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Universities, polycrisis and regional redistribution
The need for radical transformation

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Abstract As humanity faces a worsening polycrisis, the need for systemic change in society is becoming more widely recognized. This time of increasing disruptions of all kinds comes with new opportunities for imagining societal transformation. With the accelerating climate crisis and growing economic precarity, higher education institutions are underleveraged infrastructure with untapped potential to facilitate, and to contribute to, social, economic, and spatial change for a more equitable and stable future. This paper argues that restructuring universities, including their spatial distribution and their public financing, is an essential part of systemic societal transformation. Instead of reinforcing universities as entrepreneurial, financialized organizations that concentrate wealth and power in well-off regions and urban centers, higher education could be restructured to prioritize equity, justice and the public good. A radical spatial and financial redistribution of higher education institutions would entail expanding and reconceptualizing universities' engagement with marginalized and vulnerable communities and regions. A more equitably dispersed spatial distribution is required for universities to support communities and become a resource for transformative regional economic redistribution. Building on a review of diverse literatures on the purpose and structure of higher education, we argue that a restructuring of the spatial distribution of universities is necessary so that all communities have access to resources within regional campuses. Just as many countries have invested in a regionally distributed system of public libraries to be a resource for communities, new investments in the spatial distribution of higher education institutions could provide regionally-specific resources for communities and households in

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climate vulnerable regions. This spatial redistribution and restructuring would allow universities to respond to the polycrisis by supporting, catalyzing, and facilitating the co-design and co-creation of regionally appropriate transformations.

1 Introduction

Humanity is facing a worsening polycrisis (Tooze 2022a). With the accelerating climate crisis and growing economic precarity deepening vulnerabilities among communities around the world, it is increasingly clear that incremental improvements within the current structure are inadequate and insufficient (Stephens 2020). Addressing the multiplying vulnerabilities of the polycrisis requires radical transformation and dramatically different institutional structures.

The higher education sector includes a set of institutions that could be structured differently to better respond to the polycrisis. Restructuring universities is a critically important area of institutional innovation (Stephens 2024). Higher education institutions are underleveraged infrastructure with untapped potential to contribute to and facilitate social, economic and spatial change for a more equitable, just and stable future (Kinol, Miller et al. 2023). Despite the increasing financialization and community disconnection in the higher education sector, the potential of universities to contribute to the public good is being increasingly recognized in many discussions about social change, sustainability and the future of higher education (Loorbach and Wittmayer 2023; McGeown and Barry 2023). Financialization refers to the increasing power of finance in society, and the financialization of universities has made higher education institutions more reliant on processes of commodification of knowledge, real estate markets, revenue maximization, proliferation of exploitative labour practices, and increased corporate influence, while students are being recast as consumers. Under financialization, the public mission of higher education is being threatened and many higher education institutions have become beholden to private interests, corporate partnerships and the preferences of wealthy donors and politically powerful people and organizations (Hiltner et al. 2024).

This paper argues that restructuring universities, including their spatial distribution and their public financing, is an essential part of systemic societal transformation. Instead of reinforcing universities as entrepreneurial, financialized organizations that concentrate wealth and power in well-off regions and urban centers, higher education could be restructured to prioritize equity, justice and the public good. This paper explores this potential by envisioning a paradigm shift in the societal expectations of higher education aligned with the principles of climate justice. Climate justice is an inclusive term increasingly used to describe transformative structural change toward a more equitable, healthy, climate-stable, and economically-just future (Stephens 2022). A shift toward a reconceptualized 'climate justice

university' (Stephens 2024) recommitted to the public good is proposed and the associated spatial and financial redistribution is explored.

The case is made here for an interlinked financial redistribution and spatial redistribution within the higher education sector. To expand universities' institutional engagement with marginalized and vulnerable communities and regions, a more equitable and dispersed spatial distribution is required. In other words, for universities to serve communities and become a resource for transformative regional economic redistribution, financial innovation in higher education needs to be coupled with a spatial distribution of higher education infrastructure and investments. Publicly funded universities with a mission to advance climate justice principles are needed for society to address the multifaceted and interconnected challenges of the polycrisis. This holistic mission and approach is essential because continuing to focus narrowly on specific "solutions" targeted toward isolated "problems" is unlikely to result in the transformative change required to address the interconnected polycrisis. To be more responsive to the needs of society, public funding is critically important for climate justice universities so that higher education is not reliant on private interests, corporate profits, and wealthy donors.

Recognizing that entrepreneurial, financialized universities have been opening new campuses in economically prosperous centers and regions, we suggest a restructuring of the spatial distribution of universities so that all communities have access to regional campuses. Just as many countries have invested in a regionally distributed system of public libraries to serve as a resource to communities, new investments in the spatial distribution of higher education institutions could provide regionally-specific resources for communities and households in marginalized and climate vulnerable regions. We argue that this restructuring would allow universities to respond to the polycrisis by supporting, catalyzing, and facilitating the co-design and co-creation of regionally appropriate transformative change.

While many universities are currently making efforts toward expanding community engagement (Mtawa and Wangenge-Ouma 2022; Riccio et al. 2022), the ideas discussed here expand beyond mainstream resources for academics to consider their individual engagement beyond the campus (Beyond the Academy 2022). Recognizing that many individual students, staff, and faculty sustain empowering relationships with local communities, this paper inspires a reconsideration of radically different institutional-level relationships and spatial reconfiguration of higher education. Building on, and going beyond, the emerging literature on the role of universities within 'regional transition paths towards sustainability' (RTPS) (Radinger-Peer and Pflitsch 2017) and in 'regional sustainability transitions' (RST) (Pflitsch and Radinger-Peer 2018) our paper argues for a radical transformation of universities towards climate justice.

The paper is organised as follows. First, Sect. 2 explores linkages among the polycrisis, regional economies and climate justice. It highlights the fact that the climate crisis plays a critical role in the unfolding polycrisis and it is exacerbating spatial injustices and economic disparities at various geographical scales, including the regional scale. This section also highlights the need for a climate justice approach to be mobilised in order to address these injustices and disparities. Then, Sect. 3 reviews the links between regions and universities. In doing so, we specif-

ically highlight the concepts that aim to capture the contribution of universities to (regional) climate action. We then argue that while useful, these concepts overlook the fact the higher education sector is being increasingly financialized, and that the process of financialization is a powerful constraint limiting climate action within higher education. We suggest that for universities to play a transformative role in addressing the climate crisis and helping society to shift towards more equitable, healthy, climate-stable futures, they themselves need to be transformed. We contend that climate justice provides a framework to guide and orient a range of transformative changes within higher education. This transformation involves a radical shift from a 'financialized university' to a 'climate justice university'.

Key features of the 'climate justice university' are introduced in Sect. 4, focusing on its spatial and regional aspects. In Sect. 4.1 we argue that a radical spatial and financial redistribution of higher education institutions is needed. This would entail the expansion and reconceptualization of universities engagement with marginalized and vulnerable communities and regions. In Sect. 4.2 we highlight the need for climate justice universities to facilitate new kinds of regenerative, local community-based relationships. Section 4.3 elaborates on the idea of spatially-distributed universities, using the model of public libraries to demonstrate the conceptual shift being proposed. Section 4.4 addresses the challenges of implementing climate justice universities.

The concluding Sect. 5 emphasizes that a more equitably dispersed spatial distribution is required for universities to support communities and become a resource for transformative regional economic redistribution. This restructuring would allow universities to respond to the polycrisis by supporting, catalyzing, and facilitating the co-design and co-creation of regionally appropriate transformation toward more regenerative local economies.

2 Polycrisis, regional economies and climate justice

The concept of "polycrisis" has been recently popularised by Adam Tooze (Tooze 2022a, b). The term refers to numerous intersecting crises, happening at the same time, often magnifying each other so the overall impact is greater than the sum of any of the individual crises. The crises that Tooze identified as contributing to the polycrisis back in 2022 included a new COVID variant, war, the risk of nuclear escalation, inflation, the risk of a recession, a food crisis, and the worsening climate crisis (Tooze 2022b). The interaction among the different elements contributing to the polycrisis leads to escalation. So, Tooze argues that a polycrisis "*is not just a situation where you face multiple crises [but] where the whole is even more dangerous than the sum of the parts*" (Tooze 2022b). The dangerousness of the situation threatens the very existence of humanity. While each individual crisis is resulting in significant human suffering, we argue that the rapid acceleration of the climate crisis plays a particularly critical role in the unfolding polycrisis.

Indeed, the climate crisis is exacerbating many other crises. Growing climate chaos is causing disruptions of all kinds from food production to transport systems, from immigration patterns to energy distribution, to economic inequities and finan-

cial stability. Climate instability is feeding inflation (e.g. via increasing food prices) and political instability resulting in hunger, migration, and war. Climate impacts, including heatwaves, wildfires, rising sea levels, extreme weather events, and spread of new diseases, are already resulting in misery to millions and deepening global health crises around the world. Climate-induced devastation is having profoundly uneven impacts, both socially and spatially, resulting in large-scale injustice. Different people and places are exposed to vulnerabilities from the polycrisis in general—and from the climate crisis in particular—in different ways.

With regard to spatial distribution, the climate crisis is exacerbating spatial inequities at all scales, from global to local. At the global scale, the Global South is being harder hit, despite having contributed much less and having fewer resources to adapt than the Global North (Hickel 2020; Dafermos 2023). Within the Global North, the most climate vulnerable communities and regions are also the communities and regions with less resources to adapt. Within the European Union (EU), for example, poorer countries in the southern European periphery are suffering more than their northern counterparts (Mathiesen, Oroschakoff et al. 2021). Within individual countries, different regions are being impacted differently with very different adaptive capacities; among different European regions poorer regions are being harder hit (Rodríguez-Pose and Bartalucci 2023). Similar patterns are also clearly emerging at the local scale; communities and neighbourhoods are experiencing climate impacts and climate policies differently—again, poorer people and places are suffering more. The climate crisis is already exacerbating, and will continue to exacerbate, spatial injustices.

We argue that addressing the spatial injustices and geographic disparities being exposed, and exacerbated, by the climate crisis requires a *climate justice* approach. Climate justice prioritizes reducing the inequitable vulnerabilities to climate impacts and focuses climate action and climate investments on redressing the injustices by reducing marginalization, exploitation, and oppression (Sultana 2022). Climate justice includes a commitment to transforming economic and political power because from a climate justice perspective the climate crisis is a symptom of a larger problem of extractive systems that are concentrating rather than distributing wealth and power among a select few. By focusing on power and the need for transformative structural change, climate justice can be applied at multiple scales from the institutional, to the community-scale, to a region or state, and globally. Climate justice includes multiple kinds of justice including *procedural climate justice*, which is about fairness in decision-making processes, *distributive climate justice*, which is about equity in the distribution of harms, benefits, and impacts, *recognition justice*, which focuses on the equitable representation particularly of marginalized groups, and *intergenerational justice*, which favours fairness for future generations (Newell, Srivastava et al. 2021). Fundamentally, climate justice prioritizes equitable distribution, which requires paying attention not just to the science of climate change, but also to the unequal and disproportionate impacts of climate change among different households, communities, and regions of the world. In this way, the concept of climate justice contrasts with 'climate isolationism' (Stephens 2022), the more mainstream approach to climate action which, problematically, views the climate crisis as a narrow scientific issue in need of technological solutions.

In terms of spatial considerations, climate justice is often evoked at the global scale with reference to the Global South and Global North (Robinson 2018). It propels the issues of 'loss and damage' and climate reparations to the forefront of international climate negotiations (Gibson 2023). But we want to emphasise that climate justice also applies to the regional scale. Regional disparities in both climate impacts and resources to respond to an increasingly precarious future require innovative new mechanisms to advance *spatial* justice, including a more equitable regional distribution of resources and investments.

It is worth noting that the concept of 'spatial justice' has long been discussed in geography and beyond (Soja 2010). We argue that the climate crisis expands the relevance of the concept of spatial justice because different regions are being affected differently. To guarantee that "no person and no place are left behind"—to echo the EU Green New Deal approach (European Commission 2023)—new public investments in distributed regional infrastructure are urgently needed. Restructuring the distribution of higher education institutions provides one vital mechanism for investing in marginalized regions and communities. To support societal transformation toward a more just, equitable and climate-stable future for all, however, higher education institutions need themselves to be transformed—including their spatial distribution across regions. This requires reconceptualizing the role of universities in regions, a topic discussed in the next section.

3 Regions, universities, and financialization

This section first examines the role of universities in their regions in general and then in connection to transformative climate justice in particular. Situating this in the context of increasing financialization of higher education, we argue that financialization is hampering transformative climate justice actions in universities and that a radical transformation away from the 'financialized university' is needed.

The examination of the connections that universities have with the regional area in which each higher education institution is located has been a long-standing interest of academic literature (Chatterton and Goddard 2000; Uyarra 2010; Trippl, Sinozic et al. 2015; Benneworth and Fitjar 2019). In their seminal work, Chatterton and Goddard (2000) highlighted the importance of higher education institutions responding to regional needs both through their core functions of teaching and research, as well as a 'third role'—a 'community service' to civil society (Chatterton and Goddard 2000). They argued that it is this 'third role' that embeds universities in the region more than the other two roles (ibid, p. 489) and that regionally-engaged universities can become "a key asset and powerhouse for [regional] economic development" (ibid, p. 475).

Subsequently, important efforts have been made to understand and classify various regional roles of universities and modes of engagement between universities and regions. In her influential paper, Uyarra distinguishes between the university as a knowledge 'factory'; the relational university; entrepreneurial university; systemic university and the engaged university (Uyarra 2010). Trippl, Sinozic and Lawton Smith have, for their part, identified four different models of university-regional

interaction: the entrepreneurial university model; the regional innovation system (RIS) university model; the 'mode 2' university model; and the engaged university model (Trippl, Sinozic et al. 2015). One way or another, universities are seen as strategic agents in shaping regional development (Nieth and Radinger-Peer 2023); as contributors to regional economic growth (Benneworth and Fitjar 2019); and as actors in regional innovation strategy processes (Fonseca and Nieth 2021).

Attention within the literature is often placed on university-industry collaborations or, even more frequently, on the interactions between universities, industry and government—the so-called 'triple helix' (Etzkowitz and Leydesdorff 1998). For Etzkowitz and Leydesdorff, universities have been undergoing a 'second academic revolution' by adding economic development as one of its roles, alongside teaching and research. As part of this process, the emerging 'entrepreneurial university' (Clark 1998) has 'capitalization of knowledge' at the heart of its new mission and is becoming "an economic actor in its own right" (Etzkowitz and Leydesdorff 1998, p. 197). The emphasis on the importance of knowledge for economic development has been part of a wider narrative that has been promoting the idea that advanced economies are becoming knowledge-based or knowledge-driven (Burton-Jones 1999; Leadbeater 2000; Antonelli and Fassio 2016).

Some have argued, however, that in the face of various societal challenges, it may be worth expanding the range of actors beyond the 'triple helix'. A 'quadruple helix' approach thus involves not only the university, businesses and government bodies, but also civil society (Goddard and Kempton 2016). Consequently, the 'civic university' concept highlights the responsibility of universities to contribute to the public good and to maximise their contribution to civil society (Goddard, Hazelkorn et al. 2016; Goddard and Kempton 2016). The civic university considers its 'third role' not as an inconvenient add-on to its teaching and research roles, but sees its community engagement as an integral part of its mission, fully integrated with teaching and research. Such a conceptualisation of the university is helpful in the context of the deepening climate crisis—and climate change is duly mentioned by Goddard and Kempton as one of the complex societal challenges that the civic university would address.

Indeed, with worsening climate chaos, the voices calling for universities to engage with the climate emergency are getting stronger (Kinol, Miller et al. 2023; Loorbach and Wittmayer 2023; McGeown and Barry 2023). For some authors, the concept of the 'engaged university' allows universities to transform themselves from economically-orientated 'entrepreneurial universities' that compete with each other to places emphasizing social, environmental and cultural engagement in their respective regions (Çınar 2022). Going beyond technological innovation (a characteristic of the 'entrepreneurial university' often associated with prosperous regions) Çınar has emphasised the value of the 'engaged university' for peripheral regions and highlighted the need for other types of innovation, including social innovation (Çınar 2022).

Others—applying Kate Raworth's principles of 'doughnut economics' (Raworth 2017) to academia—have proposed the concept of 'Doughnut University' as a way forward (Urai and Kelly 2023). Urai and Kelly have argued that universities "are ideally positioned to cultivate the transformative societal, economic, and political change required to address the climate and biodiversity crisis" (Urai and Kelly

2023, p. 11), but are currently failing to do so. They propose a number of steps that would move us away from 'universities as business' towards the 'academic doughnut'; and from universities as isolated ivory towers to institutions embedded in society and planet (Urai and Kelly 2023). The principles of 'academic doughnut' also dictate that the "pervasive marketization of universities [that] emphasizes growth" and competition should be abandoned and universities should be come "growth-agnostic" (Urai and Kelly 2023, p. 9).

Parallel to this, there has been literature emerging that examines the role of universities within 'regional transition paths towards sustainability' (RTPS) (Radinger-Peer and Pflitsch 2017) and in 'regional sustainability transitions' (RST) (Pflitsch and Radinger-Peer 2018). These authors have also highlighted the potential of universities to be 'change agents' for sustainability, while emphasising that processes involved in performing this role are place-specific and require 'boundary-spanning capacity' on the part of universities.

While the above concepts and approaches are both well-intentioned and insightful, they overlook one important factor—the fact that the higher education sector is being increasingly subjected to financialization (Engelen et al. 2014; Eaton et al. 2016; Gleicher 2017). Financialization refers to the growing power of finance in society and economy (Krippner 2005; Van der Zwan 2014; Mader et al. 2020). With regard to universities, the financialization of the state has resulted in financialization in higher education (Fig. 1). With reduced public spending, higher education is increasingly financialized in terms of how the sector engages with financial markets, real estate markets, commodification of knowledge, and a constant focus on revenue maximization. Other features of financialization include exploitative labour practices, corporate influence and students being treated as consumers rather than citizens. Although financialization is occurring all over the world, it is important to
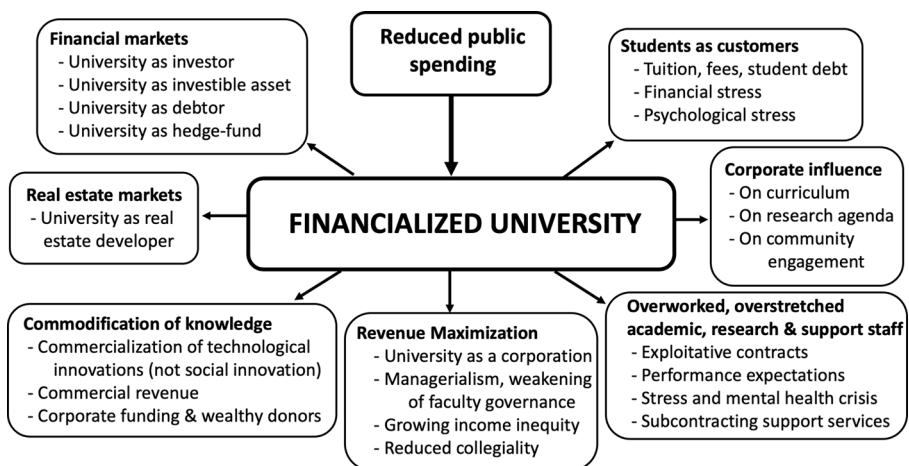

Fig. 1 The Financialized University. With reduced public spending, higher education is increasingly financialized in terms of financial markets, real estate markets, commodification of knowledge, revenue maximization, exploitative labor practices, corporate influence and students as consumers. Adapted from Stephens (2024)

recognize that financialization can be seen as a set of 'common trajectories' unfolding within an 'uneven and variegated financialization' (Aalbers 2017); this means that financialization manifests itself differently in different national and regional contexts. The degree to which universities are financialized in different places is variable. Some of the most financialized universities can be found, unsurprisingly, within the financialized economies of the US (Eaton et al. 2016) and the UK (Hiltner et al. 2024). Elite private universities in the United States have billion dollar endowments, and it has been reported that some spend more on fees for hedge fund managers to grow their endowments than they do on tuition assistance and fellowships for students (Stephens 2024, p. 163). Meanwhile, Nordic countries in Europe (Norway, Finland, Denmark) remain committed to publicly-funded tuition-free universities (Kallo and Välimaa 2025; Stephens 2024).

In addition to financialization and the associated competitive higher education market, the higher education sector has been exposed to various other processes and structures that prevent transformative responses to the polycrisis; these include neoliberalism, academic capitalism, New Public Management, elitism, neocolonialism etc. (e.g. Barry 2011; Broucker and De Wit 2015; de Boer et al. 2007; Hüther and Krücken 2013; Lorenz 2012). These processes are directly and indirectly linked to financialization; financialization exacerbates and expands negative impacts of these other structural features. The degree to which individual universities fit the model of a 'financialised entrepreneurial university' varies in different countries or regions. However, the effects of financialization on higher education are growing in higher education systems throughout the world (e.g. see Engelen et al. 2014 for a case study of the University of Amsterdam in The Netherlands, or Ó Maonaigh et al. 2025 for the Irish case).

Far from becoming the key economic players driving the 'knowledge economy' (as envisaged by the knowledge economy enthusiasts), many universities are increasingly fighting for their own economic survival in the competitive neoliberal financialised economy. Reduced public funding makes universities increasingly financially vulnerable, as they are progressively subjected to the discipline of market forces and vagaries of financial markets (Fig. 1).

We emphasize here that the processes of financialization are fundamentally misaligned with universities' potential to contribute to systemic transformative social change needed to address the climate crisis and the polycrisis. This is because the multiple impacts of financialization severely undermine the ability of universities to address structural changes. For example, cash-strapped, underfunded universities are more susceptible to accept funding and donations from fossil fuel interests (Franta and Supran 2017; Hiltner et al. 2024), and they are likely to keep investing in still-profitable carbon-intensive assets (Maxmin 2016). Overstretched and overworked academics are less likely to dedicate time and effort to climate action (Latter, Demski et al. 2024) and more likely to fall into 'socially organized denial' (Thierry et al. 2023). And fee-paying, heavily-indebted students are more likely to be concerned about their own individual financial status than working for the common good. Thus, rather than becoming 'agents of change' with regard to climate action, financialised universities reinforce the status quo, resist transformative change and strengthen the systems and structures that are resulting in the polycrisis.

Financialization has also important *spatial* consequences for the higher education sector. Indeed, increasing financial considerations and pressures have led, on the one hand, to the closures of financially weak universities, and on the other hand to the expansion in profitable markets usually in fast-growing or already prosperous city-regions. In this way, at the regional level, universities can easily become part of, and contribute to, growing regional disparities. This can further undermine the ability of the 'left-behind places' (Rodríguez-Pose 2018; MacKinnon et al. 2021) to adapt to increasing climate chaos. Spatial restructuring of universities is also happening at the global level, displaying highly uneven patterns (Kleibert et al. 2020) and contributing to globally uneven geography of higher education. For example, the small but prosperous nation state of Singapore has a high concentration of highly ranked universities and multiple US and Australian universities—including MIT, Yale, Curtin, and James Cook—have also opened campuses in Singapore some in partnership with Singapore universities (Chou 2021).

Given this, it is becoming clear that while universities may be "ideally positioned to cultivate the transformative societal, economic, and political change required to address the climate and biodiversity crisis" (Urai and Kelly 2023, p. 11), their geographical and financial distribution needs to be fundamentally transformed to realise this potential. Building on and going beyond prior work by Stephens on transforming higher education to advance sustainability (Stephens et al. 2008; Stephens and Graham 2010), the argument for transformation is increasingly made based on the principles of climate justice (Kinol et al. 2023). The 'climate justice university' (Stephens 2024) represents a new vision—a paradigm shift—in the purpose, mission and structure of higher education institutions including, we argue, more local and regional engagement that requires a more equitable spatial distribution.

Indeed, to address the polycrisis and advance climate justice, a radical re-think is needed in the way universities interact with the communities and regions in which they are located. In addition to this, a significant expansion of higher education institutions is needed in the regions where they have only a weak presence or where they are missing altogether. But for new, transformative university-region links to be forged, public investments in higher education need to be ramped up and universities need to be thoroughly de-financialised. A 'climate justice university' model needs to replace the current 'financialised university' model (Fig. 2).

Fig. 2 The transformation from a financialized university to a climate justice university
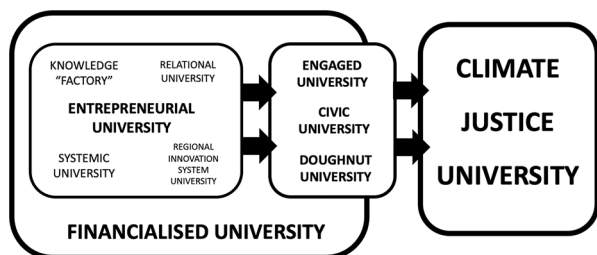
4 Towards a climate justice university model

The shift from the current 'financialised university' to a 'climate justice university' is radical and multifaceted. Table 1 highlights some key features of this transformation. These include the ways in which universities operate, how they are funded, how they engage with the outside world and how they operate spatially. These features are interrelated, and they complement each other. It is useful to mention few most important aspects here. One could start by highlighting the fact that while climate action was, at best, part of the 'third mission' of the financialized university, it

Table 1 Key features of the transformation from financialised university to climate justice university

Financialised, entrepreneurial university	Climate justice university
Climate action part of the "third mission"	Climate action as the "first mission"
Sustainability transitions	Climate justice transformation
Extractive university	Caring & redistributive university
Private profit	Public good
Industry collaborations	Community collaborations
Corporate engagement and climate obstruction	Civic engagement and action
Technological innovation	Social innovation
Spatial organisation & retrenchment according to university needs	Spatial redistribution according to local and regional needs
Expansion in profitable city-regions	Expansion in vulnerable communities
Drain on local municipalities	Asset for local communities
University "in" a region	"Emplacement"
Individual success	Collective success
Global inter-university competition	Global inter-university solidarity
University as a corporation	University as a collective or cooperative
Masculinist & racist	Feminist & anti-racist
Managerialist	Collegial & collaborative
Exclusive	Inclusive
Private wealthy donors	Public funding
Tuition and other fees	Free public education
Fossil fuel interests	Climate justice interests
Partnering with corporate banks	Partnering with community-based credit unions
University as a hedge fund	University as a public library
Maximization of revenue	Wellbeing of communities
Accumulation of resources & power	Redistribution of resources & power
Curriculum & research influenced by corporate interest	Curriculum & research co-created with communities
Commodification of knowledge	Open access
Campus with restricted access	Campus as a public space
Academic rat race	Slow academia
Students as "customers"	Students as learners and activists
Promoting regional growth (of already prosperous regions)	Supporting regional degrowth or post-growth (guided by climate justice)
University as a defender of status quo	University as an agent of transformation

could be seen as the 'first mission' of the climate justice university. Also, instead of focusing on sustainability *transitions*, the new type of university would engage in a *transformation* along the lines of climate justice. Closely related to this, instead of being preoccupied with *technological* innovation, the climate justice university would put more emphasis on *social* innovation. Instead of focusing on private profit, it would reaffirm its commitment to public good. Rather than maximizing its own revenue, it would look after the wellbeing of local communities. In doing so, it would prioritise climate justice interests over fossil fuel interests (Table 1).

This proposed vision for a climate justice university is not a one-size-fits-all model. Far from it. The focus on climate justice represents holistic, systems thinking integrating knowledge about human systems and the planetary boundaries of the earth's systems. A climate justice university does not prioritize one discipline over another, nor would it mean that certain disciplines are neglected. A climate justice university does not mean that all teaching or research will be about climate or justice. Rather, the climate justice framework is an inclusive all-encompassing lens that facilitates transformative approaches of all kinds. Also, given the breadth of different kinds of higher education institutions, the transformative potential of climate justice universities will vary in different places and across countries. The emphasis on dispersed spatial distribution in response to local needs will result in a great diversity of spatial constellations and arrangements. As a collection of networked institutions that integrate local needs with global solidarity, climate justice universities would be well positioned to deal with both the range of spatialities and temporalities of the polycrisis.

4.1 Radical spatial and financial redistribution

To achieve the above objectives, the higher education sector would need to undergo a radical spatial and financial transformation. To start with, the reductions in public spending for higher education—a major factor in financialization of universities (Fig. 1)—would have to be reversed. Indeed, as argued by Kinol et al., if universities are to reclaim their focus on the common good, public funding for higher education has to increase (Kinol et al. 2023, p. 9). Hand in hand with this, universities must resist donations from fossil fuel and carbon-intensive corporate interests, and free themselves from influence that goes with it. Expanded public funding would also eradicate the need for tuition fees and other fees. Universities would become free public education institutions and students would not end up being burdened with life-long debt. Academic staff would be freed from the constant pressure to bring in external research funding and could instead focus on turning climate action and climate justice into the 'first mission' of their universities. Instead of partnering with global corporate banks, climate justice universities would forge links with community-based and community-run credit unions. A climate justice university would be a thoroughly de-financialized university (Table 1).

A new financial architecture of higher education would have also profound implications for regions and local communities. Instead of concentrating wealth and power, climate justice universities could become instruments of a distributive justice (the concept introduced in Sect. 2) helping to channel resources to local communi-

ties, especially those most vulnerable. Instead of being a drain on local municipalities, they would be an asset for local communities (Table 1). This would mean the expansion and reconceptualization of universities' engagement with marginalized and vulnerable communities and regions. As part of this, there would be a considerable expansion of higher education institutions in regions where they have only a weak presence or where they are missing altogether. Thus, rather than being 'growth-agnostic' (Urai and Kelly 2023) the higher education sector could be part of a conscious expansion strategy—especially in peripheral regions and "left-behind places", in part echoing Çınar (Çınar 2022). That said, universities—especially those in high-growth high-pollution regions—could support the overall degrowth or postgrowth strategies in their respective regions, guided by climate justice principles and, in so doing, ensuring that all communities will have healthier, safer and more sustainable future.

A more equitably dispersed spatial distribution of higher education institutions could become a resource for transformative regional economic redistribution and climate resilience. The 'extractive university' could become a caring and redistributive university (Table 1). Rather than competing among different universities, higher education guided by the principles of climate justice would embrace the mission of reducing economic inequities and, in doing so, they would play a major role in addressing the polycrisis. More equitable spatial redistribution of universities would also allow them to respond to the polycrisis by supporting, catalyzing, and facilitating the co-design and co-creation of regionally appropriate transformations. Here an engagement with local communities in their respective regions would be crucial, as discussed in turn.

4.2 Restructuring for new kinds of community-university engagement

Increases in human suffering and devastating disruptions from climate disasters are forcing universities to reconsider their role in their local communities. Engaging with local communities is done to some degree in almost all higher education institutions, but there is a broad range of types and levels of commitment to community engagement. In fact, in some cases, one could talk of community dis-engagement. For instance, in response to worsening poverty and the associated health and safety disruptions of communities in crisis that surround them, many universities are building higher walls or stronger fences and increasing security measures. But relying on a 'fortress approach' reinforces the coloniality of 'othering' those who are not officially part of the university community. Rather than continuing down the path of isolation and separation, universities have an opportunity to shift their mind-set toward centering the needs of local communities and co-creating alternative futures through local empowerment. This echoes the earlier calls by Chatterton and Goddard for universities to provide 'community service' in their regions (Chatterton and Goddard 2000) and resonates with the idea of a 'civic university' (Goddard et al. 2016) meantioned earlier.

Centering community needs is currently misaligned with many contemporary universities that have intentionally positioned themselves as distinct from their surrounding communities and the places where they are based. Most universities are

structured and organized to prioritize their own survival and success, and all-too-often that is perceived as completely separate, and disconnected, from the well-being of the surrounding communities. The process of financialization makes this issue even more pronounced, reinforcing the features of colonialism.

The legacy of colonialism is entrenched in the ways that universities theorize, research and teach about 'communities'. Many universities are increasingly perpetuating the colonial idea of 'community-as-other' in their university-community interactions. Unfortunately, many existing university-community programs are strategically designed with a goal of promoting an appearance of engagement rather than to achieve any specific community-centered goals. Growing acknowledgement of the dangers of extractive and exploitative forms of community engagement in universities has resulted in efforts to articulate principles for ethical community engagement that focus on reducing power differentials and encouraging genuine collaboration, co-design and co-creation of university initiatives (Riccio et al. 2022). It could therefore be argued that universities' 'boundary-spanning capacity' (Pflitsch and Radinger-Peer 2018) needs to be enhanced and expanded when it comes to university-community interactions.

With calls for universities to engage with local communities in new and different ways, careful attention must be paid to how this is done (Boyle et al. 2011). Building on his earlier work (Baldwin 2021), Davarian Baldwin, for instance, has proposed that all existing universities conduct an iterative process of social footprint mapping (Baldwin 2022). This includes mapping out the university's finances, real estate, technology-transfer systems, the development office, and the research portfolio and highlights how interconnected and embedded universities are with local communities (Baldwin 2022).

If universities were restructured and intentionally designed to serve the public good, higher education could decolonialize the construct of community by embedding higher education within its conception of community (Dutta 2018). Higher education systems could be restructured to center the needs of local and regional communities rather than centering their own institutional needs. If the higher education sector embraced a commitment to the public good and deep community engagement, a spatial redistribution of universities would be necessary.

The geographical redistribution of higher education institutions that is being suggested here is based on the value of 'emplacement'. Emplacement is a commitment to engaging and promoting deep localization, learning from the land, and from the non-human (Ecoversities Alliance 2020). Emplacement recognizes that the concept of place exists at multiple spatial and temporal scales (Barron, Hartman et al. 2020). Emplacement, including the focus on local, community-centered needs, is a powerful principle to transform the societal impact of higher education because emplacement connects localism with global solidarity. Localization can be contextualized as direct resistance to the damaging trends of globalization, which refers to the international integration of economies, societies, cultures and technologies resulting in global networks of communication, production, trade, exchange and finance with deepening patterns of uneven development (Sokol 2011). This also echoes the call by Urai and Kelly to embed universities in society and planet (Urai and Kelly 2023) and an

earlier call by Goddard and Kempton for universities to become institutions 'of' the region, not only 'in' the region (Goddard and Kempton 2016).

While most universities support a limited number of community-engagement programs and initiatives to demonstrate that they are contributing positively to the local community, these efforts are often small compared to other institutional priorities. Trusted, long-term relationships are essential for effective and transformative community-university partnerships, and building and sustaining relationships requires emplacement and some level of physical proximity and face-to-face interaction. With the current structure of the higher education sector, many communities have low expectations of their local and regional universities, and increasingly negative community impacts of universities are being recognized (Baldwin 2021). This needs to change if universities are to assume their role as agents of positive transformation.

Different spatial, institutional and financial models for a more distributed higher education system are necessary for transforming university-community relationships and interactions. Creating new mechanisms for connection and dismantling traditional knowledge hierarchies are necessary to strengthen university-community relationships. A society-wide commitment to emplacement and community-centered localization as a core mission of universities requires a spatially-reconfigured higher education system. Examples of spatially de-centralised third-level institutions can be found in Italy (e.g. see Rossi and Goglio 2020 on the University of Turin in North-West Italy), in the UK (see Charles 2016 on rural university campuses including those of the University of Glasgow in Scotland and the University of Cumbria in England) and Ireland with a recent national reinvestment in a new configuration of distributed technical universities (Ó Maonaigh et al. 2025). The opportunity ahead is to build on these experiences and reinvest in a network of public universities that serve diverse communities across regions.

4.3 Distributed universities like public libraries

One way to reconceptualize the potential of a restructured and redistributed higher education system is to consider the distribution of public libraries. Just as many communities have local public libraries, a new vision for higher education committed to addressing the polycrises could include public higher education institutions distributed spatially so that all communities have easy access and proximity to university resources. With this spatial restructuring, rather than being exclusive and exclusionary institutions, universities could become all-inclusive hubs of civic engagement and action. Rather than being viewed as a cost or a drain on municipal finances, locally distributed universities could become a major asset and a public resource for local communities. Rather than being spaces of private ownership and restricted access, this new model of distributed university resource could cultivate a sense of public space and open access (Table 1), just as public libraries do in so many places.

In addition to considering public libraries as a tangible example of current distributed knowledge-based infrastructure, restructured networked university systems could partner with existing networks of public libraries. In many countries throughout the world, public libraries serve as social hubs and community centers. A par-

ticularly well-developed network of public libraries in the United States can serve as a model (Mehra and Davis 2015).

To expand and restructure higher education systems based on community-centered needs and transformation for the public good, the spatial distribution of universities needs to change. Large existing universities could branch out and open satellite campuses in new places, and/or new localized publicly accessible universities can be established. As communities across the world are struggling to adapt to climate instability and other crises, households, communities and organizations are in desperate need of information and support (Favretti 2023). Distributed, accessible public university systems could become critically important community hubs providing learning opportunities and resources of all kinds. This idea of reimagining distributed public universities aligns with the proposal by the iconic social activist, environmentalist, author and critic of globalization, Vandana Shiva, who made the case for community-centered universities when she called for the creation of grandmother's universities everywhere[1].

Like Shiva's proposal for distributed and localized Grandmothers' universities, establishing networks of rural universities and resources for all communities is essential for transformative social change. A comprehensive network of university resources accessible to all communities is necessary not only to empower people but also to counter dangerous misinformation and disinformation.

Communities throughout the world, including rural communities, urban communities, and suburban and peri-urban communities, are in need of information and reinvigorated investment in social infrastructure. A distributed network of public universities in all communities around the world would provide capacity building support for communities to adapt to new climatic conditions and contribute to the co-design and co-production of new, emerging climate-related policies and practices contextualized to reflect the specific needs of each community and region. This distributed network of universities would serve as convening places to support learning-by-doing, peer learning, and experimentation of new approaches including regenerative agriculture, renewable energy, regenerative forestry, and other regenerative land-use practices (Stephens 2024).

While there is not one single university that could be currently described as a 'climate justice university', examples around the world demonstrate some different features of a climate justice university. For example, as mentioned in the previous section, Ireland and Italy have made recent new investments in regional universities (Rossi and Goglio 2020; Ó Maonaigh et al. 2025), and Mondragon University, in the Basque Country of Spain, with its cooperative ownership structure demonstrates a novel commitment to regenerative economics and transforming the local community (see Stephens 2024).

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[1] In the 2012 film, *The Economics of Happiness*, Vandana Shiva says: "Local knowledge is knowledge that tells you about life. It is about living. I call it grandmothers knowledge, and I think the biggest thing we need—the task for today is to create Grandmothers universities everywhere so local knowledge never disappears.".

4.4 Challenges of implementing climate justice universities

Recognizing the many challenges of implementing the transformation towards climate justice universities, this section reviews numerous obstacles and potential criticisms.

If higher education institutions were restructured and redistributed spatially to be more place-based and locally engaged, one could argue that they could become 'hyperlocal' losing sight of their roles and responsibilities at national and global scales. But an engaged local focus facilitates a sense of global solidarity and reprioritizes the importance of relational knowledge. In the age of interconnected polycrisis, local and global issues cannot be separated. Local engagement and community-based applications are inextricably linked to national and global priorities of higher education. Thus, a local focus is intended to be complementary to—and not to displace—national and global roles and responsibilities. A local focus encourages deep practical learning and action research on the ground ensuring an engaged relevance to society. Engaging with the local context allows for action-learning and facilitates a sense of global solidarity. Indeed, climate justice universities could cooperate and collaborate globally in a global network of climate justice universities. This global cooperation (rather than competition) could be supported by digital means.

Another criticism could be that this proposed vision of climate justice universities would narrow diversity and pluralism in the higher education landscape. But because the localised, spatially distributed model will be better suited to respond to local circumstances, each climate justice university can be different, responding to the different local needs in each region. A rich diversity within higher education systems (and within the emerging global climate justice universities' network) is likely to increase rather than decrease.

Another criticism that could potentially be levied against climate justice universities is that the emphasis on community engagement, co-creation and co-production could delegitimize scientific expertise in these universities. But literature on epistemic hierarchies point out that the dominance of western scientific knowledge has contributed to the creation of the polycrisis, so integrating more indigenous knowledges and relational knowledge is critically important (Engle et al. 2022). Engaging with local knowledge and alternative knowledge systems can benefit and strengthen (rather than undermine and delegitimise) the academic mission of universities. The narrow prioritization of western scientific knowledge has devalued relational knowledge and disregarded embodied knowledge in higher education institutions; this devaluation has contributed to our collective inability to effectively address the intersecting crises that humanity is facing.

Another critique could question how a distributed locally-based higher education system would align with widespread digitalisation and provision of knowledge and information by digital and virtual means. Here it is important to emphasize that digital/virtual technologies complement rather than replace the need for in-person, face-to-face interactions. Despite the flexibility offered by virtual and simulated experiences, in-person, local experiences and locally-based physical resources are still critically important for all regions, particularly for peripheral/remote regions and disadvantaged communities. This new model of climate justice universities could be

at the forefront of integrating the most sophisticated digital resources, technologies and capabilities to remote regions and underserved communities who can benefit the most from them (thus reversing the market trends that usually favour advanced regions). Climate justice universities can also function as a global network—supported by the cutting-edge digital infrastructure—sharing knowledge, resources and expertise globally, creating new synergies and opportunities and advancing a sense of global solidarity among diverse and far-flung communities. Digitalization could be a central feature of efforts to spatially decentralise university learning, research and engagement.

Another important question is who will drive the change from the the current 'financialised university' to a 'climate justice university'. How could the associated realignment of priorities and activities be incentivised and sustained? This proposed vision of redistribution would require a commitment by the state and public bodies supported by public funding as part of a wider socio-ecological transformation. This transformation could be triggered by a broad coalition of environmental movements and labor (trade union) movements (e.g. Taylor 2024) and community-based organizations (CBOs) could also be critical. Further to this, there is a growing global movement questioning the effectiveness of higher education in a time of polycrisis represented in the rise of new coalitions including the Ecoversities Alliance (Ecoversities Alliance 2020) and the Climate Justice Universities Union (McGeown et al. 2024). These international movements are essential for driving the change in the higher education landscape.

One way or another, it is clear that the existing political economy must be radically transformed, and universities could be critical social infrastructure facilitating the change. Climate justice universities can be considered both agents of change and recipients of change. Accelerating climate instability is altering the existing political economy and disrupting established geopolitical assumptions in ways that many of us do not yet realize. So while the concept of climate justice universities can be easily criticized as radical, aspirational and lacking realism, research that does *not* assume radical change in the future can also be criticized as lacking realism. Equally, it is not realistic to expect that a much-needed socio-ecological transformation can be achieved by continuing with the universities, systems and institutional mechanisms we currently have. Higher education systems are massive social infrastructure that are not currently being leveraged to fight the worsening polycrisis. Redirecting and re-aligning all of the resources that are already allocated to support higher education institutions has huge potential to guide humanity toward a more stable and healthy future.

Inspiration for this can be drawn from redistributive regional development policies used in the past (Pike et al. 2006), perhaps adapted to the post-growth or degrowth era. Progressive regional policies centering universities could help reverse the decades of neglect of 'left-behind places' (Rodríguez-Pose 2018). Literature on innovative approaches to higher education in some 'rural' areas and the development of satellite campuses in remote areas and peripheral regions offers multiple relevant insights on the spatial decentralization of universities (e.g. Boucher et al. 2003; Charles 2016; Rossi and Goglio 2020). Implementation challenges and opportuni-

ties would vary across regions, countries and continents, so analysis of institutional environments in different jurisdictions and regions would be needed.

The crucial issue of resources and funding provides another area of potential criticism. How could such an ambitious transformation towards climate justice universities be financed? To address this, it is important to recognize that the resource needs for transformative change need to be weighed against the cost of inaction. Climate disruptions around the world are increasingly impacting universities by creating more frequent and extreme acute disruptions and instabilities of all kinds including storms, heatwaves, fires, etc. So climate instability is now causing shocks to the way many universities operate. As the climate crisis gets worse, the shocks from climate instability are increasing steadily and could become even more predictable than financial instability. As it becomes increasingly clear that financial instability and climate instability are linked, moving toward climate justice universities is one way to strive toward more long-term stability.

Spatialities and temporalities of the polycrisis are increasingly intersecting with spatialities and temporalities of the operation of universities. This means that it is becoming increasingly difficult for higher education to ignore the polycrisis and continue with "business as usual". During this time of accelerating disruption it is important to acknowledge that while calls for radical transformation of higher education might be critised as being too political to some, continuing with a higher education system that maintains the status quo (which is worsening injustices and human suffering around the world) is also political.

It is also important to consider that securing resources for transformation of higher education could be part of a larger strategy of financial innovations for climate justice involving, for example, innovative monetary policies (Stephens and Sokol 2024).

Finally, a transformation towards climate justice universities will no doubt face stiff opposition from increasingly aggressive culture wars and 'anti-woke' politics. At the time of writing (spring 2025), higher education in the United States is under attack alongside suppression of climate and environmental justice ideas, principles and programmes. It might be that these attacks will further highlight the need for a radical transformation within higher education towards climate justice.

5 Conclusions

This paper argues that a radical restructuring of universities, including their spatial distribution, is an essential part of systemic societal transformation needed to address the worsening polycrisis in general and the climate crisis in particular.

Recognizing that spatial injustices and economic disparities are being exacerbated by the ongoing climate crisis, a climate justice approach could help universities to more effectively engage with the polycrisis and regional economies. Universities' commitment to regional climate action is currently severely inhibited by the constraints imposed by financialization. For universities to play a transformative role in addressing the polycrisis they themselves need to be transformed from a 'financialized university' to a 'climate justice university' (Stephens 2024).

Key features of a 'climate justice university' includes spatial restructuring and financial redistribution. This radical transformation of higher education would entail the expansion and reconceptualization of universities engagement with marginalized and vulnerable communities and regions. Instead of reinforcing universities as entrepreneurial, financialized organizations that concentrate wealth and power in well-off regions and urban centers, higher education could be restructured to prioritize equity, justice, the public good and wellbeing of local communities.

A more equitably dispersed spatial distribution is required for universities to support local communities and become a resource for transformative regional economic redistribution. This spatial redistribution and financial restructuring would allow universities to respond to the polycrisis by supporting, catalyzing, and facilitating the co-design and co-creation of regionally appropriate transformations. Without a spatial redistribution, it is likely that higher education will become increasingly elitist, isolated, and disconnected from the direct issues facing communities. Without a financial restructuring, the continued financialization of higher education will further disconnect universities from acute needs of people and communities.

New ways of conceptualizing the spatial distribution of universities to unleash the transformative potential of higher education requires reimagining a new geographic distribution of publicly accessible universities. With a more distributed geography, higher education can be leveraged to center community needs at a regional scale. Recognizing the links between the concentration of financial interests and spatial distribution, this reconceptualization requires a paradigm shift in university-community interactions. Rather than continuing to define university-community interactions based on prioritizing benefits to the higher education institution, leveraging the transformative potential of universities requires that the needs and benefits of communities are prioritized.

This paradigm shift should embrace a justice-centering relationships framework (Quan 2023), which acknowledges the dominant power structures that tend to reinforce an imbalance of knowledge and wealth within university-community interactions. Embracing a justice-centering framework requires resisting the current power structures and developing long-term, genuine, movement-building, place-based, community-centered institutional strategies that transcend individuals and focus on community dignity, community trust, and community needs, rather than university outcomes (Quan 2023). New structures created by the transformation of the higher education sector would unleash the potential for co-designing and co-creating with communities.

It is important to note that none of the above will be possible without much-increased public funding for higher education. Indeed, one of the biggest challenges to undertake the transformation needed is to dramatically increase public funding. One approach would be to recognize the importance of the role of universities in climate action, to redefine higher education as critical infrastructure, and include expanded higher education funding in Green New Deal packages. For example, if Europe is serious about its commitment that "no person and no place are left behind" then its EU Green New Deal policies would reflect that and prioritize substantial investments in Europe's higher education sector. A range of financial innovations with regard to monetary policy (in coordination with fiscal and other policies) that

would also allow public finance to be available for climate justice transformations (Stephens and Sokol 2024).

As we reimagine how "climate justice universities" (Stephens 2024) could commit to distributing rather than concentrating knowledge, wealth, and power, new ways of empowering and co-creating with local communities are a critically important part of the transformative social changes that are needed to address the polycrisis.

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