Futures Studies, Mobilities, and the Postdigital Condition: Contention or Complement

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Abstract

This paper explores relationships between recent developments in the fields of mobilities, futures, and postdigital studies. The article covers six main themes: questions and their histories; definitions; research methods and ethics; the nature and ownership of knowing and learning; understandings of time, space, identity, community, and relationships; and political processes and political legitimacy. The article was written in three steps. In the first step, the leading author (John Traxler) has identified the relevant themes. In the second step, proponents of each position have freely responded to the themes (futures studies, Stuart Connor; postdigital theory, Sarah Hayes and Petar Jandrić; mobilities, John Traxler). In the third step, the responses have been collectively (re)mixed and edited, identifying complementary and conflicting concepts and ideas. The article was initiated a month before the outbreak of the Covid-19 pandemic, and it was completed over one and a half years later. Thusly, responses and analyses have included the pandemic experience without explicitly focusing to the Covid-19 pandemic. The paper concludes with drawing together contributions, seeking underlying commonalities and differences, and looking for trends, convergence, and change. Epistemically, the three positions discussed in this paper are far from commensurable. Yet they are compatible and complementary, in a postdigital dialogue, in a sense that they all need each others' inputs on the road to a better understanding of our current condition, and the road to a better future.

Keywords Postdigital · Mobilities · Futures · World views · Paradigms · Philosophies · Convergence · Dialogue · History · Definitions · Research methods · Ethics · Knowing · Learning · Time · Space · Identity · Community · Relationships · Political processes · Political legitimacy · Covid-19 · New normal

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Introduction

This paper discusses, explores, and analyses the three positions represented by this opening statement in order to see if they are compatible, complementary, or competing, or perhaps all three are subordinate to some greater emerging worldview. More formally, the positions and their proponents are as follows: (1) futures studies (Stuart Connor), (2) postdigital (Sarah Hayes and Petar Jandrić), and (3) mobilities (John Traxler). Collaboration between the co-authors took the form of postdigital dialogue, aiming to produce ‘more knowledge than the arithmetic sum of its constituent parts ... as [i]nterstitial spaces between authors’ research interests offer important insights into the breadth and depth of the postdigital challenge [and] overlaps and reoccurring themes are good indicators of pressing issues’ (Jandrić et al. 2019: 180).

The article was initiated by John Traxler. It grew out of a seminar organised by the Education Observatory at the University of Wolverhampton,¹ where all four authors are affiliated, in the days shortly before the Covid-19 pandemic hit Europe and England went into lockdown. As we write these words in May 2021, initial pandemic shocks are no more and the world slowly builds the ‘new normal’. While we all experienced a roller-coaster of emotions during the pandemic, an article written over the course of over one and a half years cannot do them justice. Perhaps things are better that way; started before the pandemic, and completed at a point of its normalization, the article ‘reaches beyond the pandemic to the point where the pandemic experience is transformed from an object of research to an intrinsic part of our theories, approaches, research methodologies, and social struggles’ (Jandrić 2021: 262). This position, we believe, is important for development of a broader understanding of the historical moment we live in.

One may ask, and rightfully so, why pick studies of futures, postdigitality, and mobilities, in the vast sea of competing positions? Futures studies have significantly risen in importance in our pandemic times marked with uncertainty. Based on convergence between the analog and the digital, the biological and the informational, postdigital studies provide important insights into the nature of our reality. And in our rapidly liquified modernity, engagement with mobilities hardly requires any justification. Our choice of positions may be arbitrary, and the positions have different priorities and levels of maturity. Yet these three areas of study are covering aspects of life that have come to the fore with recent events and concerns, and have emerged somewhat serendipitously through the dialogues during the Observatory event. During over a year of co-writing this article, we have become convinced that their mutual interaction offers fertile ground for analysis.

¹ See <https://www.wlv.ac.uk/research/institutes-and-centres/education-observatory/>. Accessed 5 May 2021.

Questions and Their Histories

Implicit in all research positions are questions. In the case of futures studies, these are fairly explicit: what is next? More specifically, under what conditions does the question, ‘what is next?’, have a value or meaning (Masini 1993)? What do we need to do or know, to answer the question, what is next (Bell 1997/2003; Inayatullah 2009)? What do we need to let go of in order to answer the question, what is next (Inayatullah 1990)?

The ambiguity and recurrent uncertainty inherent in a response to what is next may be considered to limit the value of anticipating futures (Miller 2018), particularly in a world where order, certainty, and control are valued. The answers to the questions, what was and what is can be equally contested, complex and uncertain (Guba 1990), but answering the question, what is next, demand different orientations from the questioner and respondent (Amara 1991; de Jouvenel 1967). Assuming that what is next has not happened yet, not only are we unable to verify an answer against an actuality, but we may also believe in the potential to realise our answer to the question what is next (Bloch 1995).

It is the uncertainty and doubt in the possibility space (Miller 2006) that is opened by the vital question of, ‘what is next?’ that is deemed to be of value (Dator 2009). Not only is what can be known and how we should know brought into question, but far more significantly, we are no longer acting on the basis of what we claim to know. Instead, we are recognising that what we claim to know comes from our actions and ways of being in the world (Heidegger 2010; Merleau-Ponty 2002). So, these are the questions that constitute an initial outline of futures studies.

The mobilities community is also rooted in uncertainty, and certainly in flux and turbulence. Mobilities, also called the mobilities turn and sometimes the sociology of mobilities, encapsulate a position in social science but not a clearly defined body of people, or body of work. So, these remarks represent what seems to be their consensus. The need for the mobilities position is that all of our societies and cultures, each in their own different ways, coming from their own different histories, are now characterised by movement and motion. Perhaps they always were, but now these are accelerating and diversifying, and they are over-powering those earlier worldviews characterised by stasis and solidity. The latter are now stagnant perspectives unfit for an ever-faster moving world, a world where motion is pervasive, some of it physical, some virtual; some disciplined, some incoherent; some voluntary, some compulsory; and where immobilities too are in constant movement.

Mobilities (as described for example in Urry 2012) encompass both the large-scale movements of people, objects, capital, and information across the world, as well as more local processes of daily transportation, movement through public space, and the travel of material things within everyday life. A classic exposition of the world as seen by the mobilities community might be a world characterised by the ‘five highly interdependent “mobilities” that form and re-form diverse networks’:

- Corporeal travel of people for work, leisure, family life, pleasure, migration, and escape.
- Physical movement of objects delivered to producers, consumers, and retailers.
- Imaginative travel elsewhere through images of places and peoples upon TV (1 billion worldwide).
- Virtual travel often in real time on the Internet so transcending geographical and social distance.
- Communicative travel through person-to-person messages via letters, telephone, fax, and mobile. (Urry 2007: 47)

In terms of landmarks, the Centre for Mobilities Research (CeMoRe),² founded in 2003 at the University of Lancaster, is certainly one. *Mobilities*,³ its core and open journal founded in 2006 by the late John Urry, Mimi Sheller, and Kevin Hannam, produces a healthy six issues a year. The Wikipedia entry for mobilities⁴ provides a credible account of the history and achievements of the mobilities communities, and of its leading protagonists. *Perpetual contact: Mobile communication, private talk, public performance* (Katz and Aakhus 2002) was probably the earliest edited volume representing emerging mobilities, and the most definitive and authoritative account must now be *The Oxford Handbook of Mobile Communication and Society* (Ling et al. 2020). It must be admitted however that there have been some more speculative—not to say, whacky—readings of the current trends and realities of movement, some that spill over into our other two positions (Kirby 2009). And there have been attempts to look for tacit precursors, for example in Bauman’s liquid modernity (2013), describing ‘rapidly changing order that undermines all notions of durability... a sense of rootlessness to all forms of social construction...’ (Lee 2005: 61) and in the hypermodernity of Paul Virilio with his concern with speed (Armitage 1999).

By comparison, the postdigital position seems more confident. The mission statement article for *Postdigital Science and Education* journal and book series⁵ (Jandrić et al. 2018: 893) says: ‘We are increasingly no longer in a world where digital technology and media is separate, virtual, “other” to a “natural” human and social life’. The postdigital community believes that this simple truism has wide-ranging consequences. From anthropogenic changes in the Earth’s ecosystems, through changing power relationships between humans and machines, to posthumanist proposals of radical equality between carbon-based and non-carbon-based forms of life, the contemporary human condition has transformed at all scales and at great speed. Developed in times and contexts very different from ours, traditional philosophies, sciences, and arts need to be reimagined and repurposed for today’s challenges.

² See <https://www.lancaster.ac.uk/cemore/>. Accessed 5 January 2021.

³ See <https://www.tandfonline.com/action/journalInformation?show=aimsScope&journalCode=rmob20>. Accessed 5 January 2021.

⁴ See <https://en.wikipedia.org/wiki/Mobilities>. Accessed 5 January 2021.

⁵ Postdigital Science and Education journal: <https://www.springer.com/journal/42438> and book series <https://www.springer.com/series/16439>. Accessed 5 January 2021.

In the postdigital position, scientific research is a collective enterprise consisting of four equally important prongs of we-think, we-learn, we-act, and we-feel (Jandrić 2019; Jandrić and Hayes 2020), so postdisciplinary research perspectives cannot be separated from community development. The word postdigital first appeared in artistic circles at the brink of the millennium, although the idea can be traced a few years earlier (Jandrić et al. 2018; Cormier et al. 2019). These days the community around the *Postdigital Science and Education* journal and book series is far from alone in their efforts at mainstreaming postdigital ideas into the social sciences and the humanities, and the concept appears with increasing frequency in literature, exhibitions, academic institutes, and departments.

Definitions

‘The postdigital is hard to define, messy, unpredictable, digital and analog, technological and non-technological, and biological and informational. The postdigital is both a rupture in our existing theories and their continuation.’ (Jandrić et al. 2018: 895) The key element of this oft-discussed definition (see, amongst others, Jandrić et al. 2019; Fawns 2019; Peters and Besley 2019; Sinclair and Hayes 2019; Hayes 2021a) is a curious mix of continuation and rupture that characterizes all postdigital research. The postdigital community has a lot of appreciation for its intellectual ancestors, yet it dares to challenge traditional canons and explore new ruptures between our past and present.

Mobilities is also hard to define but in terms of specific research and publication, there has been little slackening of activity to carry it forward. There has been a steady output of papers and special editions, exploring different communities and their mobilities, including diaspora (Blunt 2007), counter diaspora (King and Christou 2011), cycling (Spinney 2009), walking (Myers 2011), railway travel (Löfgren 2008), cargo (Birtchnell and Urry 2015), migrants (Faist 2013), urban homeless (Smith and Hall 2016), migrant academics (Morley et al. 2018), farmers (Morris 2004), tropical villagers (Price and Price 2017), jogging (Qviström et al. 2020), and lifestyles (Cohen et al. 2015).

The current trajectory continues to explore ever-widening target groups in ever-widening countries and contexts, some geographical, a few historical, with as much focus on (im)mobilities as the eponymous mobilities. The focus does however seem largely restricted to the corporeal category, the movement of people rather than the other categories mentioned above. Like the postdigital in its mix of rupture and continuity, mobilities also has its (im)mobilities, its tetherings, not ignored or overlooked but reconsidered and placed in a new frame of reference. This then might be its first major contribution, asking readers and researchers to reconceptualise their world around motion.

Whilst mobilities perspectives draw on the constituent disciplines of the social sciences—mostly sociology itself and geography, anthropology, media studies, and communications—postdigital perspectives draw from a hectic and eclectic mix of sources from more diverse fields including arts, philosophy, sociology, systems theory, cybernetics, critical theory and pedagogy, critical linguistics,

science and technology studies, natural sciences (primarily physics, biology, and life sciences), science fiction, and others. This creates a radically postdisciplinary conceptual space, and one of the key theoretical challenges of postdigital theory is development of mutual understanding between these often-incommensurable constituents.

What links science fiction visions of artificial intelligences, Karen Barad's (2007) quantum-physics-based agential realism, David J. Chalmers' (1995) work on consciousness, and critical pedagogy's struggle for emancipation? How can these diverse theories conceive a meaningful interaction? It is through drawing links invisible to traditional disciplinary research approaches, and through developing a more holistic view to the contemporary human condition, that postdigital approaches are hoping to create a more accurate image of our reality. This is intended to inspire a more powerful means for changing that reality towards more freedom, emancipation, environmental sustainability, and other important goals associated with the long-term well-being of humankind.

Expectations of clear answers to these kinds of questions may sound like science fiction, yet that should not prevent us from trying. In a recent editorial, Jandrić (2020: 534) wrote that the postdigital challenge 'does not only require more traditional research—more importantly, it also requires development of conceptually different research', and this is an emerging theme across our three perspectives. 'Given the rupture and continuation nature of our postdigital reality (Jandrić et al. 2018: 895), these two requirements are not at odds.' (Jandrić 2020: 534).

While they grapple with these hard epistemic problems, postdigital approaches are far from shy of developing practical approaches and engaging in popular movements. Drawing from the tradition of critical pedagogy, one current trajectory of postdigital thinking is aimed at developing a postdigital philosophy of praxis (Peters and Besley 2019). Another trajectory concerns community work on critical postdigital skills and resistance to oppressive forms of algorithmic management (Williamson 2019).⁶ Following the recent outbreak of the Covid-19 pandemic, there have also been an increasing number of publications on postdigital futures (Costello et al. 2020; Kupferman 2021).

Development of postdigital philosophy of praxis is in its infancy, as are new collaborative endeavours towards postdigital participation⁷ and examinations of postdigital positionality (Hayes 2021a; Hayes and Jandrić 2021). Our foundational concepts of we-think, we-learn, we-act, and we-feel (Jandrić 2019; Jandrić and Hayes 2020), can make sense only when 'we' comprise as many different people from as diverse walks of life as it is reasonably possible. Working in the early days of postdigital philosophy of praxis, our most important challenge is development of the budding postdigital community and establishment of a respectful, creative postdigital dialogue (Jandrić et al. 2019) amongst its members and between its members and the general population.

⁶ See <http://educationobservatory.co.uk/human-data-interaction/>. Accessed 6 October 2020.

⁷ See <http://postdigitalparticipation.org/index.php/englisch/>. Accessed 6 October 2020.

Moving onto futures studies, we again see diversity and transience. This has been informed and characterised by a diverse and frequently contested range of philosophies, functions, forms, moments, and methods (Adam and Groves 2007; Bell 1997/2003, 1997/2004; Inayatullah 1990; Gidley 2013; Slaughter 2008; Son 2015). It is instructive to raise a distinction between the study of futures and the study for futures. The study of futures can quite easily sit alongside, though potentially be competing for attention against, other domains. Framed as an object of study, the aim is to survey, order, and know how futures have and continue to be imagined and used at different times and in different spaces. When applied, the study of futures seeks to inform how best to represent futures (Bell 1997/2003; Tower Sargent 2010), our relationship to futures, and the relationship of futures to other domains and objects.

The study for futures offers a subtle, but important distinction. As noted above, a study for futures brings to the fore the question of what comes next, or in an embellished form of the question, what form of current thinking, disposition, and knowledge we could and should orientate to futures? What can be argued as the futurity of being human would suggest that all projects inherently, though frequently implicitly, serve the project of what comes next (Adam 2010). A study for futures makes such a project explicit where efforts are placed on various combinations of knowing futures, influencing and enacting futures. In short, a study for futures addresses how we could and should anticipate futures.

If a recurrent axiomatic statement is to be found across these forms of futures studies, it is that uncertainty is the only certainty—or more specifically how we should respond to the inherent uncertainty of futures. A source of anxiety, our contingency, is also the source of our greatest hope and dignity as beings because recurring conjunctures afford new possibilities and pathways.

Futures studies do not seek to own the concepts of a possibility space, uncertainty, or even futures. Rather it seeks to make explicit that an inherent, but not always explicit, aspect of research, scholarship, policy, and practice is its orientation to the future and therefore its associated contingencies and plurality. And yet, the future, or what we should term futures, and how best to anticipate futures remains an underserved issue (Connor 2017).

Agents need to make sense of what might be ahead and in the process, to develop accounts and claims as to the nature and scale of a given problem and subsequent solutions (Fischer 2003). A contested and potent site, futures represent a particularly vital terrain where both visions over what the future is and should be are subject to conflict (Dunmire 2010). As such the development of what is described as a future-minded (Adam and Groves 2007) research, policy, and practice is not just an exercise in extending the number of years over which an agent considers the future and or exploring questions of intergenerational justice, but also one that supports agents to make sense of and enact a complex, open and contested past, present and future.

Research Methods and Ethics

Postdigital research is strongly based on social constructivist epistemologies. Speaking of methods, postdigital research requires a combination of traditional disciplinary methods and various interdisciplinary, transdisciplinary, and postdisciplinary approaches. Accepting that ‘my words and ideas in this article are not just mine: they are an amalgam of all encounters with colleagues, friends, and people known and unknown that have passed through my professional and personal life’ (Jandrić 2020: 179; see also Mañero 2020), recent developments in the field focus to the political economy of knowledge making and dissemination practices including peer review and academic publishing. This focus is probably best exemplified in the dichotomy between knowledge capitalism and knowledge socialism.

Whereas knowledge capitalism focuses on the economics of knowledge, emphasizing human capital development, intellectual property regimes, and efficiency and profit maximization, knowledge socialism shifts emphasis towards recognition that knowledge and its value are ultimately rooted in social relations (Peters and Besley 2006). Knowledge socialism promotes the sociality of knowledge by providing mechanisms for a truly free exchange of ideas. (Peters, Liu, and Ondercin 2012: 88)

As of recently, and under the influence of the Covid-19 pandemic, these theories are now developed further into the direction of bioinformational capitalism ‘based on a self-organizing and self-replicating code that harnesses both the results of the information and new biology revolutions and brings them together in a powerful alliance’ (Peters 2012: 105). It also seems that many knowledge-related phenomena can be approached using the concept of viral modernity, which ‘is based upon the nature of viruses, the ancient and critical role they play in evolution and culture, and the basic application to understanding the role of information and forms of bioinformation in the social world’ (Peters et al. 2020; see also Peters and Besley 2021). This requires a recognition of universities as responsive and dialogic ‘postdigital sites, for connecting global technological and biological change, with local, social projects and citizens’ (Hayes et al. 2021). This brings about a lot of experimentation at the fringes between mainstream academic publishing and activism, aiming at development of a more holistic approach that reaches far beyond the question of method and resulting in new postdigital knowledge ecologies.

We must distinguish between the research methods and the research participants. Since their emergence, mobilities researchers have seemed to focus for their empirical work on mobile communities rather than on the mobile methods to research them. In fact, anyone watching the 2020 John Urry Annual Lecture⁸ might have been surprised by the absence of any mentions of concepts, epistemology, or methods and equally surprised at the disciplined and intense re-focussing of a plethora of what, to the outsider, might have been disconnected phenomena, around mobility.

⁸ See <https://www.lancaster.ac.uk/social-futures/events/annual-john-urry-lecture/>. Accessed 15 June 2021.

This seems ironic because the foundation of the *mobilities* position was that understanding the social world was based on an outdated epistemology of stasis, when not moving was the norm and the datum, and when movement could only be understood as freeze-frames, when researchers had to extract data from the moving in-world and retreat to the static out-world in order to look at frozen moments of movement captured as snapshots.

The paintings, ‘Dynamism of a Dog on a Leash’, the imperfect translation of the Italian title, by Giacomo Balla, 1912, and ‘Nude Descending a Staircase’, translating the title from the French, by Marcel Duchamp, also 1912, perfectly encapsulate the challenge of mobilities research, the challenge of capturing movement within a static medium. Both paintings come from the Futurist movement, those artists who had noticed the sudden forcefulness and prevalence of mechanical motion in European society. Clearly, these artists had already seen movement as a theme emerging through the twentieth century, the century of the motor car, and now latterly giving way to the decades of the mobile phone.

There was and still is great scope for methodological innovation especially from a technological perspective. Data capture, for example capturing location, voices, images and measurements, and data transmission, meaning coverage, bandwidth, telemetry, and ubiquity, continue to become more powerful, compact, and reliable and there are incredible possibilities. But technology is not a prerequisite and may in itself be an intrusion into worlds where the movement is already natural and habitual, such as walking. Perhaps there is a more subtle loyalty amongst researchers to the solidity, stability, privacy, convenience and quiet of interview rooms, and of physical presence. Even in a pre-mobile world these are far from the naturalistic and authentic settings that would increase or ensure the credibility of findings. In a world of movement, this is however even less likely.

This critique is perhaps only valid in terms of particular types and speeds of movement, most of which are not physical, not all are fast enough to require new technologies, allowing existing methods to work with continued credibility. And this is actually the case; most mobilities research co-opts earlier methods. There are however now works addressing an overarching methodological framework (Büscher et al. 2010; Büscher and Urry 2009; Fincham et al. 2009; Merriman 2014; Hein et al. 2008), drawing back from our earlier focus on merely faster physical motion to embrace Urry’s ‘five highly interdependent ‘mobilities’.

Researchers, working with students walking in Manchester, observed: ‘We recognise that accompanying students “in the field” can enable researchers to explore students’ narratives “in place”, and observe first-hand how multi-sensual, multi-layered experiences of places may be both captured and interpreted.’ (Wilkinson and Badwan 2020) The research was however sadly conducted indoors and stationary. These remarks capture the potential of the mobile empirical. John Traxler will be taking some of these ideas further in a ‘walkshop’ at a forthcoming un-conference, post-pandemic, in order to develop this potential.⁹ Outside the avowed members of the mobilities community itself, research does evolve pragmatically.

⁹ See <https://ict4d2020.org>. Accessed 15 June 2021.

Early work in Kenya (Traxler and Leach 2006) attempted lightweight qualitative surveys by Short Message Service across tens of thousands of rural primary teachers, lightly constrained in terms of location (worse case: weekly walking to market for network coverage and battery top-up) but not constrained in terms of movement. More recently, as mobile devices become more widespread and their functionality improves, systems like WhatsApp have become widely used in research, often exploring the impact or perceptions of experiences or situations that were themselves mobile as well as reaching people who are intrinsically mobile, meaning practically everyone these days and that is, of course, the point.

As an aside, time geography is a minor geographical discipline and looks at how people move through spaces (Miller 2016), how perhaps different demographics occupy spaces at different times and in different configurations. Some work already looks at a convergence with mobilities and exploits the methodological possibilities we suggest earlier (Liu et al. 2011; Kang et al. 2010), usually with a focus on specific social groups or social situations, for example Latvians in Germany, young Swedes, older people, travel diaries, or second homers—searching the literature reveals these and others.

Meanwhile, in futures studies, different moments and typologies (Gidley 2013; Inayatullah 1990) are testament to the observation that ‘the scientific, scholarly, and rhetorical methods of any discipline in humanities, social science, and sciences might be – and sometimes are-used by futurists doing research on some particular topic’ (Bell 1997/2003: 241). Approaches such as time series analysis, Delphi, simulation, global modelling, content analysis, morphological analysis, cross-impact analysis, and visioning may have their origins in other disciplines; these tools tend to be re-purposed when applied in the study of the futures (Puglisi 2001).

In all claims on futures, there is the potential for a form of temporal imperialism (Sardar 1999). This is particularly the case in ‘realistic’ views of the future and predictive claims on the future that can seek to displace what are deemed as unrealistic alternatives—closing the future as a space for projecting a range of fears, hopes, and calls for another world (Nowotny 1994). Agencies granted a licence by authorities to know the future have the capacity to exhibit influence over what is deemed possible and desirable and the potential to shape today and tomorrow. Therefore, attention needs to be given to who receives a licence for representing the future and the conditions under which these licenses are held (Connor 2017).

In futures studies where the emphasis is placed on the plural, the aim is to provide foresight rather than a forecast. The objective is not to know ‘the future’, but using a range of approaches and tools such as scenario analysis, in-casting and back-casting methods and speculative design practices, the aim is to examine and extend the horizon of what is deemed probable, possible and preferable, whilst also surfacing and questioning assumptions regarding what constitutes a desirable future and the means by which such a future can and should be realised. By systematically exploring, experiencing creating, and assessing alternative futures, methods in futures studies can blur distinctions between strategy, planning, design, and research as agents are

enabled to consider and rehearse a wide range of future operating conditions and relations and test and assess prototype policies and practices.

Given a recurrent theme in futures studies is to inform, facilitate, and foster open conversations as to how best to anticipate and prepare for the challenges and opportunities of the future, methods in futures research do not seek to establish what is, but reclaim the present as a site of tendencies and potentiality (Alessandrini 2003) and draw attention to what could be.

So, in looking at these summaries of research, their methods, and positions, we see an important concordance in the acceptance of messiness and complexity, not just in our descriptions of the world, but also in increasing fluidity between research methodologies. We further identify clear differences in emphases, sometimes on the mechanics of tools and techniques and sometimes on epistemological choices and decisions. However, in all three cases, we see growing and emerging disciplines grappling reconciling their evolving ideas with the changing world they seek, however provisionally, to explain.

The Nature and Ownership of Knowing and Learning

In many respects, the mobilities community has largely overlooked education and has certainly overlooked knowing and learning. Mobility (and connectedness) has nevertheless a transformative impact on knowing and learning; mobile societies undergo a substantial epistemological change, a change driven by the impact of massive connection and movement. This engages with only one or two of the mobilities outlined by Urry and others, quoted above, but the nature and ownership of knowing and learning are important, and the changes are profound.

Our case is based on the capacity of people and communities to use connected mobile digital technologies to create information, images, ideas, and opinions and to share, discuss, challenge, transform, merge, store, and disseminate them. People and communities do these things in ways that challenge the previous ownership and nature of knowledge and any previous digital technologies because personal mobile digital technologies are ubiquitous, pervasive, universal (nearly), and intrusive; they are now familiar, robust, cheap, easy, and personal, whereas even a decade ago, they were difficult, fragile, expensive, and unusual and their distribution is now very different from that of desktop and laptop computers, televisions, and plasma screens.

The changes have dramatic implications for what constitutes knowing and learning and what is worth knowing and worth learning because technologies change the nature of the employment, assets, commodities, transactions, entities, and relationships that constitute economic activity irrespective of the specific economic, cultural, and historical context of any given society. And this is perhaps a narrow and rather academic discussion of ‘knowing’; it excludes what might be ‘merely’ curious, interesting or fascinating in the world around us and how we can now explore it, and it excludes the aesthetic, the creative, and the spiritual and how these are transformed as the physical and the digital become ever more tightly interleaved, interlinked, and interwoven by personal mobile digital technologies and the networks, connections, and interactions that they afford.

It is possible to start from the first principles, from the foundational axioms of mobility, from inferences, and deductions about the ongoing or overdue transformation of the social, economic, political, and intellectual realms and outline a new pedagogy based on changed understandings of knowing and learning. This is however embryonic (Traxler et al. 2019). This ongoing, subtle, and pervasive transformation has however been overshadowed by the transitory attention garnered by ‘mobile learning’, an extension of institutional e-learning within the universities and colleges of some advanced economies (Traxler 2018) that grew out of adherence to ‘innovation’ as a theory of change espoused by national governments with the ideology and resources to support it. There is perhaps a contrast between this, the latter, a normal paradigm of science, and the other, the former, potentially a ‘revolutionary’ paradigm of science, though perhaps not in a formally Kuhnian sense (Kuhn 1962).

Our other two perspectives have more sophisticated and mature insights. Understood as conglomerates of various influences past and present, our knowing, learning, thinking, acting, and feeling cannot be attributed only to a single ‘genius’ or ‘inventor’. It certainly takes exceptional talent and intellectual courage to recognize previously unseen relationships between different strands of inquiry, to add one’s own contribution, and to formulate a new theory. In our highly competitive world of knowledge capitalism (Peters, Liu, and Ondercin 2012: 88), scientists who make such achievements receive recognitions such as prestigious jobs and prizes. Yet the majority of ‘regular’ scientists, who engage in less exciting or prestigious research, make the shoulders that a small number of ‘high-flyers’ build upon. ‘Welcome to viral modernity, where we produce more and more research for less and less people, and where chances to have one’s argument heard are approaching chances of winning a lottery.’ (Jandrić 2020: 533).

Postdigital science and education recognizes various perils accompanying these developments, such as reproducibility issues and the political economic relationships between research funding, knowledge production, and academic publication (Jandrić and Hayes 2020). The viral behaviour of contemporary science cannot be significantly improved from within the current systems of knowledge production and dissemination (Peters et al. 2021a); new knowledge ecologies require a deep philosophico-practical shift in our understanding of what it means to think, know, learn, act, and feel.

Postdigital knowledge ideals are of utopian character, not least because they require a wide social consensus and a fundamental change in ways that we conduct scientific research. This is where postdigital theory strongly draws from its theoretical links with critical pedagogy and in particular Freire’s understanding of utopia (Freire 1972). ‘Crucially, this utopia is messianic as opposed to prophetic because the latter is located in the future and takes place according to chronological time, while the former is located in the *now*.’ (Jandrić and Ford 2020) Aimed at connecting (now largely disconnected) relationships between the nature and ownership of thinking, knowing, learning, and acting, postdigital knowledge ecologies are amongst us and beyond us; now and in the future.

And so to the future. *Poiesis* in the form of an education of attention (Gibson 1979) and wayfinding (Ingold 2000; Sarpong et al. 2013) is offered as a response to the question of the nature and ownership of knowing, learning, and thinking in

futures studies. *Poiesis* here refers to and retains a capacity for agents to shape their worlds and, consequently, themselves (Levine 2015), but where mastery over knowledge and future are rejected in favour of a project that, redolent of Haraway's (2016) sym-*poiesis*, seeks to attend, attune, and at times accede or amplify the rhythms and flows of being and time. It is not about 'looking' at the truth, but awakening our experience of it (Heidegger 1971/2013). In response to, if not in contrast and opposition to, an alleged arid dominance of Apollonian logic and correspondence theories of truth (Levine 2015), *poiesis* as a practice appeals to a Dionysian disposition (Nietzsche 1994) that envisions truth as the uncovering of what is present but hidden (Heidegger 1971/2013). This is not a project that can be undertaken solely through a detached, rational, analytic, or reflective exercise, but a revealing and a dwelling, expressed and enacted by and through the senses and the imagination (Connor 2021).

Poiesis as a form of knowing and expertise is not the product of acquired, accumulated, and elaborate mental representations, but through being attuned to 'picking up' and unconcealing critical features that one may simply fail to recall or notice (Ingold 2000). Both expert and novice expect and become familiar with being 'comfortably confused' (Levine 1997). Redolent of Keats' (1958: 193–194) concept of 'Negative Capability', an essential quality of *poiesis* is to be 'capable of being in uncertainties, mysteries, doubts, without any irritable reaching after fact and reason'. In learning, attention turns from the transmission of representations to an education of attention, where the etymologies of ignorance and to educate, to ignore, and to bring out and lead forth, respectively, are surfaced and realised. Mastery is subverted and subsumed into the capacity to let-go of the desire, or more accurately, the illusion and delusion of control.

Understandings of Time, Space, Identity, Community, and Relationships

Our three positions each have something to say about these topics and certainly the mobilities literature sees them as all intimately interconnected and transformed. As with many other aspects of the mobilities community, thoughts on these issues range from the quite quotidian to the frankly fantastical. It is perhaps most stimulating to explore the latter rather than the business-as-normal depictions of the former.

The emergence of the mobile phone in the mid-2000s had a major impact on mobilities research, catalysing an outpouring of thought and writing. On the changing sense of self, authors described personal mobile digital technologies as becoming 'embodied' (Rettie 2005). Others described them as becoming prosthetic. Raul Perterra said:

Unlike desktops and other immobile technologies, mobile phones more closely resemble tools or prosthetic devices as extensions of the body. They become extensions of the hand, allowing us to connect anytime, anywhere, with anybody. Bodies themselves become writing devices as *phoneurs* negotiate new urban spaces. (Perterra 2005: 27)

Anecdotally, Nokia staff referred to mobile phones as ‘our new private parts’. Elsewhere, the mobilities community reacted imaginatively to what it portrayed as the out-dated Newtonian, European Enlightenment, or Industrial Revolution account of time and space; mobile devices eroded established notions of time as the common structure, for scheduling, coordinating, and organising activities and events. Authors talked about the ‘approximate meeting’ and the ‘multi-meeting’ (Plant 2002: 31), about ‘socially negotiated time’ (Sørensen et al. 2002: 3), and the ‘micro-coordination of everyday life’ (Ling 2004: 69) alongside the ‘softening of schedules’ (Ling 2004: 73) afforded by mobile devices as we used them to adjust our schedules and our commitments on-the-fly. Nyiri (2007: 301) said, ‘with the mobile phone, time has become personalized’, whilst Fortunati said:

The mechanical representation of time is more and more unacceptable at a social level. In other words, the abstract, uniform and unitary time of the clock is sinking further and further down in relation to electric and satellite time. With the possibility of perpetual contact,¹⁰ the mobile phone ends in fact by shaping time as a container of potentially continuing connection. (Fortunati 2002: 517)

In relation to space and to place, again, the breakthrough of the mobile phone at the start of the century and then the smartphone a decade later provoked much thought, discussion, and writing. It created ‘simultaneity of place’ (International Telecommunications Union 2004: 20; paraphrasing Plant 2002), combining physical and virtual spaces of conversational interaction, and an extension of physical space, through the creation and juxtaposition of a mobile social space, *phonespace* (Townsend 2000), very different from the cyberspace mediated by computers.

Mobile phones also reconfigured relationships between public and private spaces. Virtual communities and discussions used to be mediated by static networked computers in dedicated times, places, and spaces. Mobile phones propelled these communities and discussions into physical public and private spaces, necessitating adjustments as we learnt to manage more fluid environments. The private ‘is no longer conceivable as what goes on, discreetly, in the life of the individual away from the public domain, or as subsequently represented in individual consciousness’ (Cooper 2002: 22). Bull commented on mobile phones re-appropriating public space or work time back into the private:

The use of these mobile sound technologies¹¹ informs us about how users attempt to ‘inhabit’ the spaces within which they move. The use of these technologies appears to bind the disparate threads of much urban movement together, both ‘filling’ the spaces ‘in-between’ communication or meetings and structuring the spaces thus occupied. (Bull 2005: 334)

Mobile phones redefined conversation. Rather than it being set aside as something done at certain moments, for a delimited stretch of time, usually in a private

¹⁰ Perhaps an unconscious reference to Katz and Aakhus (2002).

¹¹ Really just an oblique reference to the iPod and its imitators.

space (or semi-private phone ‘box’ or ‘booth’), Sheller (2004: 5) said there is now ‘a constant flickering of conversation’. These are, on the one hand, excerpts of a larger literature but, on the other hand, may have been only documenting the apparently exciting transition to a new normal as it then seemed and now of little interest now to societies thoroughly blasé about the mobile phone.

Postdigital theory adds an additional layer to these studies by recognizing entanglements between the online and offline, analogue and digital, and biological and informational. While there has been little dedicated research in the field,¹² preliminary work implicit in existing postdigital research offers some starting points for discussion. Technology brings about rapid social acceleration which, in our pandemic times, has manifested in quick and unprepared shift to online work including but not limited to teaching and learning. This has made much more visible the postdigital participation of humans in computing, rather than the more common assumptions and rationalities about what computing simply brings about in human lives (Hayes 2021a). As we increasingly work all times of day and from our homes, private time, and space merge with public time and space, thus creating new private–public time–space entanglements. Coupled with mobile technologies, which bring work into the private sphere on the move, these trends result in new, by now largely unexplored, reconfigurations of the offline and the online. As technologies enter our living rooms, bedrooms, and even bathrooms, these reconfigurations strongly contribute to new bioinformational convergences.

These convergences profoundly impact people’s identities leading to diverse individual experiences that might be understood as ‘postdigital positionalities’ (Hayes 2021b) due to their intersectional nature. At work, we are professors; at home, we are parents; when we visit our parents, we are children. However, as we answer our work emails while homeschooling our children, and lecture online while cooking our dinners, these identities—which have never been completely separate—now come even closer.

Anecdotally, this brings about a whole new culture and etiquette. Only a few years ago, it was unimaginable to pause a lecture or meeting to take a kid to the toilet; today, this has become a norm. As we enter our colleagues’ homes, witness chaos in their kitchens, meet their children and spouses (while showing our own chaos and our own families), our relationships also gain a degree of intimacy. Postdigital reconfigurations of intimacy are one more research area deserving attention. While we wait for results of the (as far as we know) only dedicated project in the field at the moment,¹³ its research questions do indicate the importance of these studies.

[H]ow can people build meaningful relationships over long distances and time zones? How do people make sense of their public and private selves? And what does it mean when social media selfies represent who we are as people,

¹² A notable exception is the forthcoming Special Issue of *Postdigital Science and Education*, The Postdigital Spaces of Higher Education, edited by Lucila Carvalho, James Lamb, Michael Gallagher, and Jeremy Knox, scheduled for January 2022.

¹³ See <https://www.coventry.ac.uk/research/about-us/research-news/2020/launch-of-the-postdigital-intimacies-network-at-coventry-university/>. Accessed 31 March 2021.

revealing the intimate details of where we spend our private time, and who with?

Our constantly reconfigured identities and relationships profoundly impact ways in which we form and maintain communities. Over the past decades, there has been a lot of educational research in and around learning communities, communities of inquiry, and the like; in the face of the pandemic, this research requires a significant update.

The Covid-19 pandemic has brought about some fundamentally new developments such as massive-scale home-schooling, yet all these developments have their roots in pre-pandemic social organization and technological affordances. This is why postdigital/mobilities reconfigurations of ancient philosophical problems of time, space, identity, community, and relationships theory have such an important role in development of the ‘new normal’. A Few years ago, McKenzie Wark wrote:

It is commonplace that science fiction is not about the future, but about alternative possible presents. Science fiction is one of the things that enables you to think through relationships between different kinds of knowledge ... Science fiction is not always about science, some works actually ignore the science, but it is usually about a geopolitical reality. (Wark in Jandrić 2017: 132)

While futures studies should not be equated with science fiction, Wark’s conclusion remains. Futures studies are not just about predicting the future—situated between being (in the present) and becoming (in the future), futures studies play a crucial role in shaping our present and future. Futures studies need postdigital/mobilities understandings of time, space, identity, community, and relationships, and postdigital/mobilities studies need future studies. At a meta-level, these diverse and historically disconnected worldviews and approaches need to work in unity, respecting different positions and emphases, and merging them into a common goal of creating a better and more sustainable future.

Political Processes and Political Legitimacy

In recent years, the news media have highlighted occasions and trends where the supremacy of the nation-state and its agents has been challenged and eroded. There are several aspects to this. One is the rise of global corporations, especially digital corporations such as Facebook, now one of the largest ‘countries’ in the world, and Apple, apparently with a larger economy than Poland. Another has been the emergence of militant extra-state actors operating across national borders, such as Daesh and Al Qaeda in the Middle East, able to wage war in ways previously the unique domain of the nation-state. Yet another has been the increasing permeability of national borders as cyber-warfare replaces physical warfare and thousands of refugees and migrants flee conflict and poverty. Finally, the legislatures, executives, judiciaries, and their processes and personnel in many countries, especially the liberal democracies, have been usurped, bypassed, or ignored by diverse factions,

events, and movements. Each of our positions and perspectives provides its own context for these observations.

For the mobilities community, the archetype event was the Arab Spring and its various off-spring and subsidiaries, where personal digital technologies, mostly mobile phones and social media, appeared to empower people to challenge and sometimes overthrow the static and sedentary institutions of the established order (Allagui and Kuebler 2011; Alhindi et al. 2012), where the lumbering authorities could be outwitted by agile, spontaneous and digitally connected groups. Whilst the eventual reality differed dramatically from the early vision, the initial portrayal showed mobile phones enabling and ‘mobilising’ a new physical and political dispensation. The prototype or template took place in Egypt in 2011 (Aouragh and Alexander 2011) and demonstrated the possibility of this transformation to a global audience. Whether any of these changes endured beyond the first few years, whether they spread beyond the authoritarian regimes of Middle East and North Africa, or whether they represented anything that marked a shift in global political conceptions is debatable, but the mobilities community seems not to have engaged with these speculations.

The postdigital position is deeply oriented to emancipation and social justice, yet its inputs to political processes and political legitimacy are largely indirect. Important examples include inclusion of various reconfigurations of relationships between human and non-human actors, usually found under the broad banner of posthumanism, into political discourse. This translates to wide research about post-truth, fake news, and epistemology of deceit (MacKenzie et al. 2021). Almost 30 contributions to the 2020 Special Issue of *Postdigital Science and Education*, ‘Lies, Bullshit and Fake News Online: Should We Be Worried?’,¹⁴ and the recent book, *The Epistemology of Deceit in a Postdigital Era: Dupery by Design* (MacKenzie et al. 2021), indicate width, depth, and importance of postdigital theory for political processes and their legitimacy.

Then there are challenges linked to Human Data Interaction (HDI) where there are calls for greater inclusivity for people in decisions concerning their personal data and support for people to re-evaluate their decisions about their data held within commercial systems, as their circumstances change (Mortier et al. 2014). A forthcoming book, *Human Data Interaction, Disadvantage and Skills in the Community: enabling cross-sector environments for postdigital inclusion* (Hayes et al. forthcoming 2023), will draw in the lived experiences of cross-sector agencies and individuals to shed light on new ways to understand HDI. In our postdigital lives, we all need to understand what is happening to the data that is being gathered about us as individuals (legibility) and to be able to change relevant digital systems. We will then be in accord with our own wishes (agency) and will be able to work with those who are processing our data (negotiability). As such, there is a need for analytics algorithms to be more transparent and comprehensible to people and for those systems that process data to give people more capacity to control, inform, and correct their data, or to avoid systems and forms of monitoring and surveillance (resistance).

¹⁴ See <https://link.springer.com/journal/42438/volumes-and-issues/2-1>. Accessed 15 June 2021.

In education, these concerns translate to questions such as: ‘Where does the human teacher leak into the algorithm, and where does the algorithm leak into the human teacher’s practice?’ (Bayne in Jandrić 2017: 206). Insisting that ‘[d]istance is a positive principle, not a deficit’ and ‘place is differently, not less, important online’ (Bayne et al. 2020), postdigital positions and principles translate into educational politics, policy, and practice.

For the postdigital community, together with many others, the archetype event was the Covid-19 pandemic—especially in the field of education, which has experienced the most extensive switch to working from home in human history. Consequently, we now witness a rapid refocus from research of reconfigurations between the analog and the digital to research of reconfigurations between biology and information and (the struggle against) bio-informational capitalism (Peters 2012). During the Covid-19 pandemic, it has become painfully obvious that.

these various reconfigurations cannot be thought of without each other. While our research efforts often focus to lower-level convergences between traditional disciplines such as biology+information or science+technology, we always need to maintain their grounding in the over-arching postdigital convergence between all sorts of disciplines and technologies produced by these disciplines and their convergences. (Peters et al. 2021b)

The over-arching great convergence implies reconfigurations in all areas of human life. Opening up themes such as viral modernity (Peters and Besley 2021; Peters et al. 2020), postdigital theory is in constant interplay with political practice.

When claiming futures, both appeals to a better tomorrow, or the fear of what is to come, can serve as means by which partisans seek to legitimate the actions, conflicts and sacrifices taken today. Claims to know the future are inherently political. Knowledge claims and forecasts become a resource for determining what is and will be deemed realistic and what actions are taken to be feasible in and towards the future (Heller 1999). A remedy is to ensure that futures and the space for making claims on the future remain open (Adam and Groves 2007). By systematically exploring, creating, and assessing alternative futures, a study for futures can consider and rehearse a wide range of future operating conditions and relations. A significant tension in such projects is with a diverse set of means and ends being surfaced, under what conditions can moves towards futures be agreed. Efforts to open futures also disturb the ground on which claims towards a particular future can be made.

In addition to identifying alternative futures, a study for futures also contains a critique of the present moment (Polak 1973) and attempts to identify potential points of intervention and agents of change (Levitas 2011). By subverting notions of a determined future (Nandy 1999), and eschewing efforts to provide a view from nowhere or promise a false sense of certainty, the study for futures has the potential to consider a plurality of positions and thereby extend the menu of options for what could be done and the likely winners and losers of each position. By further developing our capacity to imagine and act, futures studies foster a space to move beyond what is, towards what could be, where it is possible to explore the nature and

meaning of our existence and as such offer a way of revisiting some of oldest and profound questions regarding our place in space and time.

The capacity for futures studies to disrupt established understandings and relations means that it is an approach that will not always be welcomed—a reminder, if one was needed, that the uptake of any one position or method is not just dependent on demonstrations of truth and proficiency, but a willingness and ability to engage with and shape questions of politics and power.

Conclusions... and in the Post-Covid-19 ‘New Normal’?

At this point, we draw together our contributions, seeking underlying commonalities and differences, and looking for trends, convergence, and change. We acknowledge the scope and impact of our different positions beyond privileged European and American academics and intellectuals, and address what difference do they make to the Global South, to regions of poor infrastructure, human capacity, and economic activity, to the marginal, the disenfranchised, and to the excluded (Traxler et al. 2020). As practising professional researchers, we also ask ourselves about the likely impact of our research communities and their research outputs. Could they make a difference to policy and practice, might they have implications for equity, opportunity, and social mobility?

For the mobilities community, much of the research reported in journals, especially in *Mobilities*, does indeed focus on different and diverse communities in motion, and more recently explores how their mobilities and their immobilities have been reconfigured by the pandemic and by responses to it. Examples of the latter are manifold including lockdown, distancing, masking and isolation, the reduction of hospitality, entertainment and tourism sectors and of local public transport and international air travel and all those sectors upstream of them, and changed consequences of disability and disadvantage. This has not yet however resulted in major shifts in policy or practice and that may be the fate of any philosophy or world view growing from largely conceptual concerns. Change beyond academia is slow, subtle, and imperceptible, and decades later, we look back and acknowledge it.

Post-Covid-19, postdigital theory, and practice experience rapid growth: increasing numbers of dedicated research centres, mushrooming of (research-, policy-, and practice-oriented) projects, a flourishing publishing ecosystem consisting of *Postdigital Science and Education* journal and book series, growing numbers of exhibitions and events in fields such as arts and architecture. The Covid-19 pandemic has brought about new reconfigurations between the digital and the analog, the biological, and the informational, and it seems that the last 20 years of postdigital theory have developed concepts and tools that provide a good starting point for analysing these reconfigurations. Just like the mobilities perspective, the postdigital perspective has not, by now, resulted in major shifts in policy or practice. At this stage of development, this is hardly a surprise. As we write these words 17 months into the Covid-19 pandemic, postdigital concepts and ideas are under rapid development. It is only when some of this dust

settles, that we will be able to offer simple and straightforward recommendations that will hopefully be applicable for the future.

Reflecting on the process of completing this paper, first, one can reflect on the vital nature and role of dialogue, particularly in a context where conversation is preferred over martial forms of debate. Second and more specifically, if not more profoundly, it is worth considering that a role for futures studies is not just one where the means and ends that could and should be adopted are surfaced and shared, but that the privileging of ends and means that constitutes our projections into the world, is itself subject to question. Where futures studies return to and expose the present moment, it is argued that part of this unconcealing is what we take as the moment and our disposition towards past, future and present moments.

There is a significant and diverse tradition of writing (Adam 2004; Bergson 1889/1960; Deleuze and Guatarri 1988; Grosz 2005; Heraclitus 500/2003; St Augustine 1991) that has sought to question a metaphysics of presence (Derrida 1967/1973). In contrast to a vulgar conception of time, where the present is viewed as a distinct event within a timeline along which you move, time is experienced as a *durée* (Bergson 1889/1960)—intimate yet inscrutable and resists attempts at capture and expression (Bergson 1965). A mode of experience, three *ecstases* of past, present, and future, are understood as three dimensions of our experience that extend in time in a distinctive but mutually constitutive and complementarity (Heidegger 2010). Each of these *ecstases* is not separate intentional acts, but consanguineous elements, often in the background but essential to every intentional act (Richardson 2012). Notably, it is not the past that determines the present, but the future that leads by engaging the other two *ecstases* of past and present (Heidegger 2010).

It is within such a rendering of time and futures where knowing as *poiesis* makes sense and becomes an act of embodied and extended sense making. Such a form of *poiesis* can be precarious, particularly where attempting to make a space within a knowledge economy where the imperative to codify and commodify knowledge is strong (Ancori et al. 2000: 255–256). In a world of big data, data scientism, metrics, performance reviews and intellectual property, it is tempting to cast *poiesis* as being subject to the same creative destructive fate as the handloom weaver facing the advances of the power loom, but this is a fate that is far from determined. A tacit form of knowing (Polanyi 1969: 195) that is itself inarticulable, the *poiesis* of futures studies requires and enables a distancing from the alleged actuality of a situation to question and reveal the limits of knowing and action and the possibilities of mystery and doing less. *Poiesis* in this sense subverts and goes beyond technical-rational understandings and yet does not just offer another way of being, but calls attention to our relation to being—a vital question, if not the question regarding our futures, to be raised within the context of a climate emergency (Wallace-Wells 2019).

Epistemically, the three positions discussed in this paper—mobilities, futures, and postdigital studies—are far from commensurable. Yet they are compatible, and complementary, in a sense that they all need each others' inputs on the road to a better understanding of our current condition, and the road to a better future. Postdigital dialogue (Jandrić et al. 2019) presented in this paper is just one possible configuration of conversation between scholars, each representing 'their' own

position, but not claiming any primacy over that position, and not claiming leadership. As a practical exercise in ‘process philosophy, which is a form of speculative metaphysics that privileges the event and processes over and above substance’ (Peters and Besley 2019: 29), this postdigital dialogue is an experiment in what is, and what may become of, our collective journey into the future.

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