cooke, 2020; Karp, 2020). The pandemic, it would appear, simultaneously drives time–space compression seen in the reach of the microbe, and time–space expansion, as border control regimes are reintroduced.

3 | VIRTUAL AND EMBODIED LEARNING: EFFECTS, CHALLENGES, OPPORTUNITIES

The rapid growth in international student mobilities over the last two decades has been influenced by the promotion of overseas study as desirable because of the 'distinction' it offers, both as a means to acquire social capital, and in terms of the value of experiencing life and study in different linguistic and cultural contexts (Brooks & Waters, 2011; Collins et al., 2014). In contrast, images and accounts of international students studying under pandemic restrictions from their bedrooms in shared accommodation convey nothing of the exciting, cosmopolitan milieux that universities, intermediaries, and ranking agencies have portrayed. Unsurprisingly, the international student body has traditionally been wary of the kind of online learning that is now being deployed in response to COVID-19 (Ziguras, 2001). Moreover, some governments (among them China, India, and Vietnam) have refused full recognition of online degrees as a safeguard against 'diploma mills', organisations that offer fake or substandard degrees for profit (Ziguras, 2001). Fee structures and contractual agreements between students and education providers have not been changed to anticipate the shift to online learning. In the wake of pandemic-driven disruptions, international and domestic students have called for fee reductions ranging from nominal compensation for the additional costs of remote learning to demands for significant concessions or refunds (Commonwealth Ombudsman for Overseas Students, 2020). Having been induced to consume the commodified goods of overseas study, often at significant cost to themselves and their families, international students are questioning the value of remote learning that carries only the most rudimentary features of international education.

Scholars have long recognised that effective learning is situated; that is, it is place-reliant and draws on and builds social relations (Collins et al., 2017). Institutional identities, aspirations, and reputations rest on the provision of quality learning experiences that centre such embodied learning encounters (Davie, 2020b; Ross, 2020). Universities are caught in a balancing game, instituting physical distancing as a pandemic measure, while acknowledging the importance of on-campus experiences for student learning and well-being. With some pandemic-driven restrictions lifted, the liberal arts Yale-NUS College in Singapore has been able to reopen and welcome back student residents, blending together face-to-face and virtual modes of learning (Yale-NUS, 2020). After COVID-19, planning will

require careful reassessments of campus space to enable opportunities for small group learning and the cultivation of intercultural sociabilities that are the hallmarks of a liberal arts education desired by international students and now a distinctive feature of Singapore's hub strategy.

Before the pandemic, attempts by universities' leaders to cajole academic staff to embrace technology-enhanced teaching encountered resistance. In some quarters, these initiatives were seen as shifting the locus of control, accountability, recognition, and investment away from the embodied cognitive labour of academics to other actors (Selwyn, 2014). Even among technology enthusiasts, the virtual realm was better suited for 'lower order' learning activities, and face-to-face classroom encounters were reserved for higher order active and inquiry-based learning. That stated, there remain many unexplored questions about the politics and ethics of technology-enhanced learning. Scholars have argued that administrators tend to accept technology uncritically, enabling the 'surveilled, datafied classroom' where students are viewed as quantified data objects rather than thinking and feeling beings (Selwyn, 2014; Williamson, 2019). Universities operating in neoliberalising contexts have been criticised for shifting resources to technology and away from other important areas of student care and well-being (for example, scholarships, welfare support, and language and learning support), all of which are crucial for smooth transitions for international students migrants.

The salience of online learning during pandemic times has (re)positioned new actors, techniques, and instruments within university hierarchies. Many fee-for-service products have been offered free for temporary periods by technology companies. The pandemic has been a 'business opportunity,' a moment when market-making projects are furthered by such acts of strategic generosity. These moves help to install educational technology companies as good global citizens. They also raise the possibility that pandemic pedagogies may exceed their function as emergency instruments to become prototypes of new modes of education provision (Williamson et al., 2020). University leaders in New Zealand, for example, have spoken of opportunities for universities to "'Spotify' the learning experience," allowing students to "co-construct their curriculum" (Thomas, 2020). Academic staff have been invited to take "the opportunity to apply the advantages of the COVID-19 lockdown shift to online teaching and learning and revisit traditional ways of delivering lecture content" (Quigley, 2020). Similarly, Australian Vice-Chancellors have highlighted the "greater flexibility and choices for students" and welcomed "a changing of the guard" as previously sceptical academics have been required to 'do' education differently (Hunter & Baker, 2020). Singapore's university leaders have been more circumspect, highlighting the importance of "face-to-face interaction" in "holistic education" and have promoted hybrid courses (Ross, 2020; Tan, 2020). Digital technologies remain important in their eyes, and are seen as among the avenues by which to reenergise marketing and recruitment (Davie, 2020b).

In summary, there is every possibility that both reduced international student numbers globally and an amplified role for education technology companies may drive major structural changes in higher education. In the case of Australia, austerity measures introduced in response to the immediate financial difficulties at some universities are anticipated to dismember a significant proportion of the country's academic and research workforce. Speculating on the implications of that diminishment, researchers have flagged the following possibilities: reduced capacity to teach domestic students, numbers of which are anticipated to rise in an economic recession; reductions in, and accompanying decline in the quality of programmes; and falling levels of research productivity (Bare et al., 2020; Marshman & Larkins, 2020). If they eventuate, such outcomes will weaken the international standing of universities, further reducing their attractiveness to international students. These large-scale restructuring, redundancies, and other austerity measures may also limit capacity for a successful and ethical pivot to digitalisation and, in turn, that may negatively affect the attractiveness of universities to those in the international student market, whether for virtual or physical mobility.

3.1 | Education destinations and the virtual turn

Beyond their impacts on universities, international students have had considerable economic and social significance for cities and urban regions (Ho, 2014). International student mobilities have played a central role in the transformation of urban residential and retail landscapes (Cheng, 2018; Collins, 2010; Fincher & Shaw, 2009). Student mobilities are also a feature in international ranking exercises that correlate the value of higher education with urban place dimensions (QS, 2020). For cities such as Melbourne, Singapore, and Auckland (all top-30 in QS's list of 'best student cities'), student mobilities have been critical in narrating the cities as cosmopolitan, knowledge-intensive places of opportunity (Melhuish, 2019).

As the pandemic-led lockdowns curtailed urban mobility, images of peopleless city streets and of students hunkering down in apartments circulated widely, bringing into question the viability of cosmopolitan urbanism models promoted and inspired by international higher education. The pandemic also highlighted fissures in existing projects of multiculturalism, seen in rising levels of intolerance and xenophobia towards foreigners, particularly Asians (Chakraborty, 2020).

Six months after the closure of its international borders, Australian cities such as Sydney and Melbourne were reporting higher than normal rental vacancies as student numbers continued to fall. According to pre-pandemic estimates, AU$25 billion or 72% of all non-tuition spending by international students was concentrated in the heavily urbanised economies of retail, hospitality, and real estate (Hurley, 2020). Falling student numbers have produced demand shocks in goods and services, and cascading supply-related disruptions; these have been particularly sharp in Greater Sydney (inner city, north, west, and southwest) and Greater Melbourne (Southbank, Docklands, Clayton). Up to 30% of residents in some suburbs in Greater Sydney were international students; their absence has greatly affected consumption for retail, hospitality, and housing. With more of Australia's onshore international students showing signs of returning to their home countries while staying enrolled, falling demand for goods and services will continue for some time, deepening the economic stresses on local communities (Hurley, 2020). Similar patterns are apparent in New Zealand cities, especially Auckland, which has been the primary destination for international students. There, apartment rental vacancies are increasing and rental prices are declining in the central city where international students usually reside, while outer suburbs are continuing to experience significant property and rental price inflation. Retail sales in the central city were also reported to be down by NZ$1million per day and the flow-on effect of international student absences is leading to increased retail vacancy and the closure of private educational operations (Collins, 2020). As rental vacancies climb, property investors and purpose-built accommodation providers are also expected to be affected. Unlike the economies in 'student cities' in Australia and New Zealand, Singapore's economy is much less dependent on attracting international students. Its public universities have a policy of prioritising Singaporeans and capping foreign undergraduate student enrolment while the private education market is increasingly constrained by stringent state control to raise standards (Business Times, 22 October, 2016). Despite pandemic-related fluctuations, the residential property market and rental demand have not seen significant decline (Sun, 2020).

In coming months, it is entirely possible that international students may reevaluate their preference for traditional study destinations and look towards destinations where their cultural safety is assured. Even before COVID-19, international students and their families placed a premium value on the safety of host cities and the openness of their residents (Ho, 2014, pp. 161–162). Some may consider branch campuses and universities that are closer to home. The attractiveness of study destinations may also be recalibrated by considerations of the capacity and effectiveness of health/medical infrastructures and the cost of student health insurance (Chiu et al., 2014). Alongside new ethical concerns about the role of 'immunity passports', the dimensions of health and cultural safety dimensions are likely to influence which students can move, where to, and under what conditions.

3.2 | New political economies of public higher education

COVID-19 has highlighted the 'hidden architecture' of digital infrastructures undergirding higher education systems that both enables and potentially disables the mission of universities. As socio-technical formations, digital infrastructures do more than just facilitate learning and the management of large institutions. They also reshape the spaces and subjects of higher education — student learning experiences, the role of research, relationships between students and faculty, and the public role of the academy. In a post-pandemic era, authority and expertise in commercial vendors and business intelligence may increase, diminishing the role of academic labour in shaping the intellectual development of students (Carrigan, 2019; Williamson, 2019). Digital technologies have enabled universities to respond to the crisis with technical efficacy, while reigniting challenging questions about the deepening relationship between public higher education and commercial platform providers (Carrigan, 2019; Mirrlees & Alvi, 2020; Williamson et al., 2020). Critics point to the precipitous rise of the number of projects aimed at schooling the poor in the global South by means of partnerships between international organisations such as the Organisation for Economic Co-operation and Development (OECD) and World Bank and technology companies and see those projects as problematic precursors to the global reach of online education (Ball et al., 2017). The pandemic may be a critical moment towards the 'platformisation' of all education including higher education.

Although software platforms have been inside universities for some time, the idea of a 'platform university'

marks a new moment. It materialises through demands for new and enhanced performance measurement in teaching and research impact. State-initiated marketisation is an additional driving force, opening up higher education to new providers in the name of 'innovation' and 'efficiency' in service delivery. Platformisation involves unbundling higher education and outsourcing specific services to platform providers; the same services are then repackaged for sale back to the higher education sector. In this context, learning analytics, artificial intelligence, and other data collection software enable student data to be repurposed as proxies for performance measurement and assuring accountability (Selwyn, 2014; Williamson, 2019).

One set of challenges posed by platform universities concerns the surveillance architectures arising from institutional dependence on digitally mediated labour, digital communication, and performance and quality evaluation. The process of building digital infrastructures into higher education involves extensive and longitudinal collection of data from students, academics, and professional staff. Collectively, these activities turn previously invisible processes and everyday experiences into quantifiable data, thus rendering people and practices as objects to be monitored, tracked, analysed, and optimised through analytics (Williamson, 2019). As end-users of mobile apps, virtual dashboards, and other digital learning tools, students become active contributors to 'student data', which may be translated into pedagogically valuable frameworks to improve learning experiences. At the same time, student and academic users are converted into performance measures that feed into wider commercialisation of higher education market (Selwyn, 2014; Williamson, 2019). Similarly, academics may become entrenched in technological matrices that transform them into governable 'bibliometric selves' (Lim, 2019) by means of institutionalised platforms that encourage self-assessment and reporting of research and teaching impact. Such digitalisation of higher education will introduce complex changes in expectations held of universities by individual students and collectives such as professional bodies, local communities, governments, and societies. There is an inherent risk that the investments in digital infrastructures under platformisation could impose expensive technical solutions to complex institutional and political problems (Hayes & Jandrić, 2014).

The effects of digital infrastructures on international student mobility are far less well understood. Important and critical conversations are underway about the possibility for digital technologies to support virtual forms of student mobility to overcome cross-border mobility restrictions during and after the pandemic (Durden, 2020). In response to the lockdowns, experiments have been underway to duplicate the benefits of face-to-face modes of instruction through online learning for all students. The preliminary results of applying flipped or blended approaches in practice-based education programmes are predictably mixed. Attempts to use online platforms for laboratory-based learning—vital in the science, technology, engineering and mathematics (STEM) disciplines favoured by international students—have been far from seamless: certainly, engineering and science practicals and geopraphy field trips are proving difficult to simulate in virtual environments (Tertiary Education Quality and Standards Agency [TEQSA], 2020). Similarly, student surveys suggest that online clinical education is perceived to be less effective and less engaging than immersive clinical programmes involving face-to-face interactions (Dost et al., 2020). While it is certainly the case that such limitations may be an opportunity to innovate and apply new practices, the compromises discussed above have led international students to call for reductions in their tuition fees (SBS, 2020).

While there may be an emerging consensus on the vital role of face-to-face learning during study abroad stints, with physical travel as the hallmark of immersive cross-cultural interaction (Ross, 2020), strong arguments are now being made about the opportunities of online learning platforms that allow students to actively choose immobility over mobility and not as a default option (Mittelmeier et al., 2020). In a context where significant higher education spending is flowing from universities to platform providers, new pandemic-era claims that digital affordances can work towards widening geographical and social access, and strengthen the mission of all public education, deserve further scrutiny.

In the final and concluding section, we turn to consider the future of international student mobility in a shifting context to explore how digital infrastructures could be repurposed to further collective ends, a 'platform cooperativism' (Carrigan, 2019).

4 | CHARTING THE FUTURE OF INTERNATIONAL STUDENT MOBILITIES

As people across countries and cities begin to exit lockdowns while keeping cautious eyes on the resurgence of the coronavirus, at least three possible futures for international student mobility may be considered.

First, the forms in which student mobility manifest are changing in terms of the actual mode of movement across borders (virtual versus physical) and the duration of student mobility sojourns (long term versus short

term). This dynamic is being shaped at the 'pandemic scale' as governments continue to recalibrate border control and bodily surveillance on the one hand and, on the other, higher education organisations compete to woo international students with technology-integrated teaching and learning environments. Consistent with a wider turn towards a "fourth industrial revolution," university futures in this scenario may be characterised by a "strong technocratic/technophilic impulse and futuristic orientation" (Yang & Cheng, 2018, p. 58).

Accordingly, virtual student mobility may become an option, even though it may not entirely replace student mobility programmes involving physical travel. Universities may also begin to incorporate more hybrid programmes, offering more pathways to combine overseas credentials with domestic degrees. If undertaken, these measures may lower the financial bar for young people with modest means but who desire an international experience of the kind enjoyed by wealthier students who have long enjoyed a 'secessionist mobility'—a spatial secession from the local. The affordances of spatial and intercultural connectivity through alternative modes of internationalisation such as technology-enabled Internationalisation at a Distance (IaD) have also been touted, although these too require further research (Mittelmeier et al., 2020).

A second scenario is one where the circulation of international students is manoeuvred by new pandemic-driven political contests. Before the pandemic, there were signs that the axis of global higher education would pivot towards East Asia, thus boosting intra-regional student circulation (Lipura & Collins, 2020). A case in point is China's Belt and Road Initiative and its allied investments in educational and research partnerships across Southeast Asia and beyond. The pandemic appears to be hastening geopolitical tensions notably in China–US relations and more recently in China–Australia relations. In a context of amplified nationalistic sentiments in both sending and destination countries, we may witness a respatialisation of international student flows leading to an increase in popularity of regional education destinations.

While anticipating declining mobility over the next five years (see Hurley, 2020), insiders in the international education industry are also reconstructing optimistic scenarios of a return to the same, pointing to the cosmopolitan aspirations held by young people and their families who see employability and livelihood security being enhanced by the acquisition of Anglophone forms of cultural capital. Global education agents, ranking agencies, marketing firms, and other intermediaries whose core business depends on facilitating international student mobility are directing efforts to ensure the continuing relevance of the student migration industry.

Third, the pandemic has also opened a window of opportunity and promoted a sense of urgency into the search for more sustainable, ethical, and socially just modes of global higher education. The environmental impacts of international student mobility on carbon footprints have raised concerns about sustainability (Shields, 2019). There are signs that virtual alternatives are being considered as alternatives (for example, ERASMUS+ Virtual Exchange). There has also been a call for universities to reaffirm their responsibilities to care for the security of international students. Many students who remained in host countries have been subjected to material hardships and mental stresses. By failing to extend income support to international students, the Australian Government left students exposed to significant vulnerability. Many were unable to pay for essentials needs such as food, medicine, and shelter, once again revealing the limits of market citizenship (Berg & Farbenblum, 2020; also Marginson et al., 2012). International students stranded at home by border closures have also received little support from their enrolling institutions (Iqbal & Phan, 2020). The pandemic brings a new urgency to ethical matters, prompting uncomfortable questions on the care obligations of host and home governments and of enrolling universities. The question of how to scale ethical practices transnationally is especially important given that an exclusionary nationalist politics is being mobilised for electoral advantage in established study destinations such as the United States, the United Kingdom, and Australia.

The pandemic plunged international students into hardships, highlighted racial antagonisms, caused serious academic disruptions, and exposed students to precarious after-study pathways. By laying bare the political, economic, and cultural effects of cross-border vulnerabilities, the COVID-19 crisis compels us to grasp the nettle to agitate for mobility justice (Sheller, 2018). International student mobilities offer a context to explore the responsibilities of the globalised, technicised, platformised university to address broader issues of justice and equity. By developing knowledges about the neoliberalisation of post-pandemic political economies within which we locate the platform university, universities offer the intellectual and imaginative resources to halt the return of the same. They offer the hope of steering higher education towards non-proprietary futures such as 'platform cooperativism.'

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