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(No) Hope for the future? A design agenda for rewidening and rewilding higher education with utopian imagination

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Abstract
This article argues for exploring, connecting, and applying utopian imagination, speculative design, and planetary thinking as a way forward for higher education to reimagine and move towards more hopeful planetary futures. It examines hopepunk and solarpunk perspectives on possible futures to propose a design agenda for rewidening and rewilding higher education and educational technology with utopian imagination. Firstly, the article outlines and develops a framework for wider and wilder futures in higher education, emerging from utopian thinking and desire. Secondly, it connects hopepunk with speculative design and solarpunk with planetary design to highlight and put forward rebellious strategies of hope in envisioning more preferable futures. Thirdly, it approaches the field of educational technology within the context of wide and wild education to establish four planetary orientations concerning educational technology: Higher Education for, in, with, and by the world. Taken together, the article proposes a design agenda for educational technology that integrates utopian imagination and solarpunk practices with planetary educational technology to catalyse the development of more preferable futures in a more-than-human world.

Keywords Utopian imagination, Higher education, Educational technology, Hopepunk, Speculative design, Solarpunk, Planetary design, Futures thinking, Utopian higher education.

Grimdark and narrow futures in higher education

What does a world that works for everyone look like? How can it translate to higher education institutions? And what role or potential lies within utopian imagination to think, talk, and act critically, holistically, and reflexively in both anticipating and shaping higher education futures?

This article argues for exploring, connecting, and applying utopian imagination, speculative design, and planetary thinking as a way forward for higher education – that also resonates with and has implications for the domain of educational technology – to reimagine and desire more just and hopeful futures. The term *utopia* generally refers to

an imagined, ideal, and often perfect society, while the term *dystopia* is utopias dark twin pointing towards the undesirable society marked by negative qualities or frightening characteristics. This article applies the concepts to examine and discuss potential futures. In this context, *hopepunk* and *solarpunk* attitudes – are specific value-driven rebellious utopian strategies originating from popular and aesthetic culture and often point towards collective and imaginative bettering of worlds through radical hope and planetary justice and consciousness. Here, such approaches are coupled with orientations of higher education as being *for*, *in*, *with*, and *by* the world, that might help guide us towards futures that transcend present dull and domesticated educational utopias (Webb, 2016). It is, however, important to acknowledge that any discussions centered on more hopeful or just futures inherently involve making normative judgments, where some futures are deemed more preferable than others.

The normative dimensions of designing for possible futures relate to, for instance, Voros' concept of *preferable futures* within futures studies (Voros, 2001), Nelson & Stolterman's foregrounding of *desiderata*, the pursuit of *that-which-ought-to-be* and materialising *the ideal in the real* within design studies (Nelson & Stolterman, 2014), along with Levitas' *utopia as method* and *utopian imagination* (Levitas, 2013) and other applications of utopian thinking within higher education studies (see, e.g., Amsler & Facer, 2017; Barnett et al., 2022; Bayne, 2023; Nørgård, 2022; Ross, 2022), that all underscore this normative dimension. Such notions of higher education oriented towards educating for *utopian desire* (Abensour, 1999) not solely grounded in 'pragmatic feasibility' or 'realistic futures' necessitates a transformation of both higher education institutions themselves and our own perspectives and relationships with the world around us.

Neglecting our interconnected existence with each other, the planet, and the entangled web of more-than-human entities and futures leaves us trapped in bleak and challenging present circumstances inside and outside our higher education institutions. As such, there are calls to envision alternative futures – both in and beyond higher education – that extend thinking toward a deeper notion of relationality (e.g., Akama et al., 2020; Escobar, 2017) and necessary radical change in social systems because of an ecological imperative and planetary challenges (Levitas, 2017), and, consequently, new approaches towards considering the futures of educational technology (Macgilchrist, 2021). To progress forward, we require, on the one hand, more utopian imaginative models and hope-driven attitudes to envision futures that are genuinely worth pursuing. On the other hand, we also need a less *ego-centric* and more *eco-centric* mindset of planetary sensibilities to believe that these envisioned futures are planet-wide and hopeful for 'all of us'.

The climate crisis and the looming specter of a planetary catastrophe have given rise to the emergence of various educational approaches, including *eco-pedagogies* (Kahn, 2010; Molina-Motos, 2019; Misiaszek, 2020), *post-anthropocentric* and *post-human* thinking (Banerji & Paranjape, 2016; Bodén et al., 2021; Braidotti, 2013; Bridle, 2022; Snaza et al., 2014) and a *planetary turn in design* (Akama et al., 2020; Samson & Haldrup, 2023; Wahl, 2016). These responses are potential strategies to address the increasing tangibility of societal and planetary dystopian scenarios and grimdark futures, both in everyday life and educational settings. Moreover, discussions within and surrounding higher education about the *Anthropocene* and *Capitalocene* bring attention to an era shaped by human activities and a concept linked to environmental degradation influenced by

the dynamics of capitalism and its related economic and social structures. These discussions, especially concerning the neoliberal and performative aspects of universities and higher education, underscore how domesticated, dull, and pessimistic prospects have come to exert influence on higher education institutions. This influence has constrained and altered the perspectives and actions of academic individuals, including students and teachers alike (Ball, 2003).

While there is a consensus among higher education scholars regarding the necessity for change, the scope and vision of this change vary widely. Some advocate for more pragmatic and incremental shifts, while others adopt a more holistic and imaginative stance (Levitas, 2004, 2013; Webb, 2016). The latter group emphasises the need to envision alternative futures and propose methods and modes of thinking that can actively contribute to the discovery and process towards more hopepunk futures that connect to a contemporary movement and aesthetic about speculating, changing, and bettering the world and its future(s) through its emphasis on optimism, cooperation, community-building, the rejection of apathy, and the embodiment of radical hope.

In the context of higher education and educational technologies, there is a need for improved frameworks and methodologies to evaluate our current practices, considering the state and prospects of desired and preferable futures for us all, both human and more-than-human entities, in a planetary and pluriversal perspective. This foundational approach to shaping the future closely aligns with design practices found in *speculative design* (Dunne & Raby, 2013), *design fiction prototyping* (Bleecker at al., 2022), and approaches to designing for improved educational futures (Abegglen et al., 2023; Hall et al., 2022). These transformative design approaches depart from our existing *anticipatory regimes* in education (Amsler & Facer, 2017), where we consistently find ourselves shaping the future of higher education and educational technologies based on projected and predictable dull futures that are essentially already present in our current reality. To envision wider and wilder futures, drawing conceptual inspiration from Arturo Escobar (2017), accentuating the pluriversal design imperative of *wider*, i.e., people-wide, and *wilder*, i.e., planet-wide, it is important to design beyond pragmatic *real utopias*, as criticised by Webb (2016), and for futures that are more than practically achievable and realistically feasible, given the current situation and the foreseeable future on the horizon.

Here, the article examines and proposes an alternative perspective to counteract the practice of domesticating and narrowing future scenarios. Consequently, the approach diverges from more conventional notions of fostering human optimism or striving for planetary justice when discussing educational technologies in higher education. Here, we advocate for a *more-than-human* approach (Akama et al., 2020), emphasising the entangled relationality of humans and non-humans and recognising the complex agency of the non-human in the, e.g., biological, social, and cultural worlds, which challenges the prevailing discourse in educational technology theory and practice. Such more-than-human approaches, combined with planetary and solarpunk attitudes, prioritise people-wide (hopepunk) and planet-wide (solarpunk) utopian imaginations for preferable futures. They do so at the expense of capitalism's perpetual growth and totalitarian technologies' dominance, as Levitas (2017) argues. This offers a path forward for educational design and technology, which often grapple with the looming specter of exclusively human-centered or 'Global North' anticipatory futures in higher education. The array of potential futures confronting us in higher education is vast and dynamic.

Importantly, these futures are not binary utopian or dystopian outcomes that can be definitively reached. Instead, they represent an ongoing (r)evolutionary process, where certain actions may lead us toward grimdark educational landscapes while others may guide us toward more radical and hopeful ones (Nørgård, 2022). In other words, this article explores the full array of futures – from the present grimdark to the imaginative hopepunk and solarpunk, and from the dull, domesticated, and predictable futures to wider and wilder preposterous futures (see Fig. 1).

Through cultivating hopepunk and solarpunk attitudes within the field of higher education and educational technology, as well as rewidening and rewilding higher education using utopian imagination, the article points towards more hopeful, preferable futures for the people and the planet.

First, the article outlines and develops an imaginative model for wider and wilder futures in higher education, growing from utopian thinking and desire. This section emphasises the interplay between utopian imagination and design approaches such as speculative design and future scenarios. Second, extending utopian examination and reflection, we connect speculative design with the popular cultural phenomenon of hopepunk that accentuates rebellious strategies of hope in envisioning better, more hopeful futures. From here, as the third part of the article, we extend the mentioned perspectives through planetary design and solarpunk concepts, moving beyond the human-centric perspective towards eco-centric future-making for the planet. Finally, the article approaches the field of educational technology within the context of wide and wild higher education, establishing four planetary orientations through educational technology: Higher education *for* the world, Higher Education *in* the world, Higher Education *with* the world, and Higher Education *by* the world.

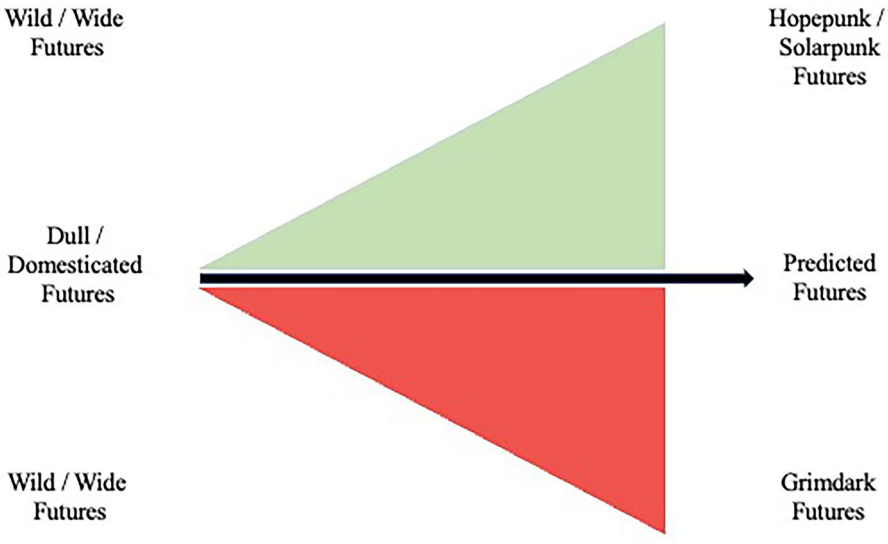

Fig. 1 The domain of all possible futures we are confronted with in higher education. The ones close to the predicted future (in the singular) are dull and domesticated, while the ones spanning the outer cone are wilder and wider. The first half of the cone leads us into more grimdark futures; the other half leads us into more hopepunk futures

Imagining with hope toward utopian higher education futures

In the introduction, we outlined alternative approaches to thinking about higher education futures and educational technologies, namely hopepunk, solarpunk, wider and wilder futures, utopian and dystopian futures, and both human and more-than-human approaches – and a need to emphasise more just, desirable, and preferable planet- and people-wide futures for 'all of us' that encompass the agencies of not only humans but also more-than-humans. Perhaps we should, then, dare to dream of wider and wilder futures - and herein not approach utopia as a feasible destination but as an ever-moving, ever-evolving future world to continuously strive for. For this, we must escape present-day utopian studies and approaches in higher education that have become domesticated (Webb, 2016). As such, there is a pressing need to advance and imagine wilder and wider higher education utopias that do not merely 'predict' the future or point towards 'probable' futures but, rather, make us engage the multiple 'possible' futures – even ones that might initially be deemed 'preposterous' (see Voros, 2017 for a description of the different kinds of possible futures).

Utopia is etymologically conceptualised as a *no place* or *nowhere*, often connected to and framed by acts of social dreaming. However, utopian studies – particularly in higher education - are vast, diverse, contested, and plural, accentuating, e.g., both real utopias, possible/feasible utopias, and imaginative utopias. Here, we draw inspiration from Levitas (1990, 2013, 2017) to advance and explore the concept of utopia in higher education. We approach this idea from various perspectives, such as holistic, critical, imaginary, reflexive, prescriptive, normative, contingent, and future-oriented angles (Levitas, 2004, 2013: 84). Our goal is not just to envision *what might be* but to imagine *otherwise*. Levitas, moreover, frames the interdependencies among economic, social, existential, and ecological processes within an integrated framework. Challenges arise when our attention is predominantly directed towards analysing and explaining existing phenomena, referred to as *that which-is*, thereby neglecting the realm of ethical and moral considerations denoted as *that-which-ought-to-be*. Additionally, this oversight transpires without regard for the preferences and longings resonating from *that-which-is-desired* (desiderata), as Nelson and Stolterman (2012) explained. As such, "the point is not for utopia to assign 'true' or 'just' goals to desire but rather to educate desire, to stimulate it, to awaken it.… Desire must be taught to desire better, to desire more, and above all to desire otherwise." (Abensour, 1999: 146). Levitas draws attention to the perspective that pragmatic and feasible utopias are not enough and that we will only end up with more of the same if we do not demand the impossible (or preposterous) (Levitas, 2004). We might thus say that higher education systems need holistic, hopeful utopias – utopias of *social dreaming* (Dunne & Raby, 2013), *collective visioning* (Wahl, 2016), *extended relationality* (Holflod, 2023b), and *hopepunk imagination* (Nørgård, 2022). However, education of desire and imaginative utopias are not consistently *eutopias*, i.e., always positive, but more critical and reflexive towards *desiderata*. Addressing utopian studies in line with this perspective, Fitting (2009, p. 12) accentuates the following:

> *It is a mistake to approach Utopias with positive expectations, as though they offered visions of happy worlds, spaces of fulfillment and cooperation, representations which correspond generically to the idyll or the pastoral rather than the utopia. Indeed, the attempt to establish positive criteria of the desirable society char-*

> *acterizes liberal political theory from Locke to Rawls, rather than the diagnostic interventions of the Utopians, which, like those of the great revolutionaries, always aim at the alleviation and elimination of the sources of exploitation and suffering, rather than at the composition of blueprints for bourgeois comfort. (Fitting, 2009, p. 12)*

Levitas' utopian approach might allow us to imagine what an alternative society could look like and even what it might feel like to inhabit it (Levitas, 2017, p. 3) when "utopia is the expression of the desire for a better way of being or of living, and as such is braided through human culture" (Levitas, 2013, p. xii). Moreover, she emphasises that we must perceive and engage with utopia primarily as a method rather than a destination. This method involves provisional, reflexive, and dialogic processes (Holflod et al., 2023) and enactments of collective visioning and processual future-making (Barnett et al., 2022). As educational design researchers, this understanding corresponds with speculative design as a way of stimulating idealism (Holflod, 2023a; Nørgård, 2022), reminding us of alternative and imaginable worlds and not something to make real – but as somewhere to aim for rather than build. (Dunne & Raby, 2013, 73). Acknowledging the domestication of educational utopias (Webb, 2016), we thus might need to envision imaginative and preposterous but possible futures – for utopian visions towards a plurality of both voices, ways of knowing, and societal re-constitution (Levitas, 2013).

With imaginative and hopepunk utopian higher education futures possibly sounding abstract and preposterous, speculative design and design futures might be tangible ways of grounding such a utopian approach. In our discussions – with educators, students, and practitioners - about possible and imaginable futures, we have found inspiration in the *futures cone* that frames and directs our utopian thinking in classifications of utopia (see Fig. 2) as projected, probable, plausible, possible, and preposterous in relation to an imagined future (Voros, 2017). These different classes represent different ways of thinking towards the future – best thought of as nested classes of futures moving from the narrowest projected future (in the singular) to the broadest seemingly preposterous futures. Notably, the cone of possible futures is ever-expanding (except for the projected singular future) as we move further and further into the future, indicating trajectories rather than destinations. As a tangible tool for envisioning alternative futures, the futures cone might help guide and widen our imagination. Though it might not be

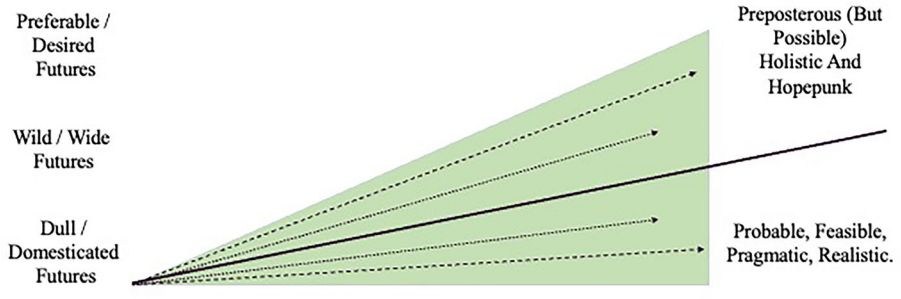

Fig. 2 The domain of all preferable and desired futures we might imagine within higher education. The pathways close to the dull and domesticated futures (bottom of triangle) are probable and 'realistic', while the pathways unfolding in the upper half of wilder/wider futures are 'preposterous' and holistic. The bottom half leads us into domesticated utopias as preferable and probable futures to settle for, while the other half leads us into utopian imagination towards desired and hopepunk futures for people and planets

tailored specifically to the utopian approach expressed by Levitas, it provides a tangible framework for exploring, analysing, and pursuing different classes of possible futures – even wildly imaginable, reflexive, and critical – higher education futures.

Speculative design and hopepunk higher education: re-widening futures

In the previous section, we argued that transcending pragmatic utopian perspectives towards, e.g., holistic, hopepunk and processual future imagination is needed. As such, a shift from a predictive/projected to a visionary/hopepunk attitude towards higher education institutions – and herein educational technologies – is critical:

> *There are several ways of looking at the future, but two methods predominate. The first is by prediction and the second is 'visioning'. Prediction is, perforce, based on extrapolation of past trends. Through this process the future can only be viewed as though along a corridor of constraining possibilities. The corridor might widen along its length but the process of prediction is essentially a restrictive one. Visioning, on the other hand, is a process that begins with the desired future state and then looks backwards to the present (building a new corridor between the states). Visioning is a tool that, under various guises, has been developed by the business community to help corporate planning. The present state can be a difficult barrier to what could be – the future state (Stewart, 1993). Therefore, visioning is radically different from conventional futurology which is predictive, prophetic and tends to offer pictures of exaggerated optimism or pessimism. (McRae, 1994) (in Wahl, 2006, p. 714).*

Within a speculative design approach, this needs to happen from the bottom up (Dunne & Raby, 2013) to escape totalitarian utopian 'blueprint' frameworks or fixed destinations and have in their place ever-evolving micro-utopias of collective visions. Building on the utopian method enables us to imagine more hopeful futures and evoke both personal and collective desire as 'that things might be otherwise, and might be better, is the defining characteristic of utopian thought' (Levitas, 2017, p. 6). However, to rewiden our futures under the present realities of higher education, we need a certain kind of hope. To not 'just be hopeful' (Dunne & Raby, 2013), we must invoke hopepunk attitudes as more rebellious stances towards both the present and future.

Hopepunk is more than conjuring an idealistic, bright vision of the future. By engaging in discussions about futures worth having and problems in working towards them, the community of higher education thinkers and technologists can engage in processes of collective visioning about (more) preferable futures and approach design processes to materialise them (Wahl, 2006, 2016). Here, hopepunk thinkers and practitioners can come together to engage utopian imagination through design agendas to materialise pathways towards more just and hopeful futures. According to Aja Romano, *hopepunk* is not a naïve optimist or purely hopeful state – but an active political choice 'made with full self-awareness that things might be bleak or even frankly hopeless, but you're going to keep hoping, loving, being kind nonetheless' (Romano, 2018). It is, on the one hand, a utopian insistence on believing in the possibility of wilder and wider futures and then fighting for those preferable futures to happen, and, on the other hand, rebellion against dull and domesticated futures that diminish our utopian imagination and belief in that things could be otherwise.

Hopepunk signals an anti-nostalgic, forward-looking stance against the grimdark and encroaching darkness of the present world. It is characterised by a utopian imagination of softness and wholesomeness that advocates taking concrete action towards building positive and preferable worlds: 'Hopepunk is a radical call to arms for us to imagine better […] To embrace the fact that fantasy is not simply an escape from the world but an invitation to go deeper into it. That we must fall in love with the world that we so deeply wish to change (Romano, 2018). Accordingly, hopepunk embraces a futures-oriented activist punk attitude or approach to the world grounded firmly in virtues such as care, compassion, community, love, and friendship. Here, utopian imagination, speculative design, and preposterous but possible futures run in the veins of hopepunk as a mode of resisting the encroaching closing of the projected future. However, relevant current criticism of and reflection on hopepunk as a movement of 'weaponised positivity' lies in its lack of inclusion of diverse races, that are illuminated by a disconnect between those canonised and those self-identifying as hopepunk artists and creators, along with a rapid rise and fall of the genre in popular culture (Mancuso, 2021, pp. 21–22). But, as we explain in the below sections, we find insightful and activist potentials in hopepunk as an attitude or approach to contribute to the design agenda and strategies of working towards more hopeful, just, and planetary futures.

Mancuso criticises hopepunk and creates the concept of "multiplicative speculation", denoting the multiplication of possible futures that might be imagined by displaying numerous different possibilities and reminding us that things could be different (Mancuso, 2021, p. 4), which – though different – resonates with the same set of ideas and design strategies proposed in this article of imagining alternative and better worlds for all. The design equivalent of hopepunk is speculative design, which evokes desire from hope and extends towards preferable futures. Within speculative design, futures are opened in hopepunk ways to define preferable futures worth having and worthwhile fighting for collectively. These are futures emerging from 'speculating more' within higher education and concerning educational technologies. It is not 'positive design', but future practices fuelled by speculating through design, by testing out different potential futures and scenarios while translating our utopian imagination into tangible designs. Constantly questioning what is given, speculative design aims to open wider futures by creating alternatives to examine, test, and enact in a dialogic space between preferable futures and present reality. It is imagination at work in the crevices between reality as we know it (and the projected/probable future we think will come into being) and the ever-widening array of all possible futures (as realities that might come into being):

> *As we rapidly move toward a monoculture that makes imagining genuine alternatives almost impossible, we need to experiment with ways of developing new and distinctive worldviews that includes different beliefs, values, ideals, hopes, and fears from today's.[…] The idea of the 'proposal' is at the heart of this approach to design: to propose, to suggest, to offer something. This is what design is good at. It can sketch out possibilities. (Dunne & Raby, 2013, p. 189)*

Speculative design works through the fusion of utopian imagination and hopepunk activism: the diagnosis of the present state of things tells us why we would want to leave the educational (technology) landscape in which we currently live; the futures cone shows us all possible futures and helps us aim for where we want to go. Utopian hopepunk

thinking tells us *why* we want to go from here to there, and speculative design tells us *how* to go from here to there (Dunne & Raby, 2013). To transform the educational (technology) design agenda from forecasting dull futures to dreamcasting wide/wild futures, we can approach speculative design as a *compass*, the futures cone as a *map*, and utopian imagination as the *fuel*. Speculative design is the compass for a hopepunk spirit to shift the focus in educational design from designing for a future already known to design for nascent futures lying in wait.

Speculative hopepunk designers approach education as holistic world-building, always ethically mindful that they are surrounded by infinite other possible worlds and futures – grimdark or hopepunk – domesticated or wild – dull or wide. As such, we point towards speculative hopepunk design with utopian imagination as a way forward for the field of educational technology to widen its own futures and the futures of others in higher education.

Planetary design and solarpunk higher education: re-wilding futures

To invite a more holistic and 'whole world' approach to educational design, the integration of *pluriversal design* (Escobar, 2017) can be seen as a potential and promise of re-widening and even re-wilding higher education. In *Designs for the pluriverse* (2018), Escobar calls for a multicultural and multi-species approach to design. To make design wider (people-wide) and wilder (planet-wide) as both the human, biological, and inert become equal, even entangled, stakeholders in the decision- and design-making process. This also entails that all forms of wide and wild knowledge, value, interactions, emotions, and experiences are welcomed and taken into consideration when thinking of higher education futures and the role educational technology can play in these.

Taking a *pluriversal* approach to educational design, educational developers and designers might be better equipped to nurture and support wider and wilder futures that care for, restore, and rewild planet-wide ecosystems and futures that they are part of (Hansen et al., 2022). Moreover, it might accentuate and enable new wider, and wilder forms of dialogue in teaching and learning, contributing to new modes of thinking and practice that bridge the current gap between preferable futures for people and preferable futures for the planet.

Emerging from such thinking, several seminal works, primarily originating from outside the higher education field, have offered valuable insights that hold the potential to lead the way toward a more optimistic course for our planet and its inhabitants. These influential texts, including Wahl's "Designing Regenerative Cultures" (2016), Escobar's "Designs for the Pluriverse: Radical interdependence, autonomy, and the making of worlds" (2018), Friedman and Hendry's "Value Sensitive Design: Shaping technology with moral imagination" (2019), Monteiro's "Ruined by Design: How designers destroyed the world, and what we can do to fix it" (2019), Wakkary's "Things we could design: For more than human-centered worlds" (2021), and Ross's "Digital Futures for Learning: Speculative methods and pedagogies" (2022), collectively offer a rich resource for shaping and imagining the future of education in a manner that is both sustainable, just, and holistic.

Taken together, these works hold the potential of nurturing and promoting practices for a re-wilding of higher education futures, the re-widening of our utopian hopepunk imagination, planetary design, and *solarpunk* approaches to educational technology to

strive towards more-than-human preferable futures. This, in turn, might help us consider wellbeing beyond humans alone and let us engage in a transformational educational design agenda for how worlds and futures can be imagined otherwise when we acknowledge planet-wide more-than-human entities as co-participants in higher education futures. Such a planetary approach calls for higher education and educational (technology) design to embody wilder futures, develop planet-wide utopian imagination, invite solarpunk thinking and practice and develop methods for designing otherwise to re-wild futures in higher education. According to Akama et al. (2020), this requires "1) decentring human perspectives to consider life across species; 2) adopting simultaneous multiple worldviews; 3) embracing 'non-living' forms with ontologies; and 4) relating the more-than-human to the becoming of everything" (Akama et al., 2020, p. 2). To take on the challenge of foregrounding planet-wide concerns without centering the human as the reason for doing so – a sort of hopepunk *worlding* within higher education in which many ways of being, knowing, and doing co-exist.

The concepts of *grimdark* and *hopepunk* originate from speculative fiction, popular cultural media, and utopian thinking about the present and future. While grimdark accentuates dystopian imagination and society's dark, gritty, and often morally ambiguous elements, hopepunk has (as described above) a strong emphasis on optimism, resilience, and the belief in the possibility of positive change. Here, *solarpunk* could be framed as hopepunk's younger sibling (Gillam, 2023). Solarpunk is a relatively new literary and aesthetic movement that emphasises hope for and envisioning liveable and inhabitable planet-wide future scenarios. Like hopepunk, solarpunk explores alternative pathways and perspectives on fostering hope for the future but foregrounds solidarity, community, and ecological harmony. Flynn (2014) aptly put it, solarpunk is preferable to denying or succumbing to despair when contemplating the seemingly grimdark future, further accentuated by its ecological entanglements of humans and more-than-humans.

Solarpunk combines elements of speculative fiction rooted in ecological perspectives with social and political visions of preferable ecological futures for the more-than-human while considering future generations' needs and aspirations (Flynn, 2014; Sylvia, 2015). Consequently, the movement extends its focus beyond the ego-centric to *eco-centric* ways encompassing the whole planet. This involves a renewed commitment to sustainability, promoting ecological interactions, and repurposing existing materials to create new ones. When addressing hopepunk futures through the lens of planetary design, solarpunk might be the apt term to use and guide us beyond the Anthropocene (Albrecht, 2019).

Overall, solarpunk is about reclaiming power and *designing regenerative cultures* (Wahl, 2016) to form eco-pedagogies and eco-technologies in higher education, aiming to create and enable planetary and ecological awareness and consciousness in teaching, learning, and educational technology. While *hopepunk* is focused on (re)widening our futures, *solarpunk* aims to rewild the perspectives, relationships, and practices around educational technology in higher education. Here, solarpunk can be viewed as hopepunk's eco-conscious sibling: it puts forward hope-based stories and ideas for eco-centric planetary design, rejecting futures and technologies which are not in harmony with planet-wide futures. Both hopepunk and solarpunk stand in contrast to their somewhat more grimdark (neon dystopic) older sister – *cyberpunk* – focusing on 'high tech – low life' and encumbering social problems in a dystopic future (Johnson, 2010):

> *Where cyberpunk explores problems tackled by an ever-accelerating arms-race of digital technologies, solarpunk points toward a world where problems are solved in the most carbon-efficient and environmentally harmonious way possible [...and] offers worlds where people are learning to live in balance with one another in the process of learning to live in harmony with the world. (Johnson, 2010, unpaged)*

While cyberpunk produces grimdark punk futures for educational technology, solarpunk conjures hopeful, forward-looking, counter-dystopian punk futures (Grzyb, 2017; Johnson, 2010; Ulibarri, 2018): "Where cyberpunk stories, such as *Blade Runner*, persist in a permanent, rainy darkness, solarpunk narratives feed on the warmth and beauty of a sunny day […] In the darkness of climate anxiety, solarpunk is a beam of hope showing the way toward a liveable future" (Johnson, 2010, unpaged).

Solarpunk thus resists contemporary foci on literary and aesthetic pessimism, the dystopian and grim futures, by suggesting future pedagogical, societal, and academic possibilities (Reina-Rozo, 2021) to transform and rewild higher education institutions (Alexander, 2023). Where the logic of capitalism in higher education and educational technology centers on growth, often at the expense of the well-being of humans or animals, solarpunk embodies an ethic of compassion and temperance in economics. Here, solarpunk asks us: How do we engage the diverse ways of knowing, being, and doing of entities such as mountains, pine trees, sparrows, or brooks in, with, or through educational technology in ways that respect and teach for planet-wide interrelationships between the human and the more-than-human without subordinating the last to the first? How does educational technology engage and move towards a design agenda that embodies a deeper understanding of this relationality needed for our collective re-wilding of planetary futures for all? Furthermore, how can we position higher education and educational technology as a planetary interface that moves us from *ego-centric* utopian imagination to *eco-centric* utopian imagination and more solarpunk planet-wide futures? However, what does such a movement beyond anthropocentric utopias mean and implicate for educators and institutions of higher education? Levitas argues that we need to:

> *… push forward to a less cautious and more imaginative engagement with possible futures, in which utopia is understood as a creative form of sociology, building on the strengths of the discipline which include its focus on institutions, its systemic holism, its attention to subjects and agents as well as structures and processes. Above all, we need to understand utopia as a method rather than a goal, and therefore as a process which is necessarily provisional, reflexive and dialogic. (Levitas, 2013: 149).*

Highlighting regenerative cultures, systemic holism, and attention towards both structures and processes in imagining social, existential, and ecological utopias, Levitas draws attention to envisioning futures that extend beyond human subjective experience. Here, in the present article, we argue that aiming for educational futures through planetary design and solarpunk utopian imagination is something to strive for in examining and understanding the entanglements and dialogic relations between, e.g., human, non-human, heritage, ancestral voices, future generations, species, and ecosystems (Fawns, 2022; Wegerif, 2022) – and worthwhile to pursue in developing planet-wide pedagogies and solarpunk futures of higher education. It resonates with a potential ethical imperative of approaching higher education both holistically, responsibly, and towards de-centring the Anthropocene:

> *This ethical vigilance ranges from a refusal to render objects as inert, needing humans to give them agency and animacy [34], to interrogating ways technology (and design) are shaping lives, futures and ecologies. We note that more-than-human participation – systems, knowledges, practices – is often featured in reference to human-centred concerns: we care because these more-than-human things are made by us and affect us. (Akama et al., 2020: 2).*

Akama et al. (2020) frame the interdependence of plural ways of knowing, the agency of all objects, and alternative caring relations resonating with recent expansions of higher education pedagogies as *matters of mattering* through truly relational approaches and ways of being (Gravett, 2023). Thus, envisioning futures beyond the Anthropocene and approaching it with speculative design, solarpunk attitudes, and utopian imagination may re-sensitize us towards an ecological, planetary approach with humans playing a part but not the leading part in solarpunk dreaming of planet-wide preferable futures.

Solarpunk utopian educational technology for, in, with, and by the world

Above, we have conceptualised, theorised, and sketched how utopian imagination, planetary designs, and speculative futures might relate, connect, and build upon each other to create a design agenda for (re)widening and (re)wildening higher education. Such an agenda also impacts and transforms the domain of educational design and technology. As well as confronting our practices by asking us how educational design and technology can be enacted in planet-wide solarpunk ways towards more preferable futures for all. In the following paragraphs, we aim to connect educational technology with these *more-than-human* design approaches to form a design agenda for educational technology for, in, and with the world.

The design agenda calls for developing educational technology approaches and practices that embrace solarpunk and planetary perspectives within higher education. Through such an approach, educational technologies can support higher education developers and teachers in becoming hopepunk or solarpunk people- and planet-wide agents of change (see Fig. 3) by "creating conditions for students to grow into responsible

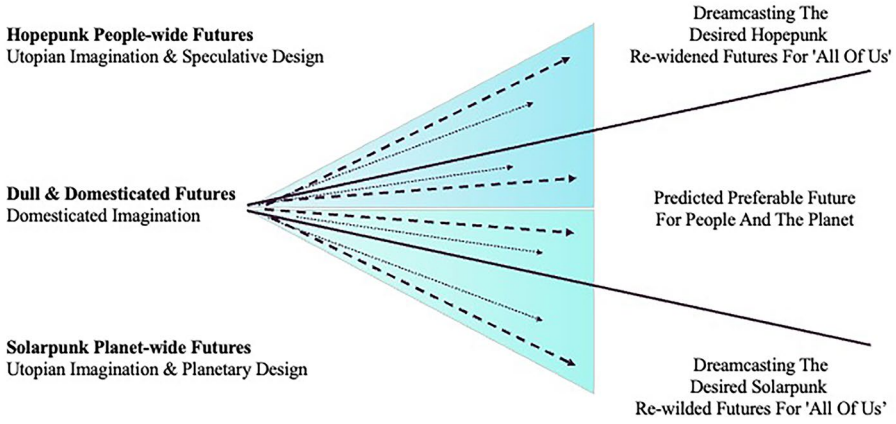

Fig. 3 The domain of preferable/desired hopepunk and solarpunk futures that we might imagine within higher education. The pathways close to the middle of the cone are forecasted futures based on domesticated utopian imagination. In contrast, the pathways unfolding at the top are fuelled by utopian imagination with speculative design and lead us into hopepunk people-wide re-widened futures. The pathways unfolding in the bottom are fuelled by utopian imagination with planetary/pluriversal design and lead us into solarpunk planet-wide re-wilded futures

designers of future technologies and play a role in driving adaptation towards more sustainable futures" (Hansen et al., 2022, p. 577).

In general, there is a need to question current educational technology paradigms and approaches, listen and respond to planet-wide thinking, and include larger groups of people and species, past and future generations of all living beings – and even mountains and rivers (Friedman & Hendry, 2019; Hansen et al., 2022). Today, educational technology and design often happen within the hegemony of *ego-centric* Western and privileged positions, heavily affecting how we think about educational technology's role in people's lives, the planet, and the future(s). A change in thinking, doing, and being is needed to re-perceive, re-widen, and re-wild the what, how, and who of educational technology and its post-digital complexities with the world, resembling the *entangled pedagogy* proposed by Tim Fawns wherein elements co-constitute each other with agency configured and re-configured between all participants (Fawns, 2022).

Explicating how this might look, the article adopts and adapts similar work done within "More-than-Human Research Practices in HCI – A Scoping Review" (Eriksson et al., 2024). The review is based on 34 papers with more-than-human perspectives, taking different stances and approaches. Overall, the review shows that adopting more-than-human perspectives (including planetary design, solarpunk approaches, utopian imagination, and speculative design) to technology and design spans a wide spectrum. In the context of higher education and educational technology, this spectrum can be re-contextualised and framed into four different higher education *orientations*:

1) Higher education for the world through educational technology.
2) Higher Education in the world through educational technology.
3) Higher Education with the world through educational technology.
4) Higher Education by the world through educational technology.

Together, the four orientations denote a 'normative shift' in perspective from *possible* (that-which-could-be) to *preferable* (that-which-ought-to-be) planet-wide futures. This perspective confronts educational technology by asking it to imagine, explore, integrate, and enact opportunities for hopepunk and solarpunk interactions that extend and re-orient current thinking and practice within educational technology and higher education (Spors et al., 2023). According to Eriksson et al. (2024), the combined field of solarpunk, planetary design, and more-than-human futures is a new field within Human-Computer-Interaction (first paper from 2017) - and undoubtedly even more so when it comes to educational technology and higher education. As a case in point, none of the included publications in the scoping review on more-than-human Human-Computer Interaction addressed the domain of more-than-human education (Eriksson et al., 2024). The below sections will, therefore, in a beginning way, explore the four orientations constituting a preliminary design agenda for re-widening and re-wilding higher education with utopian imagination through solarpunk attitudes, more-than-human thinking and planetary design.

Higher education for the world through educational technology: an ecological university encompassing all of us

Within this orientation, educational technologies for the world exemplify our capacity to enact *relations of care* that extend beyond the ego-centric and encompass the broader world. It underscores the critical role that educational technology plays in redefining our collective ecological engagement through education *for* the world. Here, educational technology can engage the design agenda by integrating and promoting ecological teaching and learning toward more sustainable worlds and just futures. This perspective represents a vision of accessible, inclusive, and world-caring higher education locally and globally. Leveraging educational technology can help higher education integrate and enact education for the world as well as address the educational needs of a diverse and interconnected global society. However, pressing concerns signal immediate steps needed toward planet-wide educational institutions.

If we view for-profit educational technologies as the tamed realm of education and technology, these 'for the world' actions move us further from that domestication. They mitigate extreme overconsumption and strive for planetary sustainability. While some institutions have adopted these practices, they have yet to venture into the truly innovative and untamed territory advocated for in this article. Rewilding higher education through educational technology is about caring for the world through regeneration, renewal, and reshaping relations, which involves reflecting on how we might educate future generations in ways that are 'for all of us as well as for the whole world.' Here, educational technology should be used in ways that bring about the potential for a planet-wide university and higher education for the world. Macgilchrist (2021) argued that educational technology practices might involve co-creating speculative designs inspired by wild perspectives and exploring alternative technologies in education spaces. She further discussed that working towards radical approaches to educational technology is connected to *critical utopias* that avoid naïve optimism. They are developed with an awareness of historical and geopolitical injustices to counteract political pessimism by embodying collective hope. Here, rewilding educational technology points towards processes of deceleration, degrowth, restoration, and desires of regeneration (Wahl, 2006) that should be visible in both how we approach and practice educational technology.

Higher education in the world through educational technology: an engaged university sinking roots and evolving a crown in the world

Sometimes higher education is not 'just' for the world, but also *in* the world. From this orientation, educational technology is used to bring higher education *into* the world and enable teaching and learning to be practiced *in* the world. With a growing awareness of the climate crisis and the environmental impact of technology, the focus is on identifying and incorporating technological solutions and systems that can make education matter in the world as it unfolds. Ofer and Alistar (2023) emphasise the potential of this perspective in enabling us to take action in the world – in ways that are *for* the world – through technology as a tangible and sensory experience, creating life as shared experiences in the world within the realm of higher education.

Ofer and Alistar (2023) draw on, e.g., Wakkary (2021), who encourages a design approach that extends beyond human-centered design, emphasising a collaborative design perspective. He also suggests the development of repertoires, which are actions

or tools that designers can employ to represent non-human elements better. This perspective thus resonates with the challenge of shifting the focus away from ego-centric design practices and utilising educational technology to enact higher education that is practiced *for* the world while being *in* the world.

Another perspective to approach in rewilding higher education and educational technology is the exploration of *ecotones*. Weller (2022) proposes a novel perspective on rewilding educational technology by considering the concept of ecotones, transition zones, and boundaries between distinct biological ecosystems, e.g., the marshland between dry and wet biomes. Typically, these areas exhibit a higher diversity of species, a phenomenon referred to as the *edge effect*, wherein richer and more diverse populations and communities can be observed. These can be related to the transitional phase of higher education striking root in the broader society/world. Rewilding could play a role in this context, making the technological ecosystem of higher education institutions more closely rooted in the great expanse of the World Wide Web, as mentioned by Weller (2022). Moreover, a more flexible and loosely structured educational technology system might not optimise students' use of time, their performance towards desired grades, or the general robustness of the educational technology systems (Weller, 2022, pp. 37–38).

In relation to Wellers' application of ecotones, Ryberg et al. (2021) argue that post-digital thinking and theorising accentuate distinctions between digital and analog – or material and real. From a post-digital stance, such distancing is reductive and problematic. As such, they also discuss the concept of ecotones as a contribution to the field and how ecotone perspectives display relevant entanglements between education, technology, and the world, bearing fruit in the form of affective, conceptual, tensional, diverse, generative, and innovative properties (Ryberg et al., 2021, pp. 421−420). The orientation leads us to embrace ecological agendas and planetary concerns while being *in* and *of* the world and committed to nurturing relationships and dependencies between different species, sites, realms, and futures in the world. The overarching goal is to prompt educational technology to awaken and sensitise higher education, extending its focus beyond human interests and needs to take root in the broader, untamed natural world. This approach represents a revitalisation and rewilding of higher education, characterised by hopepunk practices and utopian imagination, to forge paths and processes towards better alternative futures for all in the local and global contexts they think, act, and live in. Here, human well-being is intricately intertwined with the well-being of the entire world we inhabit.

Higher education with the world through educational technology: a worlding university of expanding planetary entanglements

This orientation seeks to nurture more symbiotic relationships between humans and the environment, reflecting eco-centric entanglement and pointing towards a significant contribution to the *pluriversal design* agenda proposed by Escobar (2017). This perspective delves into how educational technology can aid us in establishing solarpunk relationships *with* the more-than-human world and *through* technologies. It promotes connections and interactions within higher education built upon eco-centric entanglements through planetary design. Within this orientation, we can explore educational technologies that employ participatory approaches involving non-human stakeholders

and leverage non-human storytelling to cultivate utopian imaginaries that transcend the human perspective. This holistic and reflexive approach is designed to enrich the landscape of higher education, as Nijs et al. (2020) highlighted.

In this context, integrating solarpunk practices with educational technologies catalyses the development of more desirable human relationships with the more-than-human world through educational technologies. This not only advances the evolution of educational technology but also reorients our own position from being *in* the world to being *with* the world. This is higher education as co-habitation with the world, emphasising the need for harmonious inter-species being and sustainable planetary co-existence. Haraway (2016) explores the idea of *kinship* - the integration of "diverse practices and ways of knowing for conjoined human and other-than-human becoming and exchange" (Haraway, 2016, p. 153). The idea of kinship, fellowship, and the world as a planet-wide partner in higher education can help guide us towards more solarpunk approaches to educational technologies where we design, implement, and practice educational technology to promote being *with* the world. That is, it supports humans in living together with the world in respectful and appreciative ways where the planet is not positioned as something we can use as a resource or material for the future. Instead, the world is something we must ally to design new ways of life – also when it comes to how we think about and practice educational technology.

An example of this approach is Sheikh et al. (2021), which helps us consider how educational technologies can be employed to support higher education in the world by incorporating and visualising planetary and multi-species agencies and perspectives. The paper proposes a multi-species technological agency that supports designers and developers to move beyond egocentrism and 'the human' perspective towards multi-species assemblages wherein the planet is positioned as equal partners and participants.

To enable us to think and act with the world, Pollastri et al. (2021) put forward a five-point action plan that can be transformed into a solarpunk design agenda within the field of educational technology: (1) Shift the perspective from ego-centric to eco-centric that necessitate we design with the world; (2) Visualise planetary entanglements through educational technology and co-create higher education new solarpunk knowledges in higher education; (3) Position educational technology as a site for practicing higher education with the planet; (4) Re-imagine and re-configure higher education as a context for making preferable futures with a multi-species world; (5) Establish higher education as a transformational site for transitioning from ego-centric *designing for* to eco-centric *designing with*.

Higher education by the world through educational technology: a planetary university exceeding the human

The fourth and last orientation is probably also the most alien and esoteric of the orientations. And, by far, the most nascent. It asks of us the almost unimaginable. To imagine higher education as something not done by humans but created *by* the world. An illustrative case in point of higher education *by* the world *through* educational technology is the work of Livio and Devendorf (2022), who have introduced the concept of *eco-technical interfaces*. These interfaces open the possibility of envisioning non-human entities as the 'creators' of higher education by leveraging educational technology. This mind-bending approach has the potential to enable us to imagine planetary forces and entities

as the post-human creators and architects of our world, including higher education; To see the world and our learning as something done to us by the world and not something we are the architects of.

Methods like Anna Tsing's *art of noticing* (2015) can help us to shift away from our human orientation towards multi-sited, multi-species, and multi-sensory exploration of design and technology as something emanating *from* the world. One way forward would be to explore more symbiotic relationships between the world and us through educational technologies. Not as us entering a symbiotic relationship *with* the world, but as the world *worlding* us, making us – and higher education – part of its worldliness. In this framework, the natural world takes the lead, 'speaks first', initiates the discourse, and leads us toward novel, eco-centric, beyond-human outlooks regarding educational technology and higher education.

Conclusion

Through the notion of hopepunk and solarpunk, we have advocated for a shift in the domains of higher education and educational technology towards wider and wilder futures, focusing on utopian imagination, speculative design, and planetary thinking. This requires a shift in our perspectives and relationships with the world around us and a re-orientation of higher education as well as educational design and technology. The climate crisis and looming spectre of a planetary catastrophe has led to the emergence of various educational approaches, such as *eco-pedagogies*, *post-digital* and *post-human* thinking, and a *planetary turn* in design.

The design agenda drafted here can be seen as a response and potential strategy to address this (see Fig. 4 below). It is thus the article's scholarly contribution to extend, reconfigure, and propose new ways of thinking about the interplay between higher education, educational technology, and utopian futures that deeply emphasises a planetary design perspective permeated by hopeful, just, and relational thinking. While there is a consensus among higher education scholars regarding the necessity for change, the scope and vision of this change are still emerging. We propose that higher education thinkers and technologists 'dare to dream' with hopepunk and solarpunk attitudes through a *de-domestication* of the utopian imagination. Wide and wide utopian

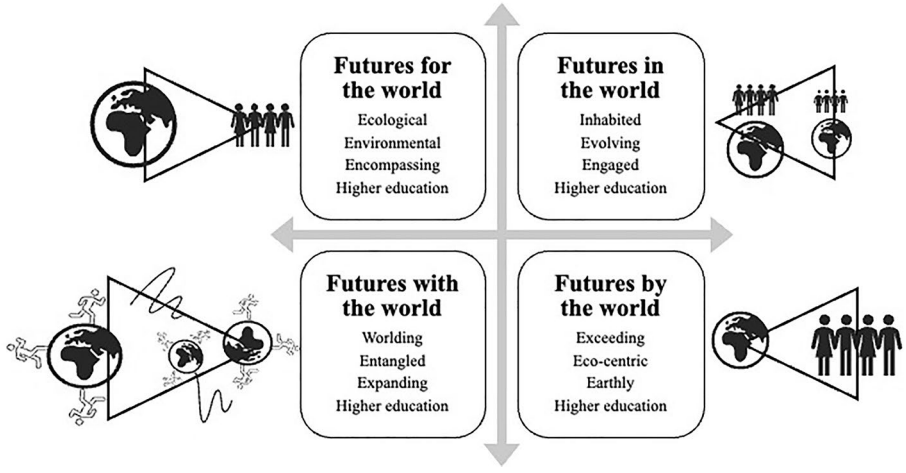

Fig. 4 The four-grid model for solarpunk utopian educational technology for, in, with and by the world

imagination encourages a rebellious perspective where higher education is rewidened and rewilded by speculative and planetary design. By adopting a more holistic and optimistic approach, higher education institutions can better prepare for future challenges and create more preferable and desirable futures for both people and the planet.

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