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Digital education utopia

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Abstract

This paper uses Levitas's (2013) 'utopia as method' as a way to approach the histories of digital education and its utopian possibilities. The themes of emergence, openness and desire are woven through the three modes of Levitas's method. First, an archaeological analysis considers the relationship between digital education, lifelong learning and utopia in the political programmes of UNESCO, OECD and the UK government. Second, Levitas's 'utopia as ontology' considers how critical digital education might help move us from the paradigm of the locked-down 'data subject' within a human capital model of education toward emergent and more-than-human ways of understanding. Third, the method's architectural phase is used to explore how a future for digital education might be imagined through the themes of ecopedagogy, diversity of knowledge and the end of institutions. The paper argues that the new 21st century utopian imagination might help us to imagine and build better futures for education.

Keywords: utopia; digital education; desire; futures; Levitas

Introduction: openness, desire and utopia

The search for hope, better futures and a newly invigorated interest in utopia is evident across current scholarship in education and beyond – the many crises of our current moment create ruptures in which new forms of imagining are necessary. However while digital technology has long been one of the tropes through which 'futures' are filtered in public discussion of where education is headed, critical research in the field rarely sees it as utopian. Its political economy is troublesome, its implications for sustainability and climate health are questionable, and its moral arc to date bends more toward extraction, surveillance and inequity than justice. To understand its utopian potential, a structured re-analysis of its histories and future imaginaries is needed. The aim of this paper is to contribute to this analysis.

The scholarship of utopia is vast, dating back to 1516 and Thomas More's original coining of the term to describe a fictionalised, idealised, perhaps impossible society (More 2016). While contemporary common usage of the term has had a tendency to be dismissive (utopia as an impossible dream indulged in only by those who lack 'real world' pragmatism), it has also until recently had negative political connotations (utopia as a rigid societal blueprint associated with totalitarianism and the failed political projects of the Left). Academic usage of the term has, however, gained currency over recent decades though – as Levitas (2011) has pointed out – the field has often struggled to achieve clarity of definition. As an idea which extends across multiple disciplines (literature, political science, architecture, sociology, art, theology and beyond), this is perhaps unsurprising. For the purposes of this paper, I align to Levitas's observation that it is 'no longer possible to specify the content of utopia but only the communicative process by which it may be negotiated' (2011, xiv). In other words, I use the term not to prescribe or define a singular utopia, but as a way of trying to understand how, as educators, we might work with the widely-felt desire for a better way of living.

According to Lewis (2007) education scholarship and policy engaging with utopia over the late 20th and early 21st centuries, took three broad forms. It was either 'stigmatized as an elite blueprint of the perfect future imposed by top-down administration', venerated as a 'vague concept ushering forth from critical pedagogues', or reduced to a set of loose ideas relating to the possibility of 'an educational third way' (216). A more recent turn in literary, sociological and, to an extent, education utopian scholarship, however, has embraced it more as a way of organising an integrated 'forward dreaming' (Bloch 1986) which is also a political move. Here, the scholarship of utopia becomes concerned with drawing out 'the connections between economic, social, existential and ecological processes in an integrated way', and imagining alternative scenarios for the future which are always provisional, reflexive and contingent (Levitas 2013, 18).

The broad movement toward the utopian imagined possible in education includes recent developments in critical methods organised around speculation (e.g. Ross, 2022; Staley, 2019), design (Nørgård 2022; Dunne and Raby 2013) and anticipation (Amsler and Facer 2017; Facer 2016) as well as new thinking in educational philosophy and theory (e.g. Yosef-Hassidim and Baldacchino 2021; Barnett 2018; Peters and Freeman-Moir 2006). The focus of this paper however is specifically on Ruth Levitas's *Utopia as Method: the imaginary reconstitution of society* (2013), and its application to the sub-field of digital education.

Why digital education?

Digital education is a field which offers a provocative starting point for an analysis of education and

utopia in that, while it has elements of utopia in its history, it often feels as though there is only dystopia in its futures.

For some, digital technologies – and the internet in particular – are an entirely lost cause with no place in a future society supportive of human and planetary flourishing. For example Crary (2022) sees them as being inseparable from the 'catastrophic operations of global capitalism' (5), functioning as the 'global apparatus for the dissolution of society' (9). Within education scholarship, Selwyn (2023) also emphasises how digital technology 'has been proven to extend and entrench the privatisation of public education, corporate control over key educational processes, and the exacerbation of oppressive conditions of individualisation, standardisation and surveillance' (2). Both Selwyn and Crary do extend a vision of how the world might be otherwise, Selwyn in a focus on 'digital degrowth' to which we return later, and Crary in the prospect of a post-capitalist world without the internet as we currently know it. Both also emphasise not only the internet's sociocidal aspects but also its complicity with ecocide.

This latter is a critical issue which until very recently has been neglected in the field of digital education. Dwivedi et al. (2022) summarise the negative impacts of the digital technology sector on the environment: data centres used to supply digital services contribute greenhouse gas emissions on a par with the aviation industry; the technology industry, skilled in its ability to educate desire for more, newer tech paraphernalia, is responsible for producing more than 50 million tons of e-waste annually; digital technology is predicted to use around 20% of the world's electricity by 2025, and the mining of raw materials for the supply of technology manufacture is deeply problematic for its environmental wreckage and unjust labour practices. Dwivedi et al emphasise that 'the digital technology industry is one of the least sustainable and most environmentally damaging industrial sectors in the modern world' (7).

Digital education is therefore deeply entangled with extractive global capitalism in all its carelessness. However, this does not mean that we cannot imagine alternative futures in which a renewed, re-formed, re-democratised digital architecture has a place – for some, indeed, it is imperative that we do so. Srnicek and Williams (2016) for example emphasise that 'the utopian potentials inherent in twenty-first-century technology cannot remain bound to a parochial capitalist imagination' (3). Instead, they are essential to a utopian vision structured around full automation, universal basic income and the diminishment of the work ethic – a post-work world in which, as Mcgregor (2017) has pointed out, education would become re-framed as grassroots and public, bursting out of the confines of institutions to take place through communities, open schools and 'a wider ecology of organisations seeking to transform the education system' (4).

With Polizzi (2021), writing in the context of critical digital literacy, we can acknowledge that a 'dialectical approach to utopianism/dystopianism' can help us when it comes to imagining a better future for digital education. As he points out, the internet enables not only repression, extraction and surveillance but also 'the decentralization of power, political participation and deliberative democracy' (8). The current overarching context and imaginary driving digital education may primarily be the 'neoliberal utopian blueprint' (Van Dermijnsbrugge and Chatelier 2022, 11), but that makes it all the more critical that we work to imagine otherwise.

Before approaching the detail of Levitas's 'utopia as method', however, there are two particular trajectories of thought in the scholarship of utopia that are important to outline here. First, the

critique of the 'pragmatic' utopias which have been a common mode to date in education, and second the re-framing of utopia as 'blueprint' to utopia as the 'education of desire' (Abensour 1999).

The limitations of 'feasible' utopias

As Webb (2016) has shown, there has been a tendency since the 1990s to restrict educational accounts of utopia to a form of 'utopian realism' – pragmatic, grounded propositions for a preferred future which is perceived to be realisable within the structures and understood possibilities of the present. Utopian realism as defined by Webb is 1) immanent, 'grounded in existing trends, processes and tendencies' (433), 2) partial, focused not on developing totalising visions and entire social blueprints but on articulating micro-utopias in localised contexts – 'everyday utopias' (Cooper 2014) and 3) processual, concerned with current practices and processes. This is a conceptualisation of utopia which aims to align itself with the *currently possible*, attempting to harness elements of the transgressive in utopian thinking while avoiding its historical alignment with idealism and totalitarianism (Webb 431).

One of the examples of 'utopian realism' in education discussed by Webb is that of Halpin's (2003) book *Hope and Education*, which applies utopian thinking to the practices of schooling. Halpin uses the term 'good utopias' to define his project, by which he means 'radically progressive conceptions of the future of education that eschew mere wistful yearning...thinking in favour of positive, unusual, but ultimately practicable visions for the reform of schools and teaching and learning generally' (59). This is a form of utopian thinking fairly common within education, promising a vision capable of defining a clear 'roadmap' for change within a particular institution or set of social practices. However, such 'feasible' (Barnett 2018) utopias are of limited scope, focusing on sectoral or institutional reform and failing to engage with the social totality, or with utopia as a radical and holistic re-imagining of society itself. For Webb (2016) they are a 'domestication' of the utopian imagination. Levitas' (2004) review of Halpin's book argues that his approach reduces utopia to managerialism, invalidating the utopian imagination and 'annihilating it discursively by claiming the space of utopia for reformism' (271). We might see such approaches as a kind of instrumentalisation of hope.

If 'realist utopias' in education are seen as failing to holistically and ambitiously imagine new, just forms of social organisation, it may be at least in part because – as Polizzi (2021) has suggested – it is hard to imagine beyond the neoliberal capitalism which currently constitutes the social order: 'We can portray the neoliberal utopia as a dystopia. But we cannot deny that it projects a vision of a desired society' (8). Van Dermijnsbrugge and Chatelier (2022) – writing specifically within education – emphasise how 'the utopian realism of capitalism and, by extension, neoliberalism, has now become a "real utopian blueprint" that leaves no alternative' (11). As Levitas (2010) reminds us, 'utopias are not the monopoly of the Left' (214).

To bring utopian thinking out of the status quo politics of neoliberal hegemony, reformism and 'deliverability', we need to give free rein to imagination and desire, taking a holistic approach which allows us to liberate our vision for the future from an over-entrenchment in the micro-possibilities of the local present. If, with Levitas (2004), 'we all have to understand that if we do not demand the impossible, all we will get is more of the same' (273) we need to put more trust in the power of our imaginations to conceive what the possible within the 'impossible' might be, and in the performative potential of the utopian imagination.

Utopia as 'the education of desire'

The openness which is a key theme of the analysis in this paper – an impulse toward the indeterminate – connects to the philosopher Miguel Abensour's 'education of desire' – an idea

which has become one of the 'foundational concepts' shaping current research in the field of literary utopian studies (Wegner 2021). Where Halpin (2003) rejects 'mere wistful yearning' (59) in his quest for utopian realism in education, Abensour (1999) emphasises such yearning – framed as desire – as a specifically educational impulse critical to the utopian imagination:

the point is not for utopia (unlike the tradition that calls for the 'moral education of humanity') to assign 'true' or 'just' goals to desire but rather to educate desire, to stimulate it, to awaken it – not to assign it a goal but to open a path for it....

Desire must be taught to desire, to desire better, to desire more, and above all to desire otherwise. (145-6)

Desire in this formulation can be understood as an educational issue. For Wegner (2021), this conceptualisation of desire works against both the poststructuralist idea of desire as based in lack or loss, and against the idea of education as instrument, instead framing education as 'affective and bodily', acknowledging the yearning for something 'not yet possessed but ... that ... is still in our power to bring into being' (Wegner 2021, 170). For Abensour (writing on Thomas More), utopia is peopled by those who are *educated*, 'whose intellects are sharpened by reading', and who are 'engaged in the endless search for a just and good political order, demonstrated in their being in a state of permanent inventing and re-inventing' (Abensour 2017).

'Wistful yearning', recast as desire in this way, comes to be seen not as a failure of 'unfeasible' utopian thinking in education (Halpin 2003), but as a purpose for education itself:

Crucially, this means that such an affective education is an unending process: there will be no final realization of utopia, no end of history, no perfection to be realized, but rather a continuous reformulation of the object cause of desire pulling us forward. (Wegner 2021, 170)

How might digital education in its various forms be positioned within such a utopia – one that enables us to desire differently, and better? What might its place be in a more humane, caring and responsible future? For 'if the function of utopia is the education of desire, the function of the education of desire is the realization of utopia' (Levitas 2011, 143).

Utopia as method: disrupting the closure of the present

The remainder of this paper will focus on the use of Levitas's 'utopia as method' as a structured way of analysing the past, and re-imagining the future of digital education. Levitas sets out her method in her 2013 book *Utopia as method: the imaginary reconstitution of society*, turning the scholarship of utopia toward sociological concerns by acknowledging the interdependence of its aesthetic and political dimensions. Utopia in this way becomes a form of 'speculative sociology' (153), working to an idea of utopia not as a blueprint, but as a holistic, reflexive way of imagining and building toward better forms of social organisation. Levitas's approach opens up new analytic possibilities while also emphasising the centrality of imagination for the education of desire. The utopian imagination 'enables people to learn to want differently' (Levitas 2017) – perhaps also to *want to learn* differently – working to 'disrupt the closure of the present' (Levitas 2013, 119) and enabling us to 'explore the structural limits of what is thinkable' (120). For the purposes of this paper, utopia as method is conceived as performative – by imagining and articulating alternatives we build, critique, rebuild and reimagine a future shaped through justice.

The method Levitas sets out has three modes, each interconnected but with its own emphasis:

- the analytical archaeological mode in which existing political programmes, artefacts and imaginaries are interrogated in order to excavate and make explicit the model of the 'good society' embedded within them
- 2. the **ontological mode**, which considers the subjects of utopia and what ways of being and flourishing might be blocked by current social arrangements, and enabled by alternatives
- 3. the **architectural mode**, which imagines how we might design institutions and modes of organisation in which such ways of being and flourishing would be enabled.

The next three sections apply these modes to the some of the artefacts, political programmes and social imaginaries embedded in what we currently call 'digital education'.

Archaeology: fragments of utopia in digital lifelong learning

Levitas's analytical archaeological mode focuses on extracting the fragments of utopian vision in existing political programmes and accounts, interrogating their gaps and silences and scrutinising the model of 'good society' which is embedded within them (2013, 154). For example Levitas herself (2013) conducts an archaeological analysis of the concepts and political enactments of meritocracy, civil society and economic growth. Van Dermijnsbrugge and Chatelier (2022) – in one of the very few systematic applications of utopia as method to education currently published – interrogate the OECD's Global Competency Framework, drawing out the way in which, in its focus on human capital development, a 'what works' logic and an assumption of the desirability of economic growth it enacts a 'hidden imperialist violence' within global education governance (14).

Here, I focus on 'lifelong learning' as a way of drawing out contesting educational models of the 'good society' and their intersection with digital education. As Knight et al (2023) point out, digital education has long been 'intimately engaged' with lifelong learning (2), an entanglement which goes back, in UK policy terms, to at least the late 1990s. At that time, what was then called 'ICT' was seen as a enabler for a utopic 'learning society' in which access to education through life had become accessible to all through digital technology – a conviction which the UK New Labour government of the time 'enshrined in a series of multi-million pound government initiatives', including the ultimately unsuccessful University for Industry and its online delivery platform *learndirect* (Gorard et al 2003, 281). Much of the government rhetoric of the time – emphasising the 'accessible to all' nature of content delivered online – was typical of an era in which the newness of 'ICT' seemed to open up wide possibilities for inclusive access to lifelong learning.

Even at the time this was derided by some as 'technological utopianism' (Robertson 1998, 5), and critiqued by others for its failure to understand that individuals' ability and willingness to engage with lifelong learning, regardless of 'delivery' mode, is 'intrinsically related to long-term social, economic and educational factors' (Gorard et al 2003, 292). As we might expect from a 'University' for 'Industry', this initiative was also tightly aligned to the utilitarian skills and employability agenda, being the government's 'principal instrument for creating in the UK a highly-trained, globally competitive workforce' (6). Nonetheless, it did have a vision of the 'good society' embedded within it: one in which wide access to learning through life was made possible through new technology, enabling individuals to be educated throughout adulthood in order to maintain themselves as 'employable', therefore supporting not only individual but also societal economic flourishing.

This instrumentalisation of lifelong learning in the interest of human capital development and economic growth continues to dominate the 21st century policy field, standing in contrast to the lifelong and adult education of the 1960s and 70s, in which access to education beyond school and university was seen as a human right, carrying a strong, emancipatory social agenda that might also be described as utopian. As Biesta (2022) has pointed out, this idea of the 'right to education' has now been transformed into 'a duty to learn' (655), in order to remain employable and an active contributor to the economy. For Rubenson (2008) these clashing perspectives are the two sides of the 'Janus face' of lifelong learning, in which the 'humanistic' paradigm sits in direct opposition to the 'economistic-utilitarian' paradigm which shapes most contemporary policy programmes (see also Regmi 2015).

Many scholars – some working explicitly with the idea of utopia (e.g. Rubenson 2008; Van Dermijnsbrugge and Chatelier 2022; Elfert 2018; Lee 2022) – have aligned the economistic-utilitarian model broadly with the work of the OECD, and the more humanistic, emancipatory model with the work of UNESCO (411). Elfert's (2015) analysis of the political utopia of lifelong learning expressed in UNESCO's Faure report (1972) and Delors report (1996), sees in both a shared faith in the 'unifying force of humanism' (90):

They are situated in UNESCO's enlightenment tradition in that they are indebted to rationalism and progress, universal values, individual freedom, emancipation, and a humanist concept of human beings as masters of their own destiny. They call for a utopia in the sense of an ideal vision of a just society. (88)

While the UNESCO project, with its emancipatory claims for justice and equality, is one of recent history's most powerful utopic counter-positions to the reductive human capital model for lifelong learning, there are criticisms to be made of its universalist underpinning. The focus on 'universal values', 'rationalism and progress' and 'individual freedom' is problematic in a contemporary context in which postcolonial, feminist, critical posthumanist and post-anthropocentric critique have surfaced their 'inherent Eurocentrism' (Chakrabarty 2000, 653), discriminatory structural distinctions (Braidotti 2019), assumptions of human exceptionalism and complicity with ecocatastrophe (e.g. Pedersen (2022) and Wallin (2017)). These significant silences in the earlier reports have, to a degree, been addressed in the most recent UNESCO report on the future of education led by Sahle-Work Zewde (UNESCO 2021), with its reference to the need for a 'reframed humanism' (115), its emphasis on environmental justice and its championing of diverse and indigenous knowledges capable of countering the dominant techno-rationalist paradigms of the 'post-Renaissance' west and north.

However it is the economistic-utilitarian paradigm which has come to dominate the way governments and organisations think about lifelong learning. The burst of UK government interest in online lifelong learning which launched *learndirect* in 2000 was underpinned by it. Offering a range of courses for over-16s including basic skills, apprenticeships and professional short courses, *learndirect* was originally run by the government's University for Industry charitable trust and focused for the most part on provision for low-skilled adults (House of Commons Committee of Public Accounts 2006). It was privatised in 2011 following a change of government, and bought for £36m by the private equity arm of Lloyds Bank (Shubber 2017). Following further mergers, debt accumulation to the value of £90m and a disastrous report from the UK education regulator Ofsted in 2017 (which the company attempted to supress) (Ofsted 2017), the profile of the initiative withered and this particular big vision for online lifelong learning as an engine for national competitiveness faded.

The competing utopic imaginaries of lifelong learning - humanistic-emancipatory or utilitarianeconomistic – continued to be played out in digital education through other high profile hype cycles, most notably perhaps the Massive Open Online Courses (MOOCs) trend which peaked in 2012-13 as learndirect was declining. As Knox (2015) and others have documented, the early classification of MOOCs as either cMOOCS (distributed, networked, collaborative, non-hierarchical and self-directed) or xMOOCs (corporate, content-driven, linear and transmissive) quite readily mapped onto the two lifelong learning paradigms. Both forms contained a utopian impulse. In the case of the cMOOCs this was articulated in terms of the emancipatory power of personal learning networks and distributed, community-engaged learning. In the case of the xMOOCs it was focused on the power of technology to enable learning to massively scale, with potentially huge gains for accessibility, population upskilling and global reach. The xMOOC model quickly came to dominate as the power of elite institutions of higher education converged with the platform economics of increasingly commercialised providers (Coursera, edX, FutureLearn) to lock down the imaginary of what MOOCs - currently re-branded for the most part as simply 'short courses' - might be. Both models have their 'silences' regarding what kind of subject gets to be a 'lifelong learner', assuming an idealised individual who is 'naturally' highly motivated, self-directed and willing to align themselves to an Anglo-US model of learning and knowledge production (see Knox 2016; Bali and Sharma 2017).

Digital technologies have been dropped as the primary delivery mode for skills training in the most current UK government programme, 'Skills for Jobs: lifelong learning for opportunity and growth', replaced by a push for a more fundamental re-configuration of higher and further education (UK Government 2021). Yet lifelong digital and data skills development agendas continue to sit at the heart of its broader vision. This is particularly the case where it connects to industrial and innovation strategies such as the National AI Strategy (UK Department of Culture, Media and Sport and Office for Artificial Intelligence 2021). Here, the language used is strikingly de-humanised, focusing on the 'talent pipelines' required to strengthen a newly-invigorated 'innovation ecosystem' supported by a 'reconfigured skills system' through which employers will be given more leeway to 'generate the skills they need to grow' (27). This kind of rhetoric around AI and lifelong learning is, as Eynon and Young (2021) have shown, common in policy perspectives within and beyond the UK, and notable for its disconnect with the perspectives not only of academics, but of commercial developers of AI products themselves.

Of course, there is no explicit reflection in these policy documents on the broader purpose of education, or why it might be valuable beyond the skills for employability agenda. Burying digital lifelong learning within a purely skills agenda leaves no space for what Levitas (2013) calls 'non-capitalist envisioning' — making it less about 'the education of hope or desire' and more 'an exercise in social and ideological control' (136). Lifelong learning within a skills agenda oriented to human capital development is also silent on the question of what prosperity is *for* beyond profit and growth — these are seen as their own end, leaving little open space for imagining or articulating a broader vision for human and planetary flourishing. This leads us to the ontological mode of Levitas's utopian method.

Ontology: wounds and scars

The ontological mode of utopia as method engages with the ways of being that are assumed and enabled within political programmes and social imaginaries:

[It] addresses the question of what kind of *people* particular societies develop and encourage. What is understood as human flourishing, what capabilities are valued, encouraged and genuinely enabled, or blocked and suppressed, by

specific existing or potential social arrangements: we are concerned here with the historical and social determination of human nature. (Levitas 2013, 153)

This ontological dimension was explicit in the 1972 UNESCO Faure report on the future of education, foregrounded in its title (*Learning to Be*), and focused on the power of lifelong learning to support human agency and renewed democracy. This report also celebrates the potential of digital education (framed as 'cybernetic pedagogy' (115)) to support 'methods of organizing education based on the principles of dialogue between man and machine' (143). At our current point in history we see how such apparent possibility has reverted to a regime of profiling, surveillance and analytics that locks individuals into anticipatory logics that – far from opening up new forms of emergent, critical relations with machines (Bayne 2015) – function to close down ontological possibility through new forms of algorithmic governance and datafied subjectivity (Selwyn, Pangrazio, and Cumbo 2022; Williamson 2016). Faure's new methods of 'organizing education' have been turned into a 'politicized and commercialized' data infrastructure functioning under a driving logic of performance measurement and competition (Williamson 2019). The neoliberal subject for whom lifelong learning has become both a 'duty' (Biesta 2022) and an internalised project of self-reinvention (Lee 2022), is now also a data subject defined, characterized and sorted algorithmically for the purposes of categorization and prediction.

The possibility of re-framing education in terms of desire and ontological openness, as 'affective and bodily' (Wegner 2021, 170), has perhaps never felt less possible. However, utopia as ontology does offer us an opening for imagining better ways of being: 'the education of desire implies that utopias take their force from releasing a potential self from some of the "wounds and scars...[from] living here, down here, below"' (Levitas 2013, 177 quoting Lincoln 2007). Utopia's temporality is one of 'suspension between the present and the future' (180), anticipating from the position of the *now* a time to come which is fundamentally *better*. For this, we need to imagine and enable new forms of flourishing which for Levitas, require 'a processual ontology, one of becoming, both at an individual and a social level' (180). What might this look like in relation to forms of digital education which push against datafication, quantification, standardisation and instrumentalisation to take human and planetary flourishing seriously?

One place to start is perhaps by engaging with *time* itself differently, exploring radically alternative, utopian temporalities in education. For example, Webb et al (2020) consider how chronological conceptions of time weaponised through anticipatory governance lock 'educated subjects' into particular imaginaries of educational futures. Focusing on learning analytics platforms (which use student data to track progress and manage and predict future performance), they critique their underpinning 'chrono-logic' which measures time quantitatively, reifying a fixed relation between past, present and future (286). Countering 'chronological time' with alternative formulations of lived time (time experienced as repetitive, cyclical, engaging both past and present simultaneously), they argue that the latter opens up new possibilities for different kinds of technological intervention, and more open ontologies through which desire can be educated differently.

Webb et al also briefly propose a route to opening new ontological possibility via the idea of 'becoming-incomputable' – a move which resists anticipatory governance in digital education through a new form of 'political affinity' with machines. This proposal draws on the work of Majaca and Parisi (2016), who posit that:

In the conditions of an omnipresent 'data behaviorism' we feel that the unknown unknowns of both the subject and the political imagination can only be taken back and built anew by enacting a political affinity with the machine, and by way of considering its very logic. Might this affinity become a path for developing an entirely new, inhuman logic of becoming-subject capable of injecting the

unknowns with entirely new alien universals, beyond the white-male constructs of paranoid humanism? (3)

At a moment in which the acceleration of artificial intelligence – currently in the hands of a largely 'white-male', for-profit, global tech oligarchy which has to date largely been expected to self-regulate – we might rightly feel nervous about building an over-enthusiastic 'political affinity with the machine'. However there is resonance here with other ways of understanding a project of 'becoming-subject' with machines. For example the early, playful intervention in teacher automation 'teacherbot' (Bayne 2015) enabled human and non-human teachers to work together in a roughly-hacked teaching assemblage which refused 'ontological hierarchy in the interest of productive play' (460). This and similar forays into a 'politics of hacking' (Webb et al 294) offer us ways of working with differently entangled ways of being in digital educational spaces. These are approaches which enable us to recognise the 'ontological inseparability of intra-acting agencies' (Barad 2007, 333) within an understanding that 'nothing exists outside of or prior to its relations or entanglements with others' (Verlie 2020): a more-than-human ontology of becoming which acknowledges that the categories of 'human' and 'machine' are co-emergent with each other.

Such a prospect is utopic – a source for human and planetary flourishing – only where the configuration of the 'machine' does not lie in the hands of profiteering big tech, and where there is meaningful democratic control over the 'means of prediction' (Kasy 2023, 1). In taking such an agenda forward, digital education might work more closely with forms of radical ecopedagogy which also counter the conventional educational project of 'becoming human' via a 'challenge [to] ontologized subject-object or human-Other divides' (Lloro-Bidart 2015, 140). Such approaches recognise that there is no human flourishing without planetary flourishing, and that 'human' and 'biosphere' are also ontologically inseparable – 'ecopedagogy is unabashedly utopian' (Horsthemke 2018, 191). For Khan (2011), destabilising the global figure of the 'human' is 'arguably the great socio-political (and hence educational) challenge of the twenty-first century' (111-2). Critical, posthumanist ecopedagogy is radically utopic in its approach to healing the 'wounds and scars' caused by advanced capitalism:

it is legitimate to retain hope for...a re-enchanted planetary home of peace, biodiversity, and freedom; a virtuous state of being that could significantly heal (if not resolve) the historical terrors of the three-headed hydra of human civilization which unfolds into the endgame of genocide, ecocide, and zoöcide (112).

Maintaining hope in the ability of education to support open, entangled ontologies of becoming is critical in our imagining of utopia. To understand the purpose of education as being to support individuals to become 'active and unfinished learners and makers of worlds' (Amsler and Facer 2017, 10) is also to work with the idea of the human as ontologically inseparable from a world also in the process of becoming.

Architecture: becoming differently technologised

In *Utopia as Method*, the task within the 'applied' or architectural mode 'is to imagine alternative ways of life that would be ecologically and socially sustainable and enable deeper and wider human happiness than is now possible' (Levitas 2013, 198). As the architectural mode is profoundly interdisciplinary, Levitas sees it as being potentially more 'troubling' than the archaeological mode which 'sits easily with social theory as critique' (197). This architectural mode diverges from purely sociological methods in that it demands 'speculation, judgement and suspension of disbelief on the part of both writer and reader' (197). It is a work of the imagination. In this sense it perhaps has a closer resonance with the speculative, creative methods which emerge from humanities and design-

oriented disciplines (Ross 2022; Dunne and Raby 2013), its goal being to work with the prior archaeological analysis and ontological framing to suspend disbelief and actively imagine alternatives within a holistic 'reconstitution of society'. This work takes place within an understanding that this suspension of disbelief is temporary, 'confined to the architectural moment' and followed always by a return to an archaeological mode that interrogates its 'inconsistencies and silences' (198). The cycle for Levitas is never complete and finished, but always open and reflexive – utopia as continual process rather than fixed structure (Levitas 2011).

This final part of the method therefore attempts to outline what a utopic architecture might look for digital education, and education more broadly. As Jandric and Ford (2022), writing in the context of postdigital ecopedagogy, remind us: 'we need new utopias' (3). Continuing with the link between critical digital education and radical ecopedagogy opens productive space for such new imaginings. In their move to integrate ecopedagogy with postdigital theory, Jandric and Ford acknowledge the roots of the former in the work of Illich, Freire and the critical pedagogy movement, while at the same time working to actively 'reinvent ecopedagogies in the light of recent sociotechnological developments' and the reconfiguration of human-machine-planet relations over the course of the late 20th and early 21st centuries. Such a reconfiguration includes taking account of the ontological turn toward emergence, acknowledging 'the endless indeterminacies of the postdigital age, the crossing and hybridization of borders between the human and nonhuman, the analog and digital, the subject and object' (7).

Ecopedagogy in this formulation remains distinct from education for sustainable development or environmental and outdoor pedagogy in its explicit and holistic refusal of capitalism, and its recognition of a more-than-human ontology – it is a more complete reimagining. However, in imagining a form of digital education which works against the 'paranoid humanisms' (Majaca and Parisi 2016) of anthropocentric, ecocidal late capitalism we must acknowledge that we are in a tight spot. Digital education in its current form is dependent on material infrastructures which – as discussed at the beginning of this paper – might be seen as being inseparable from the 'catastrophic operations of global capitalism' (Crary 2022, 5). It is also a form of practice which has been significantly co-opted by neoliberal policy agendas and colonising norms of knowledge production, as we saw in the 'archaeology' section of this paper. Much as with lifelong learning, 'digital transformation' has been seized upon by educational institutions, governments and supra-national organisations (e.g. OECD 2021) alike as an instrument for the expansion of the skills agenda, and as an 'engine' for human capital development and economic growth.

Such programmes rarely take account of the planetary health imperative to cut back, reduce and streamline organisational uses of digital technology, or consider how we might need to re-imagine the organisation of current teaching practice in the interests of planetary flourishing. Abundance in perpetuity is generally assumed. A digital education utopia would most certainly exclude the anticipatory and surveillance regimes currently imposed by some of its most toxic systems: remote proctoring, plagiarism detection systems, predictive and performance analytics, routinized use of student data dashboards, intrusive attendance and behaviour monitoring, over-assessment and standardized testing. But such systems are the symptoms, not the cause of the educational dystopias that currently exist. Utopia as method is holistic and concerned with the imagination of fundamental social change. As I have suggested throughout this paper, the unholy lockdown of the logics of advanced capitalism, human exceptionalism and technology acceleration can make it hard to imagine alternatives. Scholars are, however, starting to imagine what a counter-move from critical, digital education might look like.

Selwyn (2023), for example, outlines a set of strategies for re-imagining digital education from the perspective of 'digital degrowth'. Such a move would require us to 'forcibly talk about ways of doing

education technology differently', with an emphasis on acknowledging restraint in the use of digital technologies as a 'defiantly progressive' move, and a willingness to 'radically rethink education technology in terms of a social movement with collective benefits and shared jeopardy' (3). It would require a shift toward 'simplicity, slowing-down, and a foregrounding of local approaches toward coproduction and sharing' (4).

For Selwyn, the re-organisation of digital education for de-growth would need to address both its damaging material infrastructures and the educational practices that depend on it. In terms of the former, he outlines the potential for a movement toward 'radically sustainable computing' which decouples computing from growth-focused imperatives via a shift toward 'computing within limits', 'permacomputing' (Heikkilä 2021) and 'frugal' and 'salvage' computing – all of which emphasise in different ways the principles of device re-use and repair, constraint, longevity over planned obsolescence, acknowledgement of the finiteness of earth's resources and the importance of 'decoupling digital technology practices from the exploitative and extractive circuits of digital capitalism' (8).

Macgilchrist (2021) imagines a similar future for educational technology in terms of 'rewilding' – a vision for 'wilder, muddier edtech futures' which she frames explicitly as a form of 'concrete utopia' (Bloch 1986). In Macgilchrist's vision over-consumption, extraction and over-use of digital technology give way to deceleration, attention to 'new growth among the toxic wreckage of the world', regeneration and recuperation (no page). Like Selwyn, she is clear that sustainability of technology devices and infrastructures is only one element of this wilder, better future for digital education – we also need to think again about the practices of digital education and the forms of human flourishing they support. This might include actively adopting more local, collective, glitchy and commons-based approaches, and actively resisting the corporate, enterprise platform implementations (Selwyn 2023) designed primarily to support the bureaucracy around mass education provision.

Shared stewardship of technology and its organisation through 'collective democratic processes' (Selwyn 2023), the return of personal learning networks and community-based learning, and – most fundamentally – the dissolution of educational institutions as we currently understand them in favour of forms of distributed knowledge-sharing (for example, Connell 2019) all open up glimpses of educational possibility beyond the dystopias of the present. Knowledge-sharing in the form of 'threads', or movements, beyond and outside the (arguably) broken institutions of formal education in the global North is a theme developed by Sarah Amsler, who has consistently written on how the organisation of learning 'outside hegemonic institutions and their regimes of recognition, worth and value' (2019, 927) opens up new possibilities for democratic education beyond European modernity (926). Amsler (2016) locates utopian possibility elsewhere, in 'autonomous movements in the global South' where:

indigenous and anticolonial movements for autonomy, land, resources and dignity; grass roots struggles against patriarchal capitalist globalisation and neoliberal power; and self-organised spaces for counter-hegemonic thinking and practice constitute a radical political imaginary which enables movements not just for social change but for the immanent creation of a radically other reality. (20)

That the utopic horizons of an alternative 'global knowledge politics' (Amsler and Facer 2017, 12) lie to the South, in autonomous movements and indigenous and diverse knowledges is a proposition increasingly taken up in digital education research. For example Gallagher (2019) highlights how edtech policy in sub-Saharan Africa – focused on the 'massive scaling of educational provision' (41) via technology adoption and the 'redesigning of local pedagogy toward global indicators...and other supranational policy pressures' (41) is undermining local educational autonomy and standardising it

within a global, marketised 'new normal'. As a counter to this, Gallagher emphasises the vital need to respect and amplify 'local educational and technological practices' through which new, 'horizonalist' imaginaries of digital education can emerge (48).

Gallagher and Knox's (2019) special issue of *Learning, Media and Technology* specifically focuses on accounts of place-based practice that acknowledge 'an already-present political economy of educational technology' in areas of the global South (226). Such work aligns with the view that the concept of scale does not necessarily align with desirable models of social transformation or to theories of radical democracy. Instead, a 'way to achieve a world where many worlds fit' is by:

building autonomous communities in place, following the principle of One No (to neoliberal globalization and the patriarchal capitalist hydra) and Many Yeses (multiple transformative alternatives)'. (Escobar 2019, no page)

Re-thinking education in these terms is not just about tweaks to curricula or teaching methods, but about a fundamental re-structuring and re-organisation away from institutions as we currently understand them.

In the focus on place-based models, autonomous communities and indigenous and diverse knowledges it is important to take care not to succumb to what Chandler and Reid (2018) call the 'ontopolitics of indigeneity', in which arguments in favour of indigenous ways of being and knowing instrumentalise and reduce them in order to appropriate them as a route to 'helping western societies cope with the environmental crises of the Anthropocene' (254). At the same time, in rightly questioning colonising 'scaleability' in digital education and championing place-based approaches, it is important to remain open to the ways in which digital technology allows us to catalyse and strengthen global solidarity in pursuit of a wider imagining. Srnicek and Williams (2016) argue that to focus exclusively on the local (what they call 'folk politics') can constitute a form of retreat and avoidance of the wider problems of 'complex and abstract' society (49), limiting the capacity for large-scale social change. The 'utopian potentials inherent in twenty-first-century technology' must be 'liberated by an ambitious left alternative' (3). We hold it in our power to become differently technologised.

Conclusion: desire, hope, music

The architecture for digital education utopia outlined above touches on aspects of its material infrastructures, models of knowledge production and geographies. From these, we can begin to craft a set of implications for the way we work as academics, teachers, students and researchers. While much of the power of utopia as method lies in its acknowledgement of the political power of imagining differently, Levitas is clear that she see utopia as 'operating at the level of experience, not merely cognition, encouraging the sense that it does not have to be like this, it could be otherwise' (Levitas 2011, 143). Utopia is about what we can imagine, but also about what we can do.

This paper has sketched out how, as researchers, teachers, academics and students we might build toward a version of utopia based on justice and planetary health by excluding and refusing edtech's most toxic systems and practices, while organising for and demanding fairer, better, more democratic technology infrastructures in our institutions. We can explicitly recognise in our practice the negative implications of unbridled technology use for planetary health, and actively advocate for care, restraint and renewability in the way we use technology to teach. We can engage diverse knowledges and perspectives in our teaching, allowing counter-hegemonic thinking into our own ways of understanding and our own knowledge projects. We can advocate for change within our

institutions, and speak confidently about alternative ways of understanding what these institutions might be. We can actively build local, collective and co-designed educational technologies and approaches, while maintaining hope in the potential of technology as a means for achieving global solidarity and connection. Most importantly, perhaps, we can imagine new utopias, reflect on them collectively, discuss and acknowledge together the power of desiring differently.

Abensour's (1999) 'education of desire', discussed at the start of this paper, offers a powerful way of understanding utopian educational purpose as lying in its ability to enable us to desire differently. Yet this requires the underpinning of a renewed sense of the purpose of education itself – the education of desire as a route for imagining and building utopia must not be seen as yet another instrumentalisation of education – a perspective on what it can do, rather than what it is.

Theorising what education *is* is a project taken up by Osberg and Biesta (2021) in their 'groundwork for a non-instrumental theory of education'. Acknowledging that it has 'fallen into a form of disrepair, or perhaps one could even say despair', they argue that 'there is no longer any consensus as to what education actually is or which normative role it should serve' (57). As a starting point for building such a consensus, they emphasise the need to 'keep open a political space' in which education's 'purposes can be continually renegotiated' (58) – here the focus is on education not as a 'tool' for delivering political and social agendas, but as an emergent entity with its own aesthetic and affective powers, something like music.

There is a resonance here with Levitas's (2013) own focus on music as a source of utopian openingup, bringing with it the possibility of social change. She emphasises that 'there is something in the nature of music itself and our making of it which reforms us as subjects and agents, and thus both conjures the possibility of a new world and moves towards it' (61):

The relation to this world makes music, particularly in social terms, seismographic, it reflects cracks under the social surface, expresses wishes for change, bids us to hope. (Bloch 1986, 1088 quoted in Levitas 2013, 60)

Education might be conceived as similarly seismic, opening new desires for new worlds, bringing us hope — 'a continuous reformulation of the object cause of desire pulling us forward' (Wegner 2021, 170). Seeing education as being like music is a route to valuing it on its own terms — not for its ability to 'deliver' differently-desiring subjects, but for its fundamental opening-up of space for desiring differently:

if music serves a purpose in the lives of others, this is not because it has been designed to serve the purposes of others, but because others find meaning and value in the unique aesthetic qualities of 'music': meaning and value that somehow coheres with their own purposes. (Osberg and Biesta 2021, 59)

Osberg and Biesta create a powerful framing in which education is understood as an emergent entity issuing from the 'coordination from within' (64) of the symbolic, the individual and the political. This coordination is a form of immanence – education comes to be through the intra-action of these three constituents (64). An important connection with Osberg's earlier work is emphasised in the 2021 paper, in particular her work on complexity and 'care for the future' (2010) in which she argues for an educational democracy based in emergence – where 'the impossible' is kept open, and where the 'radical alterity' of the future is recognised. This is an approach which aligns with the idea of utopia as a reflexive process which is always open and in need of continual reinvention. In her 2010 paper, Osberg calls for an approach to taking care of the future through a 'kind of envisioning [which] can emerge from sensitive and tentative experimentation with what is not yet possible' (166)

– an approach which already has significant traction in digital education research (for example Ross 2022; Bayne et al. 2020; Nørgård, Mor and Bengtsen 2019; Collier and Ross 2017; Amsler and Facer 2017).

In applying utopia as method, this paper has tracked a pathway through the histories, ontologies and architectures of digital education, acknowledging its current problems, emphasising its capacity to contribute to positive change and arguing for its place within utopia. In its themes of emergence, openness and desire I hope we might see glimpses of what Eagleton (2015) calls 'fundamental hope' – a hope that 'acknowledges the realities of failure and defeat, but refuses to capitulate in the face of them and preserves an unspecified, nonpurposive openness to the future' (65). This is the kind of hope that allows us to maintain faith in the performative potential of imagined alternatives.

References

- Abensour, Miguel. 1999. 'William Morris: The Politics of Romance'. In *William Morris: The Politics of Romance*, edited and translated by Blechman, Max, 125–62. A Drunken Boat Anthology. San Francisco: City Lights Books.
- ———. 2017. *Utopia From Thomas More to Walter Benjamin*. Translated by Raymond N. and MacKenzie, Raymond, N. Minneapolis: Univocal.
- Amsler, Sarah. 2016. 'Learning Hope. An Epistemology of Possibility for Advanced Capitalist Society'. In *Social Sciences for an Other Politics*, edited by Ana Cecilia Dinerstein, 19–32. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-319-47776-3_2.
- ——. 2019. 'Gesturing towards Radical Futurity in Education for Alternative Futures'. *Sustainability Science* 14 (4): 925–30. https://doi.org/10.1007/s11625-019-00679-8.
- Amsler, Sarah, and Keri Facer. 2017. 'Introduction to "Learning the Future Otherwise: Emerging Approaches to Critical Anticipation in Education". Futures 94 (November): 1–5. https://doi.org/10.1016/j.futures.2017.09.004.
- Bali, Maha Ayham, and Shyam Sharma. 2017. 'Envisioning Post-Colonial MOOCs: Critiques and Ways Forward'. In *Massive Open Online Courses and Higher Education: What Went Right, What Went Wrong and Where to Next?*, edited by Rebecca Bennett and Mike Kent, 1st ed., 26–44. Routledge. https://doi.org/10.4324/9781315594248.
- Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham and London: Duke University Press.
- Barnett, Ronald. 2018. The Ecological University: A Feasible Utopia. Abingdon, Oxon: Routledge.
- Bayne, Sian. 2015. 'Teacherbot: Interventions in Automated Teaching'. *Teaching in Higher Education* 20 (4): 455–67. https://doi.org/10.1080/13562517.2015.1020783.
- Bayne, Sian, Peter Evans, Rory Ewins, Jeremy Knox, James Lamb, Hamish Macleod, Clara O'Shea, Jen Ross, Philippa Sheail, and Christine Sinclair. 2020. *The Manifesto for Teaching Online*. Boston: MIT Press.
- Biesta, Gert. 2022. 'Reclaiming a Future That Has Not yet Been: The Faure Report, UNESCO's Humanism and the Need for the Emancipation of Education'. *International Review of Education* 68 (5): 655–72. https://doi.org/10.1007/s11159-021-09921-x.
- Bloch, Ernst. 1986. *The Principle of Hope*. Translated by Neville Plaice, Steven Plaice, and Paul Knight. Vol. 1. Cambridge, MA: MIT Press.
- Braidotti, Rosi. 2019. 'A Theoretical Framework for the Critical Posthumanities'. *Theory, Culture & Society* 36 (6): 31–61. https://doi.org/10.1177/0263276418771486.
- Chakrabarty, Dipesh. 2000. 'Universalism and Belonging in the Logic of Capital'. *Public Culture* 12 (3): 653–78.
- Chandler, David, and Julian Reid. 2018. "Being in Being": Contesting the Ontopolitics of Indigeneity'. The European Legacy 23 (3): 251–68. https://doi.org/10.1080/10848770.2017.1420284.

- Collier, Amy, and Jen Ross. 2017. 'For Whom, and for What? Not-Yetness and Thinking beyond Open Content'. *Open Praxis* 9 (1): 7. https://doi.org/10.5944/openpraxis.9.1.406.
- Connell, Raewyn. 2019. The Good University: What Universities Actually Do and Why It's Time for Radical Change / Raewyn Connell. London: Zed.
- Cooper, Diana. 2014. Everyday Utopias: The Conceptual Life of Promising Spaces. London: Duke University Press.
- Crary, Jonathan. 2022. Scorched Earth: Beyond the Digital Age to a Post-Capitalist World / Jonathan Crary. London: Verso.
- Delors, Jacques, et al. 1996. 'Learning: The Treasure within. Report to UNESCO of the International Commission on Education for the Twenty-First Century'. Paris: UNESCO.
- Dunne, Anthony., and Fiona. Raby. 2013. Speculative Everything: Design, Fiction, and Social Dreaming / Anthony Dunne & Fiona Raby. Cambridge, Massachusetts: The MIT Press.
- Dwivedi, Yogesh K., Laurie Hughes, Arpan Kumar Kar, Abdullah M. Baabdullah, Purva Grover, Roba Abbas, Daniela Andreini, et al. 2022. 'Climate Change and COP26: Are Digital Technologies and Information Management Part of the Problem or the Solution? An Editorial Reflection and Call to Action'. *International Journal of Information Management* 63 (April): 102456. https://doi.org/10.1016/j.ijinfomgt.2021.102456.
- Eagleton, Terry. 2015. *Hope Without Optimism*. New Haven: Yale University Press.
- Elfert, Maren. 2015. 'UNESCO, the Faure Report, the Delors Report, and the Political Utopia of Lifelong Learning'. *European Journal of Education* 50 (1): 88–100. https://doi.org/10.1111/ejed.12104.
- Elfert, Maren. 2018. *UNESCO's Utopia of Lifelong Learning: An Intellectual History*. New York and London: Routledge.
- Escobar, Arturo. 2019. 'The Global Doesn't Exist'. *Contribution to GTI Forum Think Globally, Act Locally?* (blog). 2019. https://greattransition.org/gti-forum/global-local-escobar.
- Eynon, Rebecca, and Erin Young. 2021. 'Methodology, Legend, and Rhetoric: The Constructions of Al by Academia, Industry, and Policy Groups for Lifelong Learning'. *Science, Technology, & Human Values* 46 (1): 1 66–91. https://doi.org/10.1177/0162243920906475.
- Facer, Keri. 2016. 'Using the Future in Education: Creating Space for Openness, Hope and Novelty'. In *The Palgrave International Handbook of Alternative Education*, edited by Helen E. Lees and Nel Noddings, 63–78. London: Palgrave Macmillan UK. https://doi.org/10.1057/978-1-137-41291-1 5.
- Faure, Edgar, Filipe Herrara, Abdul Razzak Kaddoura, Henri Lopes, Arthur Petrovski, Majid Rahnema, and Frederick Champion Ward. 1972. 'Learning to Be: The World of Education Today and Tomorrow'. Paris: UNESCO.
- Gallagher, Michael. 2019. 'Educational Unsustainability in Sub-Saharan Africa: In Search of Counter-Narratives to Policy Pressures and Exponential Tech Growth'. *Visions for Sustainability* 12: 40–51.
- Gallagher, Michael, and Jeremy Knox. 2019. 'Global Technologies, Local Practices'. *Learning, Media and Technology* 44 (3): 225–34. https://doi.org/10.1080/17439884.2019.1640741.
- Gorard, Stephen, Neil Selwyn, and Louise Madden. 2003. 'Logged on to Learning? Assessing the Impact of Technology on Participation in Lifelong Learning'. *International Journal of Lifelong Education* 22 (3): 281–96. https://doi.org/10.1080/02601370304845.
- Halpin, David. 2003. *Hope and Education : The Role of the Utopian Imagination / David Halpin.* London; RoutledgeFalmer.
- Heikkilä, V. 2021. 'Permacomputing Update 2021'. 2021. http://viznut.fi/texts-en/permacomputing_update_2021.html.
- Horsthemke, Kai. 2018. *Animal Rights Education*. Animal Ethics Series. London and New York: Palgrave Macmillan.

- House of Commons Committee of Public Accounts. 2006. 'Extending Access to Learning through Technology: Ufi and the Learndirect Service'. London: The Stationery Office Ltd. https://publications.parliament.uk/pa/cm200506/cmselect/cmpubacc/706/706.pdf.
- Jandric, Petar, and Derek Ford R., eds. 2022. *Postdigital Ecopedagogies: Genealogies, Contradictions and Possible Futures*. Postdigital Science and Education. Springer.
- Kasy, Maximilian. 2023. 'The Political Economy of AI: Towards Democratic Control of the Means of Prediction'. Preprint. SocArXiv. https://doi.org/10.31235/osf.io/x7pcy.
- Khan, Richard. 2011. 'For a Multiple-Armed Love: Ecopedagogy for a Posthuman Age'. In *Critical Pedagogy in the Twenty-First Century: A New Generation of Scholars*, 109–31. Information Age Publishing.
- Knight, Elizabeth, Marcella Milana, Ulrik Brandi, Steven Hodge, and Tetyana Hoggan-Kloubert. 2023. 'Lifelong, Lifewide Learning for the New Abnormal and How Digital Fits'. *International Journal of Lifelong Education* 42 (1): 1–7. https://doi.org/10.1080/02601370.2023.2179584.
- Knox, Jeremy. 2015. 'Massive Open Online Courses (MOOCs)'. In *Encyclopedia of Educational Philosophy and Theory*, edited by Michael Peters, 1–7. Singapore: Springer Singapore. https://doi.org/10.1007/978-981-287-532-7 219-1.
- Knox, Jeremy. 2016. *Posthumanism and the Massive Open Online Course: Contaminating the Subject of Global Education*. New York and Abingdon: Routledge.
- Lee, Moosung. 2022. 'Revisiting the Faure Report: Contemporary Legacy and Challenged Legitimacy'. International Review of Education 68 (5): 691–707. https://doi.org/10.1007/s11159-022-09979-1.
- Levitas, Ruth. 2004. 'Hope and Education'. *Journal of Philosophy of Education* 38 (2): 269–73. https://doi.org/10.1111/j.0309-8249.2004.00381.x.
- ———. 2011. *The Concept of Utopia*. Bern: Peter Lang.
- ———. 2013. *Utopia as Method: The Imaginary Reconstitution of Society*. Basingstoke: Palgrave Macmillan UK.
- ———. 2017. 'Where There Is No Vision, the People Perish: A Utopian Ethic for a Transformed Future'. Centre for the Understanding of Sustainable Prosperity.
- Lewis, Tyson. 2007. 'Pedagogies from No-Where, a Review of Edutopias: New Utopian Thinking in Education'. *Educational Philosophy and Theory* 39 (2): 216–20. https://doi.org/10.1111/j.1469-5812.2007.00315.x.
- Lincoln, Abbey. 2007. Down Here Below. Audio.
- Lloro-Bidart, Teresa. 2015. 'A Political Ecology of Education in/for the Anthropocene'. *Environment and Society* 6 (1): 128–48. https://doi.org/10.3167/ares.2015.060108.
- Macgilchrist, Felicitas. 2021. 'Rewilding Technology'. *On Education. Journal for Research and Debate* 4 (12).
- Majaca, Antonia, and Luciana Parisi. 2016. 'The Incomputable and Instrumental Possibility'. *E-Flux* 77: 1–6.
- Mcgregor, Calum. 2017. 'Review: Nick Srnicek, and Alex Williams (2015) Inventing the Future: Postcapitalism and a World Without Work.' Concept (The Journal of Contemporary Community Education Practice Theory) 8 (3): 1–6.
- More, Thomas. 2016. *Utopia*, edited by George M. Logan. Translated by Robert Merrihew Adams. Third edition. Cambridge: Cambridge University Press.
- Nørgård, Rikke Toft. 2022. 'What Comes after the Ruin?' In *Transformation of the University*, by Søren S.E. Bengtsen and Ryan Evely Gildersleeve, 1st ed., 156–74. London: Routledge. https://doi.org/10.4324/9781003102922-14.
- Nørgård, Rikke Toft, Yishay Mor, and Søren S. E. Bengtsen. 2019. 'Networked Learning in, for, and with the World'. In *Networked Professional Learning: Emerging and Equitable Discourses for Professional Development*, edited by Allison Littlejohn, Jimmy Jaldemark, Emmy Vrieling-Teunter, and Femke Nijland, 71–88. Research in Networked Learning. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-18030-0_5.

- OECD. 2021. 'Building the Future of Education'. Paris: OECD.
- Ofsted. 2017. 'Learndirect Ltd: Further Education and Skills Inspection Report'. Manchester: Ofsted.
- Osberg, Deborah, and Gert Biesta. 2021. 'Beyond Curriculum: Groundwork for a Non-Instrumental Theory of Education'. *Educational Philosophy and Theory* 53 (1): 57–70. https://doi.org/10.1080/00131857.2020.1750362.
- Pedersen, Helena. 2022. 'Anatomies of Desire: Education and Human Exceptionalism after Anti-Oedipus'. https://doi.org/10.1080/00131857.2022.2130043.
- Peters, M. A. and Freeman-Moir, J., eds. 2006. *Edutopias: New Utopian Thinking in Education*. Rotterdam: Sense.
- Polizzi, Gianfranco. 2021. 'Internet Users' Utopian/Dystopian Imaginaries of Society in the Digital Age: Theorizing Critical Digital Literacy and Civic Engagement'. *New Media & Society*, June, 146144482110186. https://doi.org/10.1177/14614448211018609.
- Regmi, Kapil Dev. 2015. 'Lifelong Learning: Foundational Models, Underlying Assumptions and Critiques'. *International Review of Education* 61 (2): 133–51. https://doi.org/10.1007/s11159-015-9480-2.
- Robertson, David. 1998. 'The University for Industry--a Flagship for Demand-led Training, or Another Doomed Supply-side Intervention?' *Journal of Education and Work* 11 (1): 5–22. https://doi.org/10.1080/1363908980110101.
- Ross, Jen. 2022. *Digital Futures for Learning: Speculative Methods and Pedagogies*. Taylor and Francis. https://doi.org/10.4324/9781003202134.
- Rubenson, Kjell. 2008. 'Between Humanism and Global Capitalism'. In *The Routledge International Handbook of Lifelong Learning*, 411–22. London: Routledge.
- Selwyn, Neil. 2023. 'Digital Degrowth: Toward Radically Sustainable Education Technology'. *Learning, Media and Technology*, January, 1–14. https://doi.org/10.1080/17439884.2022.2159978.
- Selwyn, Neil, Luci Pangrazio, and Bronwyn Cumbo. 2022. 'Knowing the (datafied) student: the production of the student subject through school data'. *British Journal of Educational Studies* 70 (3): 345–61. https://doi.org/10.1080/00071005.2021.1925085.
- Shubber, Kadhim. 2017. 'Learndirect Faces Collapse after Failing to Suppress Ofsted Report'. Financial Times, 2017, August 14th 2017 edition.
- Srnicek, N. and Williams, A. 2016. *Inventing the Future: Postcapitalism and a World Without Work.*London and New York: Verso.
- Staley, David J. 2019. Alternative Universities Speculative Design for Innovation in Higher Education / David J. Staley. Book Collections on Project MUSE. Baltimore, Maryland: Johns Hopkins University Press.
- UK Department of Culture, Media and Sport, and Office for Artificial Intelligence. 2021. 'National Al Strategy'. HM Government.
- UK Government. 2021. *Skills for Jobs: Lifelong Learning for Opportunity and Growth*. London: Dandy Booksellers Ltd.
- UNESCO. 2021. *Reimagining Our Futures Together: A New Social Contract for Education*. Paris: Educational and Cultural Organization of the United Nations.
- Van Dermijnsbrugge, Elke, and Stephen Chatelier. 2022. 'Utopia as Method: A Response to Education in Crisis?' *Asia Pacific Journal of Education* 42 (sup1): 6–19. https://doi.org/10.1080/02188791.2022.2031870.
- Verlie, Blanche. 2020. 'From Action to Intra-Action? Agency, Identity and "Goals" in a Relational Approach to Climate Change Education'. *Environmental Education Research* 26 (9–10): 1266–80. https://doi.org/10.1080/13504622.2018.1497147.
- Wallin, Jason J. 2017. 'Pedagogy at the Brink of the Post-Anthropocene'. *Educational Philosophy and Theory* 49 (11): 1099–1111. https://doi.org/10.1080/00131857.2016.1163246.
- Webb, Darren. 2016. 'Educational Studies and the Domestication of Utopia'. *British Journal of Educational Studies* 64 (4): 431–48. https://doi.org/10.1080/00071005.2016.1143085.

- Webb, P. Taylor, Sam Sellar, and Kalervo N. Gulson. 2020. 'Anticipating Education: Governing Habits, Memories and Policy-Futures'. *Learning, Media and Technology* 45 (3): 284–97. https://doi.org/10.1080/17439884.2020.1686015.
- Wegner, Phillip E. 2021. 'Escaping The Repetition Of Catastrophe: On Abensour's Utopianism'. *Cultural Critique* 111 (1): 168–81. https://doi.org/10.1353/cul.2021.0017.
- Williamson, Ben. 2016. 'Digital Education Governance: Data Visualization, Predictive Analytics, and "Real-Time" Policy Instruments'. *Journal of Education Policy* 31 (2): 123–41. https://doi.org/10.1080/02680939.2015.1035758.
- ——. 2019. 'Policy Networks, Performance Metrics and Platform Markets: Charting the Expanding Data Infrastructure of Higher Education'. *British Journal of Educational Technology* 50 (6): 2794–2809. https://doi.org/10.1111/bjet.12849.
- Yosef-Hassidim, Doron, and John Baldacchino. 2021. 'Education's Autonomy as a Utopian Polysemic Possibility: Challenges and a Path Forward'. *Educational Theory* 71 (1): 35–51. https://doi.org/10.1111/edth.12466.

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