Environmental Science and Policy 151 (2024) 103615

Contents lists available at ScienceDirect

Environmental Science and Policy

journal homepage: www.elsevier.com/locate/envsci

# Inviting a decolonial praxis for future imaginaries of nature: Introducing the Entangled Time Tree

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ARTICLE INFO

*Keywords:*
Futures
Decolonial
Stories
Biocultural
Africa

ABSTRACT

The practice of envisioning the future has deep roots in the past. Across the continent of Africa, there are traditions of oral storytelling, griots, folklore, and indigenous speculation that offer guidance on how to live in the present and orient towards better futures. Whilst these traditions can act as navigational compasses, they are not prevalent in conventional futuring methodologies. Rather, we are surrounded by perspectives of thinking about the future as a projection of current trends. In this perspective, we offer a new heuristic, the Entangled Time Tree, to the body of futuring approaches for how to acknowledge multiple pasts and alternative ways of conceptualizing futures. We recognise that in a decolonial approach, it is necessary to consider a multiplicity of pasts that lead to diverse presents and futures; a recognition that we see reflected in Africanfuturism and in traditional storytelling that further offer diverse ways of understanding temporality and futures. We propose that the diverse forms of storytelling across the African continent constitute critically underexplored forms of knowledge for enabling a decolonial approach to futuring through three mechanisms -stories as power, stories as healing, and stories as diversification. We argue that centering these stories will allow the exploration of more just and ecologically sustainable futures. We recognise that this is just a first, but we hope a promising, step towards a longer term commitment of creating more diverse, imaginative visions and pathways of a decolonial future that will be useful not only on the African continent, but globally.

## 1. Introduction

> *"I believe Africans, living in Africa, need something entirely different from Afrofuturism. Our needs, when it comes to imagining futures, or even reimagining a fantasy present, are different from elsewhere on the globe; we actually live on this continent, as opposed to using it as a costume or a stage to play out our ideas. We need a project that predicts (it is fiction after all) Africa's future 'postcolonialism'; this will be divergent for each country on the continent because colonialism (and apartheid) affected us in unique (but sometimes similar) ways"* (Mashigo, 2018).

On what is a vision of an African future based? Despite the fiction of a post-colonial world, Western perspectives continue to dictate what is aspirational, which values are important and what futures are possible for Africa. In essence, there is a 'continent-sized hole' in narratives of preferable African futures (Pereira et al., 2021b). As we've globalised, the world has become limited in our ability to imagine different futures, defaulting to what can be projected or what is considered most likely by a powerful few. This narrow focus is detrimental not only to the continent, but to the world, as it misses the diverse possibilities that local cultures and traditions could offer, and it does not allow for the creative imagining of radically transformative alternatives (Pereira et al., 2021a). In this perspective, we argue that a decolonial praxis of imagining diverse futures of humans and nature is needed to mobilise the transformative change required for a more sustainable future. By decolonial, we refer to the move away from the colonial worldview that anything differing from a Eurocentric worldview is inferior, marginal, irrelevant or dangerous (Santos, 2021) towards an appreciation of multiple temporalities, knowledges and praxes of living (emphasising the prefix 'de' rather than the prefix 'post') (Mignolo, 2021). We posit story-telling as an important method to start to address this challenge and as a mechanism for unpacking alternative conceptions of time that

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https://doi.org/10.1016/j.envsci.2023.103615
Received 29 August 2022; Received in revised form 6 October 2023; Accepted 15 October 2023
Available online 28 October 2023

are not linear continuations from the present into the future.

Different framings and narratives - forms of stories - vary in their prominence and volume across regions and across cultures. In a process of imaginative and decolonial exploration of the future (as it emerges from and with pasts and presents), we find ourselves as social-ecological systems researchers seeking the important stories to tell, to listen to, and to re-amplify. This is a critical, but often overlooked process in the quest for enabling a more just and sustainable future planet. Here, we highlight the need for reconnecting with the multi-cultural pasts of the African continent - both bright and violent - in the quest to build better scenarios of human-nature relationships in the future. We make a case for this being one way to deWesternise (as discussed by Mignolo (2021) African futures praxis, and go on to explain how stories- ranging from oral traditions to contemporary African speculative fiction- are a central currency of this approach. In doing this, we recognise the complexity and dynamism of African identities connected to these stories, considering whose stories are raised to imagine more desirable futures for nature and people. We also emphasise that this is not a definitive offering, but a work in progress for exploring the topic of decolonial futures praxis and practice.

## 2. The stories that we tell ourselves

In opening new pathways to how futures (pointedly plural) for people and nature in Africa are envisioned, a focus on stories from the past forms part of a decolonial praxis of enquiry (Sardar, 2010). The stories that we tell ourselves about the world create frames for how people live and act in the world (Evans, 2017). In this form of storytelling, the dominant stories of the future that pervade globally seem to address one universal culture, despite the numerous ways of being, doing and imagining that objectively exist in the world (Durán et al., 2023; Pereira et al., 2018). These dominant narratives are not always the most beneficial for seeing and reaching a preferable future at local scales, nor are they contextually relevant in Africa, as Mohale Mashigo indicates in the opening quote. Furthermore, there is an ongoing discussion that we need more methods in futures literacy, anticipation studies and scenario planning to open up the imagination beyond current trajectories in order to enact transformative change (Moore and Milkoreit, 2020; Oomen et al., 2021; Pereira et al., 2021a; Yusoff and Gabrys, 2011). For example, there is the story of development driven by exponential growth and unsustainable resource use, with historical roots in the cultural paradigms of European Western modernity, later transported to the overseas colonies (see Ghosh (2022)). There is also the story whereby Western scientific knowledge, technology and innovation will bring the planet back from the brink of climate collapse (Keary, 2016). This proposition is somewhat at odds with the story of how the world could be transformed through reconnecting with nature, decentralisation of power and approaches such as Nyerere's villagization and cooperative economics- Ujamaa. Importantly, Western modernity has narrowed what is 'possible' (Escobar, 2023), but in this moment of poly-crisis, there is a need to open up for alternatives, not from dominant discourses, but from the margins (Leach et al., 2018). We argue that stories that fetishize local and indigenous knowledge across the world as static traditions of the past deny its agency in the present and future. Stories of racial and ethnic superiority have driven wars, class exploitation, inequality, mistrust and corruption at high levels, landing us in a moment of Afro-pessimism that is not helpful for invigorating agency for change.

With cultural homogenization in mind, decolonial research in Africa as a counter to academic imperialism is in its heyday (Chilisa, 2017). Within this field scholars are attempting to re-theorize ways of futuring with a focus on the Global South and not just drawing on the experiences of indigenous scholars in Global North settler countries, although their thinking has been instrumental in this movement (See Kawharu, 2000; Kimmerer, 2013; Watene, 2022; Whyte, 2017). Inherent to decolonial futuring approaches is a centering of the past, and there are further calls to challenge Western notions of linear time (Hunfeld, 2022; K. Whyte, 2021; Yusoff and Gabrys, 2011). There are new futuring institutes throughout the continent with a focus in design, planning and development sectors (Future Rural Africa, Future Africa), some of which emphasise a decolonial approach (African Futures Institute, Capacity to Decolonise). However, Ndlovu (2018) argues that colonial ways of knowing are so heavily embedded in African thinking, that this must first be overcome through the establishment of African knowledge institutions, before futures "otherwise" can be imagined. Ideas of Africa's future are still very much colonised by foreign interests, described by Müller-Mahn (2020: 158) as "foreign blueprints" of development that do not include the imaginations of local residents. Whilst researchers and policy makers continue to pursue Western frameworks of development, for example a call for more resilient societies based on the Sustainable Development Goals (Tutu and Busingye, 2018), there is a recognition that pursuing a Western ideal of the future has not served the continent well and "both Western and African societies may find a new future by learning from each other's past" (Kroesen, 2018: 105). Decolonial futuring beyond destructive neoliberal patterns requires a letting go of epistemologies that restrain the imagination "to shake loose the discourse in a way that allows us to move out of a tight frame of reference" (Kulundu et al., 2020: 125). It also demands approaches that actively democratise futures by inviting different, inclusive epistemologies from those which have tended to colonise futures (Bourgeois et al., 2022).

It must be acknowledged that whilst decolonial thinking in the sustainability sciences is relatively recent, except for scholars like Escobar who have written extensively on this for decades (Escobar, 2000, 2015, 2018, 2020), much of the broader engagement with decoloniality has been led from the Americas (Maldonado-Torres and Cavooris, 2017; Mignolo, 2021; Mignolo and Escobar, 2013; Quijano, 2007a), including decolonial feminism (Lugones, 2010; Pérez, 1999) with the notion of the post-colonial stemming more from the Middle East and South Asia (Bhambra, 2014). African anti-colonial thinkers like Fanon and Biko (drawing also on Paulo Freire) have had substantial influence on pedagogy (Harms Smith, 2019), on identity and liberation politics (Ahluwalia and Zegeye, 2001) and in sparking ideas of a decolonized new humanism (Gibson, 2008). There is thus a rich body of knowledge from which to draw a decolonial futures praxis for Africa in the context of our planetary poly-crisis (Lawrence et al., 2023). However, in spite of this decolonial turn, decolonial ecological research (Apostolopoulou et al., 2021; Trisos et al., 2021), and social-ecological transformations research (Gram-Hanssen et al., 2021; Pereira et al., 2021b) are in their fledgling stage. A growing body of research has opened up the discourse for critically reassessing harmful colonial patterns within conservation and ecology (Trisos et al., 2021; Wyborn et al., 2021) and for attending to the systematic exclusion of indigenous and non-Western knowledges from environmental science (Klymiuk, 2021).

Situated within this broader questioning, in this perspective we direct attention to persistent colonial patterns in the ways that as researchers, we think about the future, and time more generally, which is particularly acute in the crisis of biocultural diversity loss. We do this in order to highlight underexplored human-nature futures from an African perspective and thereby make an attempt at starting to answer the questions: What are aspirational human-nature futures of and from the African continent? And what is their potential to open new paths for future-making practices? In order to do this, we focus on the art of storytelling that allows for a messy entangling of temporalities and aspirations.

## 3. From projected futures to decolonial imaginaries

> *"Modern-colonial societies encourage and reward hyper-individualistic metropolitan consumerism and the denial of the fact that our comforts and conveniences come at the expense of others and of the planet. In this*

*context, we are to remain young, to resent ageing and to forget our intergenerational responsibilities."*

(decolonialfutures.net).

A paradox of modernity is that in continuing to project forward, modern ideas of progress fearfully avoid considerations of decay and aging, and so these projections are often depicted as seemingly endless lines of extrapolation. Such processes of futuring make up some of the critical tools Western science uses to think about projections of potential futures, such as the selection of four emission pathways by the Intergovernmental Panel on Climate Change (IPCC) (Fig. 1a). This restriction of the imagination, whilst appropriate in some instances such as climate modeling, runs a risk of path dependency and boxed-in thinking that is unlikely to envision the radical transformations that are needed to get onto alternative climate resilient development pathways such as those called for by Working group 2 of the IPCC (IPCC, 2019). For such transformative thinking, instead, we need to employ methods that can disarm deeply held, but often harmful, beliefs around natural resource extractivism and the exploitation of labour, individualism, and the ceaseless capitalist quest for economic growth because these beliefs and the values that underpin them, prime the imagination towards scenarios of inevitable dystopia and collapse if they continue to dominate our worldviews. This argument was already proposed by (Yusoff and Gabrys, 2011), but has only more recently started to become more mainstream in environmental change discourse. A good starting place for this is to reflect on what we mean by time and the relationships between futures, presents and pasts.

Yusoff and Gabrys (2011: 522) propose that 'the imagination of futures requires a careful critique of the ideologies of time that are being produced, particularly in relation to present action, such as 1- the present as a sum composed of past and future, where time is imagined as a package, 2- the future as a telos of the past where time is linear and continuous if not progressive, 3- the future as a sphere of action based on enframings of the past and future in the present, where time is a space of action, an emancipatory possibility of the present and 4- the future as the possibility of becoming otherwise where time is seen as dislocation. Such acknowledgement of multiple, coexisting manifestations of time is a critical starting point for unpacking a decolonial futures praxis'. There is a paradigm-shift needed to 'let go of any singular present and accepting the fundamental plurality and constructed nature of both present and futures worlds' through the lens of discordant pluralism and worldmaking (Vervoort et al., 2015). Here, we extend that work to incorporate multiple pasts and non-linear time, whilst further opening up imaginative pluralities through the practice of storytelling as one mechanism of decolonial worldmaking. We refer only briefly to the multiple presents within which our decisions are contextualised as these are no less important, but they have a much larger scholarship emphasising current inequities.

Our theoretical contribution is a heuristic of an 'Entangled Time Tree' (Fig. 2) that attempts to go a step further towards opening up the forward looking Futures Cones (Voros, 2017) (Fig. 1b) including perspectives that are not linear in their conceptualisation of time (Fig. 1d) and that connect to the multi-layered place-based futures found in African storytelling as developed below. Voros adapted the cones from Hancock and Bezold (1994), who in turn adapted them from Charles Taylor (1990). Voros goes some way in opening up imaginative capacities by inviting consideration beyond the projected, probable and plausible to that of "the preposterous and the multiple preferable", and thus offers a route to opening up linear thinking. The futures cone has been further adapted, for example by Christophilopoulos in their "Cones of Everything" based on relativity theory that takes into account the past (Fig. 1c) (Christophilopoulos, 2021), and the case of the 'co-speculative cones' offered by Lohmann (2018) provides consideration and inclusion of multiple perspectives in a more participatory process. Moving beyond these framings is the preoccupation of much decolonial scholarship, where the need for 'frameworks' to think about the future starts to become obsolete, in favour of more metaphorical and situated devices (Fig. 1d & 1e). One way of envisioning the future beyond simplified heuristics is through "String Figures" in the game using strings as a form of popular storytelling that can involve many figures, players and body parts. Biologist and feminist posthumanist Donna Haraway (2016), proposes such a string model (Fig. 1d) that can build relations across temporalities, species and generations. This figure allows us to see the future as "ongoingness" (Haraway, 2016) 3) with past and present and with other species, allowing for contingency and multiplicity since we need to follow the string where it goes and with whomever it makes kin, be it human or nonhuman, young and old, ancient or yet-to-come. This future-making practice constitutes a pathway to the present, when the "string figure game of caring for and with precarious worldings" (Haraway, 2016: 55) can have a transformational power.

Beyond this more relational approach, even unpacking the notion of time as mechanistic and linear rather than as experienced is an important consideration (Hunfeld, 2022; Swinehart, 2019). Circular concepts of time that reference, for example, the seasons, are important to many indigenous peoples, such as the Sami (Bergman, 2006). For the Māori, concepts of time 'are interconnected, interdependent and complex, with multi-layered and multi-faceted dimensions' (King et al., 2022), and the environment is the connector across space and time (Watene, 2022) There are countless ways of thinking about and considering time that need to be highlighted, for example by looking at practice and proverb. Take Ifa, the Yoruba divination system (Fig. 1e). Communication with the gods, spirits and ancestors in many African cultures is aimed at understanding human dilemmas, and guidance on potential avenues of future resolution. Often this communication is through objects prescribed by diviners, and such futuring methods potentially offer a substantial capacity for grasping the unknown (LaGamma, 2000). Another example is Sankofa- an Akan term that means, "to go back and get it." 'One of the Adinkra symbols for Sankofa depicts a mythical bird flying forward with its head turned backward: the egg in its mouth represents "gems" or knowledge of the past upon which wisdom is based; it also signifies the generation to come that would benefit from that wisdom. This symbol is associated with the proverb, *"Se wo were fi na wosankofa a yenkyi,"* which translates as "It is not wrong to go back for that which you have forgotten" ' (The Spirituals Project, 2004: 1). Such diverse ways of thinking about the future as linked to the past are critical to foreground in an approach for a decolonial futures praxis. African storytelling foregrounds three categories of futures thinking that have yet to be incorporated into foresight, scenarios and models processes: future as powerful collective-making, future as healing for multispecies justice and future for diversity and ancestrality.

However, recognising that collective imaginaries remain bound in categorical thinking, there is still something to be gained from simplified framings as a navigational heuristic for futuring in a complex world- and where buy-in from within different scientific disciplines is also necessary for impact. Thus, we offer the 'Entangled Time Tree' in Fig. 2 that draws on a combination of understanding multiple 'thick' presents as coming from multiple pasts that thereby open up to a range of multiple futures, captured here in three illustrative examples that reference 1) circular rather than non-linear time (see Bergman, 2006; Janca and Bullen, 2003; Yamada and Kato, 2006), 2) Sankofa whereby what is good from the past is reclaimed and taken into the present, and can also represent the centrality of the ancestors and 3) by opening up for the plural as well as the preposterous in linear notions of time as represented by the futures cones of Sardar and Sweeney (2016). This heuristic is by no means intended to be finite, but an ongoing means to enfold a pluriverse of epistemologies and to give a greater chance to free imaginations constrained by Western dualistic thinking imposed through colonialism.

The Entangled Time Tree figure we propose is inspired by the baobab tree that is deeply connected with many ancestral African cosmologies. By deriving a theory of entangled futures from the form and material

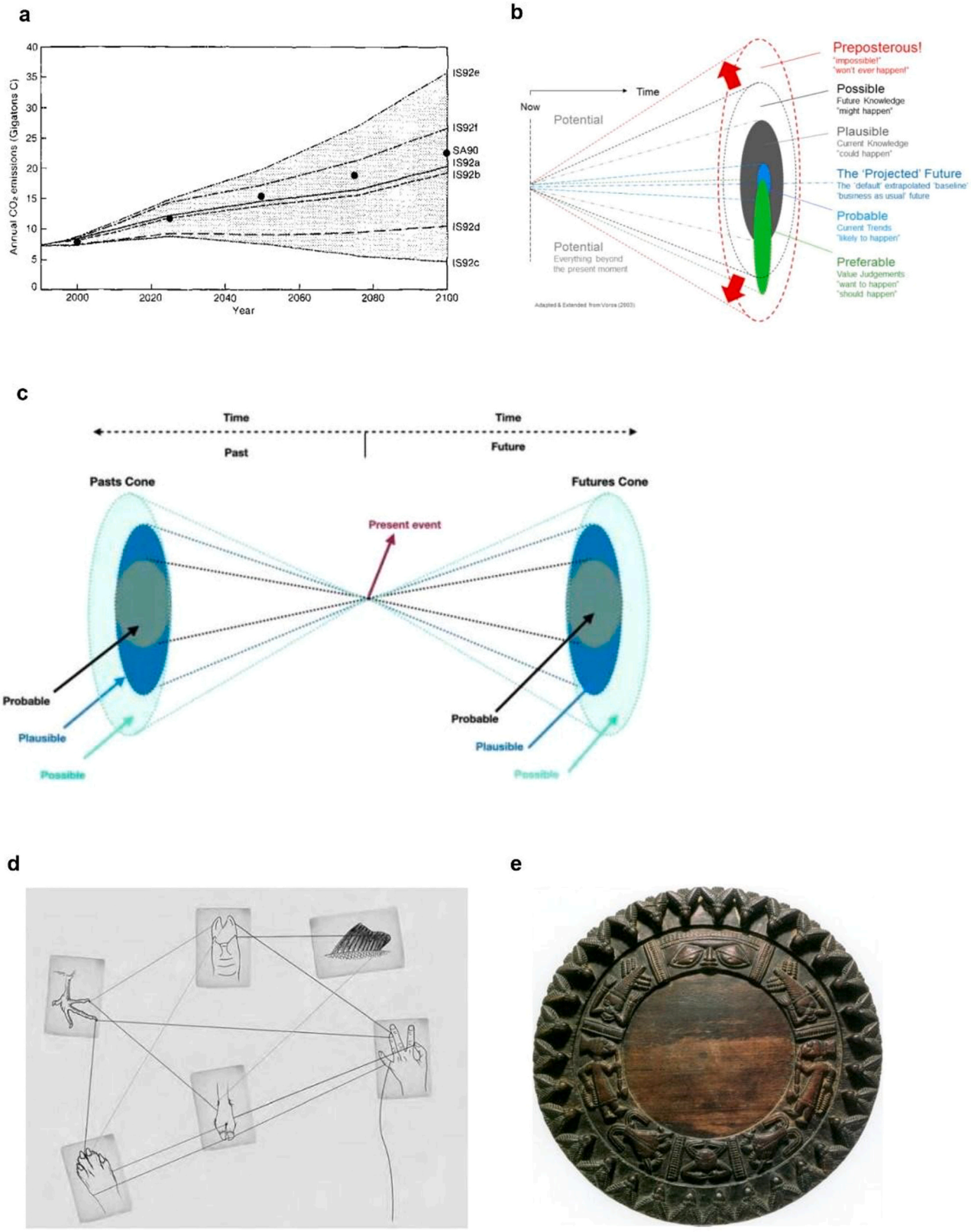


**Fig. 1.** A selection of ways of futuring: a) "Annual $CO_2$ emissions from energy, cement production and tropical deforestation" for IPCC scenarios (Leggett et al., 1992: 81) demonstrate linear projections. b) The Future Cones expand upon a limited range of future projecting, to encourage greater consideration of the preposterous (Voros, 2017). c) The Cones of Everything do not consider more imaginative elements such as the preposterous as in Fig. 1b, but they do expand a way of thinking though, by situating that past, present and future in relation to one another (Christophilopoulos, 2021) (d) The Multi-Species Cat's Cradle string game encompasses futuring as it takes into account complex interspecies interactions across generations (Haraway, 2016 drawing by Nasser Mufti, 2011). e) This Ifa divination tray *(opon Ifa)* is one of many divination instruments curated in the exhibition "Art and Oracle: Spirit Voices of Africa".

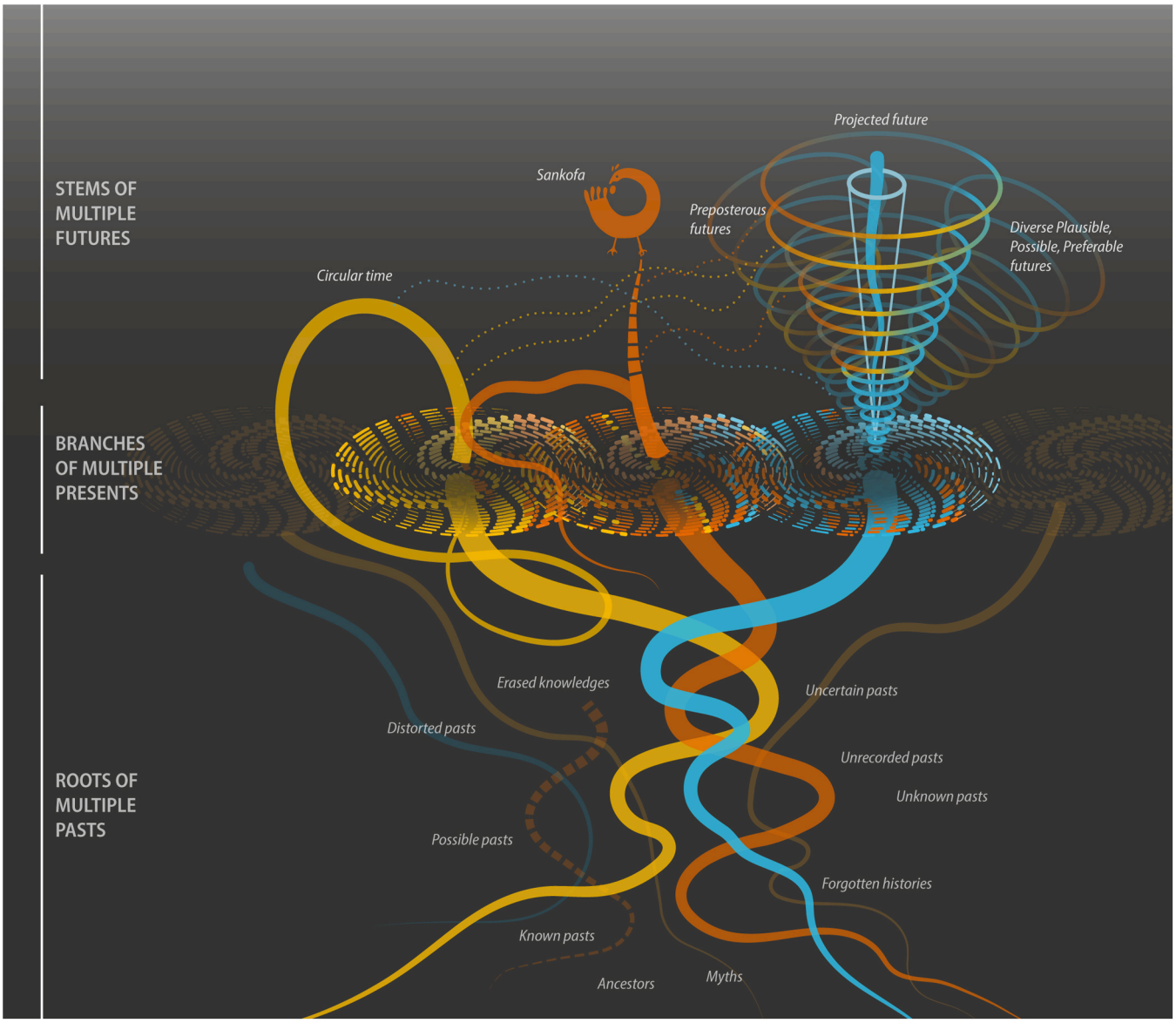


**Fig. 2.** Entangled Time Tree acknowledging the interweaving of multiple ways of knowing the future, linked to multiple presents and threads of multiple pasts. Rather than flowing from right to left, time is conceived as a baobab tree with deep roots in the past referencing the ancestors, and acknowledging the multiple lost and erased knowleges and distorted truths from the past that inform multiple presents from which the branches of the future arise. We illustrate three potential ways of thinking through these future spaces, one that is circular and does not project up, but returns to be grounded in an infinity loop with pasts. The second draws on the Sankofa icon to reference the need for groundedness in the past as the future is navigated. Finally, the multiple time cones draws on the diverse literatures on opening up from projected time and recognising that there are multiple subjectivites informing the boundaries of each cone. Each pathway is porous and can be influenced by each other, referencing the Cat's cradle string game of rhizomatic relations connecting multiple cultures and how there is no singular dominant viewpoint. We offer this heuristic as a talking point for further discussion and more examples from other cultural contexts
Source: Authors.

structure of the baobab tree, we can notice the nested temporalities that connect multiple pasts, presents and possible futures beyond the accelerated and progressive timeframes in Western paradigms. In this way, "baobabizing time" is not just a metaphor, but a decolonial effort to highlight marginalized ways of conceiving time from placed-based thinking that have the potential to empower horizontal collective-making (multidirectional exchanges between roots, trunk and branches), heal relations with other lifeforms (recover ancient story-telling of nonhumans as shape-shifters at a time when baobabs and many other species risk extinction) and diversify future theories by foregrounding ancestralism (the active connections between pasts, presents and futures in African tales and cosmologies). By "baobabizing time" and the future, the Entangled Time Tree connects with decolonial efforts in studies on other Global South places to (e.g. "amazoning time" in Latin American cultural studies), (Castro and Selgas, 2022), aiming to bring to the fore the multi-layered temporalities of the territories from Afro-Indigenous peoples that were violently forbidden or marginalized by past and present colonialisms. Again, we must emphasise that this is an initial offering to stimulate thinking in this area of enquiry rather than a definitive solution to decolonial futures-making.

A core concept we want to emphasise is that envisioning the future is not only a process of transforming the present; it also involves a deep understanding of the multiple stories that led us to be here. The Entangled Time Tree pushes that thinking a step further in the decolonial realm, directing attention to the ways in which past stories have as much relevance to guiding us as those about the future. This schema

encompasses the idea of "a thick present that can no longer be considered a kind of durationless interface between the past and the future, as an infinitely thin boundary between what has been and what will be" (Poli, 2011: 71) or a Spinozan notion of continuous 'becoming'. Instead, the present encompasses all that has been and all that is anticipated (Sommer, 2012). For us, the multiplicities of pasts and presents (whether as events or recalling seasons or celebrations that have come before), are more easily captured, conceptualised and shared as stories that shape us.

### 3.1. Envisioning futures means recognising multiple pasts

> ' By bearing witness to different pasts one is not a passive observer but is able to turn from interrogating the past to initiating new dialogues about that past and thus bringing into being new histories and from those new histories, new presents and new futures.' (Bhabha in (Bhambra, 2014) 116–117.

A key consideration of the Entangled Time Tree is that just as there are multiple futures, and multiple ways to think about the future, these are connected to multiple pasts through multiple presents. The multiplicities of the present are not something that we explicitly engage with in this perspective, but (Yusoff, 2018) starts to deal with this from a blackness, rather than African perspective, through unpacking the concept of the Anthropocene: 'This geologic prehistory has everything to do with the Anthropocene as a condition of the present in all its geotraumas and thus should be embraced, reworked, and reconstituted in terms of agency *for* the present, *for the end of this world* and the possibility of others, because the world is already turning to face the storm, writing its weather for the geology next time." (pg 137). Many decolonial scholars are thinking through the implications of colonial modernity on the present and its embedded inequities, including epistemic injustices (Byskov and Hyams, 2022; Gómez-Barris, 2017; Hickel, 2021; Kulundu et al., 2020; Patel, 2021; Quijano, 2007a; Tappe, 2016; Trisos et al., 2021). With this in mind, we turn instead to the pasts that inform these presents and that might give some insights to the rewriting of potential futures to which (Yusoff and Gabrys, 2011) refer.

Pasts can be seen as a range of stories that vary significantly in their certainty and accuracy of conveying objective events or 'history'. The 'truth' of a past story may or may not be directly related to its ability to impact imagined futures. For example, historical lies (present in colonial education), and romanticization (of tradition, indigeneity and of an idealized past) can and often do guide future trajectories, despite a lack of fidelity to an objective truth. Rosanne Kennedy comments on the discrepancies of who is considered an authority on significant past events in Australia in the context of testimonies of the Stolen Generation where she highlights how historians are just as subjective and emotionally influenced when generating discourses of the past as those giving testimony from lived memories (Kennedy, 2001). We can thus think of the past in terms of known pasts, uncertain pasts, unreported pasts and unknown pasts, forgotten histories, myths, lies, erased knowledge, plausible pasts, possible pasts.

- **The known past**: that which we know to be true and is universally accepted, e.g. All regions of Africa were at some point ruled by European powers, save Ethiopia.
- **The unknown past:** forgotten and erased histories, these are events that may have been experienced, but never recorded or retold, or their retelling has not survived to influence the present. For example, the Weyto language previously spoken by hippopotamus hunters around Lake Tana in Ethiopia is now extinct (Sommer, 2012) and thus stories from this language are lost to the present and future.
- **The unreported past:** that which is not known and cannot be known.
- **The uncertain past:** probable and plausible disputed pasts that have not been proven with certainty. For example, the Ark of the Covenant is held in the town of Aksum, in the St. Mary of Zion cathedral, Ethiopia (Heldman, 1992).

Although the Entangled Time Tree allow us to see multiplicities (pasts and futures) and connects them, the figure still suggests linear thinking, which is not akin to the methods in the form of storytelling that we are proposing, where, rather than connecting in dualistic ways, pasts, presents and futures are entangled in multidirectional ways. Stories from the past (taking the form of folktales, myths, legends and so on) are different types of narratives that span the plausible to the preposterous, recognising that these are subjective categories. These types of stories are likely to contain some element of truth, interwoven with aesthetic untruths, exaggerations, moral guides or intentional misguides. In this context, the emotion and subjectivity associated with stories need not be a downfall, but rather an asset to empower imaginations and creativity of what was, is and could be. As noted by Egan (1992), imagination helps to transcend conventional thinking to envision new possibilities, especially where stable 'facts' and 'data' mix in with shifting emotions, memories and intentions.

## 4. Stories as a central currency for pluriversal imaginaries

Having outlined the importance of re-imagining how we think about the future as connected to pasts and presents, we now delve deeper into the ways in which stories are a core component of how to realise such a decolonial futures approach that tries to centre human-nature relationships in an African context. Across the African continent, traditional oral storytelling materialized in the form of poems and songs, which have played an important role in bringing pasts forward to help guide futures; to see where one is going, one must know where they are coming from. This connection continues to exist to a large extent in many African cultures (Edwards et al., 2009). As in Diop's poem, the connection to the ancestors is frequently paralleled with connections in nature.

"Listen more to things

Than to words that are said.

The water's voice sings

And the wind that brings

The woods to sighs

Is the breathing of the dead.

Who have not gone away

Who are not under the ground

Who are never dead."

Birago Diop, *Leurres et Lueurs (*Diop, 2002*)* originally published 1961

The poetic voice prompts us to listen to the song of non-humans (water, wind, nature) and the ancestors as guidance for the future. In African oral literature, the trickster archetype, often depicted as an anthropomorphised small animal, appears throughout a myriad of folktales across the continent. The tricksters inhabit a liminal space between the human and the non-human, giving them easy access to both sides. In Zambian folklore, Kalulu is a trickster hare providing insights of wisdom. Ajapa, the trickster tortoise popular in Yoruba culture of Nigeria is often depicted as a disruptor of oppressive social structures. Chakijana, a slender mongoose in the imaginaries of the amaZulu of South Africa is the master of unforeseen events, being also portrayed as an advocate of progress whose endeavours often reveal that true progress requires effort. Ananse, the greedy spider trickster originating from the Ashanti oral traditions of western Africa is a symbol of slave resistance as it uses cunning to defy unjust societal structures. If we think about the animism present in African past imaginaries, in which

interspecies communication is commonplace, we can compare this to the "preposterous" of African speculative fiction where future humans have abilities for cross species communication, for example Lauren Beukes "Zoo City" or Nnedi Okorafor's "Who Fears Death" (Pereira et al., 2021b). This fiction embodies animist folktales, and highlights the moral value placed on multi-species interactions and reciprocity. Western Posthumanist scholars such as Karen Barad (2007), Anna Tsing (2015) and Donna Haraway (2016) also explore multispecies interconnectedness as a way to re-emphasise the human-nature-culture interdependencies that disciplinary science turned away from during the Enlightenment (Heise, 2016), but that could be a fundamentally important story from the past to recognise in the present and to amplify into the future.

Stories and storytelling bring together knowledge and experiences from different times and places. They are the threads of entanglement binding pasts, presents and futures in the Entangled Time Tree. As such, we show that African stories can be a mechanism of power and empowerment, a process for healing, and an enabler of diversification (or opening up of potentials) as we use them to think about sustainability futures that centre human-nature relationships.

a) African stories as Power (future as collective making)

By developing futuring capacities, stories and storytelling give storyholders and writers agency to shape the future they wish to live in. Co-developing future scenarios is one way of democratizing the future (Feukeu et al., 2021), taking this power beyond the hands of specific power structures and policy institutions. Whilst Eurocentric notions have colonised not only the past, but also time itself whilst seeking to colonise the future, Africans are seizing the epistemological freedom to ideate not only upon its own futures, but also to contribute to tackling global systemic crises (Feukeu et al., 2021; Ndlovu-Gatsheni, 2018). In the race to 'sustainability', African nations and peoples have often been marginalised from the political discourse, largely being the recipient of others' preferences. There is danger in this passivity, but power in taking Africa as a point of departure, to seize hold of other options for the future–not only for Africa, but for the world (Mbembe and Sarr, 2022). As Hartmann et al. (2012: 111) notes, 'if you can't see and relay an understandable vision of the future, your future will be co-opted by someone else's vision, one that will not necessarily have your best interests at heart".

There is increasing recognition that the future is African, and many are stepping up to carry the mantle. For example, Africanfuturism draws from genres of African myths and folklore, music and visual art, religion, spirituality, oral culture, and science fiction and fantasy. Themes of identity, temporality, technology, art, ecology, and magic are prominent (Weheliye, 2014; Womack, 2013). The Afro-Cuban author Eric Mota in the novel *Habana Underguater, Completa* offers ways to connect technology and cyberpunk to Yoruba and Orishas religiosity in ways that break the traditional divide between technology vs cosmology sustained in Western cultural paradigms (Mota, 2010). A recent urban exploration uses visual and literary interpretations of different ways to unseat the "African smart city" imaginary to be "more critical of what we determine to be smart, sophisticated and intelligent" when it comes to smart African cities and leaves the reframings to the interpretation of the author (Karuri-Sebina and Govender, 2021: 2,7). It is a contemporary example of seizing epistemological freedom by acting to capture the imagination through arts and culture. Such decolonial imaginaries (Pérez, 1999) can offer potentially transformative options, embedded within local practice and culture.

Stories are also how knowledge and wisdom regarding how to live well in a landscape is transferred. Take this Somali poem, for example:

The best dance is the dance of the Eastern clans,

The best people are ourselves,

Of this I have always been sure.

The best wealth is camels,

The *duur* grass is the best fresh grazing,

The *dareemo* grass is the best hay,

Of this I have always been sure.

Original source unknown, recorded by Andrzejewski and Lewis (1964)

It is a proud celebration of a culture, but with useful information about which grass is best suited for particular purposes is also communicated with simple clarity. In contemporary times, so much value is given to digital mechanisms of knowledge storage and transmission, however oral traditions are critical in that they promote continued relations with place, where knowledge and wisdom is kept alive and dynamic through continued social practice with the land and sea. Once again acting as the string connecting across not only place, but also time. This brings heightened importance to re-enlivening not only old stories, but also the knowledge that they offer, and through that to grant power to multiple ways of knowing and being in the world.

b) African stories as Healing (future as multispecies justice)

The need for healing emerges from generations of trauma, oppression and disregard, referred to as a state of 'multiple woundedness' by Nicaraguan psychologist Martha Cabrera (Cabrera, 2002). In previously colonised countries in Africa, progress is often associated with becoming "more Western", and moving away from such limiting ideas requires healing. Furthermore, the processes of collective healing from traumatic eras, such as colonialism and apartheid, opened up possibilities of hope and dreaming (Johnson, 2020). Esther Armah suggests that "Emotional Justice" for African and African descended people ought to be attended to through storytelling – and other artforms (Armah, 2012). Historians and psychotherapists have brought to light the challenges and benefits of working with stories and collective myths as narratives of identity formation and trauma processing (Denis et al., 2011; Field, 2008).

In Africanfuturism, Nnedi Okorafor, in "Who Fears Death?", makes the trauma of ancestral racial violence a central motif, where the central character, Onyesonwu, set out to seek revenge from the white powerful warlock, and father, who raped her mother (Okorafor, 2010). Through her magical powers and connection with the natural world, Onyesonwu harnesses the power of this trauma to rewrite the dominant narrative of racial hierarchy and genocide in this far-future post-apocalyptic world. Along her journey she navigates desert storms and a controversial coming of age ceremony. Thus, the natural world and traditional practices are portrayed not only as her spiritual guides, but also as treacherous and flawed. Ekpe Inyang's *The Hill Barbers*, is a blend of poetry and narrative dealing with water shortage in Africa in tandem with the destruction of traditional forms of rainwater harvesting and shifting cultivation to call attention to loss of biocultural diversity in regions where climate change is a tangible reality (Nsah et al., 2019). It offers a call to remember and reconnect to cultural practices in order to navigate the challenges brought about by the Anthropocene/Capitalocene/Chthulucene (Haraway, 2016).

(Gram-Hanssen et al., 2021)1) call upon four relational sensibilities required of transformation researchers working in a decolonial space: "listening deeply, self-reflexivity, creating space and being in action". The act of storytelling and story-listening helps to engage these sensibilities, by framing relational dialogues that could act as part of a healing process. It is vital in building alternative futures to be able to acknowledge the traumas of the past as they continue into the present and cycle through generations, and to use the healing power of stories to offer emancipatory narratives of what could be that does not perpetuate these burdens. Some of the threads through time can encounter and entangle and can alter perceived trajectories.

c) African stories as Diversification (future as ancestral conviviality)

Recognising multiple perspectives brings greater cohesion and resilience through a wider variety of worldviews and anticipatory systems to comprehend and move through current challenges (Tengö et al., 2014). Different perspectives, worldviews and voices exist within the "African", yet African identity is often restricted to a singular traditionalism, which can be treated as a static box that is not allowed to evolve. However, as with all cultures and identities, 'Africanness' is in fact diverse and dynamic, evolving and changing with no single reference point. It is not only that there are different stories from across an entire continent to be represented, but that these stories might also signal a variety of anticipatory systems in use, which is to be expected in various time-space contexts (Miller and UNESCO, 2018). Holding such plurality is, however, challenging and ensuring inclusivity of whose perspectives are represented remains a challenge of participatory practice.

The IPBES conceptual framework on human-nature relationships highlights the importance of multi-stakeholder engagement with an emphasis on indigenous and local knowledge (Díaz et al., 2015). In a period when organisations are clawing to increase their diversity metrics, and indigeneity is 'on trend', it is necessary to engage with such notions of participation with reflexive caution. "Kabusha Takolelwe Bowa";"*The one who asks first, does not ingest the poisonous mushroom*" is a Bemba proverb from Zambia, reflecting the intention of cautious, but meaningful engagement. When attempting to expand the diversity of voices being represented in narratives of biodiversity preservation and nature, it is important also to traverse with care through risks such as romanticization, traditionalization and appropriation. Whilst diverse, intersecting oral histories play a role of myth-making in the building of culture and the shaping of societies, Field (2008) cautions that the emphasis on oral histories as an liberatory tool for oppressed communities is overly romantic.

The point is thus not to see Indigenous and Local Knowledge Systems as objective truth, but rather to listen to the elements of nuance, contradiction and convergence that exist within and across different forms of knowledge and strive to understand these in their situated context, to practice the weaving of multiple knowledges as evidence (Tengö et al., 2014, 2017). Beliefs and customs evolve at their own pace via processes of transmission and ancestry involving temporal and spatial changes (d'Huy, 2016). Yet, when customary practices are codified into constitutional laws, they risk to become static, and detrimentally so. For instance, this was the case of the BaTonga people of north-western Zimbabwe, who maintained deep connections and everyday interactions with Nyaminyami- the all-powerful serpentine--shaped spirit embodying the Zambezi river. The many functions attributed to this supernatural being supported flourishing agriculture and environmentally sustainable behaviour for centuries (Matanzima, 2022). Yet the cultural significance of Nyaminyami started to change during the colonial times, culminating with the building of the Kariba Dam in the late 1950s. With the river disappearing, Nyaminyami became invisible and people no longer perceived it as the protector of the people, but as malevolent and unkind, causing unprecedented floods and loss (Matanzima, 2022). If customs had been allowed to evolve freely, what alternative present and future visions might be seen? Furthermore, if aspirations to Western-ness are shed, for example in the context of post-colonial education on the continent, how does that open up ways of seeing and imagining the future? What does the return of a benign Nyaminyami look like? There are a plethora of potential pasts-futures-presents that can be enabled or restored through a deeper recognition of diverse belief systems. A critical role for research is to be able to hold a space for inclusive story-telling that can be used for more effective decision-making as we enter a period of existential threat to the planet's lifeforms.

### 4.1. Reflections and further development

The decolonial approach to the future outlined in this perspective provokes as many challenges as it does opportunities, and thus remains inadequate. This inadequacy is not viewed as a problem, but rather as a humble invitation for deeper inquiry into unmarked terrain. Fig. 2, especially, should be seen as a work in progress to be able to capture the non-linear complexities in a 2-D image. In order to deepen the capacity of this approach to futures thinking for nature and biodiversity in the African continent, we offer some areas for further engagement:

i) Exploring complex dynamic African identities

Identities embody plurality. Cultural imperialism has threatened African identities, with the aim to weaken cultural ties through undermining a sense of belonging. Throughout this perspective, we have tried to be specific about the contexts and associated identities referenced, however we recognise that identity is more than just race, nationality or cultural group, and African identities are entwined with others through continual migrations. As Quijano (2007b) argues, race was imposed as the basic criterion for social classification of the entire to meet the needs of Eurocentric capitalist power. Thus, whilst we have centred an African perspective, we can also consider implications at global and non-African scales and recognise the relevance of opening up this discussion beyond the continent. However, what we do want to emphasise is the centrality of African agency and experience as the basis, in all its messy complexity.

ii) Understanding the role of Indigenous Local Knowledge (ILK) and Traditional Ecological Knowledge (TEK) in an African context

It is important that in making these connections between past, present and future, one should not uncritically place the past upon an unvetted pedestal, nor romanticise traditional customs. Indeed, some practices of the past may not have a role in a desirable future for people and nature. Whereas in the Americas and Australasia, the concept of ILK has been relatively well defined, it should be recognised that this may need to take a different meaning in African contexts. Through this, there is a continuous need to identify the custodians of such cultural knowledge and the forms of ecological stewardship that have been developed, following the precedent in biocultural stewardship studies. Such an engagement can ensure cultural practice is allowed to shift and shape itself according to the needs of the present and future.

iii) Decolonising imaginations to open up possibilities

In his introduction to 'possibility studies', Escobar points 'at the need for a renewed effort on the part of the critical imagination to begin in earnest the difficult but absolutely necessary intellectual-political task of transitioning beyond the constraints on thought imposed by the onto-epistemic configuration of Western modernity' (Escobar, 2023: 1). The imagination is a powerful tool in the quest for transformation onto more sustainable and equitable trajectories (Moore and Milkoreit, 2020). However, when it is framed only from one perspective, is can become locked into perceiving only a certain set of alternatives, which is how we see techno-optimist fixes dominating the sustainability solution space. Such restricted imaginations confine the stories of what's possible to those of the contemporary dominant narrative. However, as Kearney (1998) suggests there is a need to rehabilitate the narrative imagination 'because the imagination has the power to connote absence into presence, actuality into possibility, what- is into something—other-than-it-is'. A project to decolonise imaginations and therefore give rise to countless possible futures is, we think, a necessary endeavour in navigating the Anthropocene and requires further engagement and could have significant implications on what we think of as futures literacy and how we

undertake foresight. As Yusoff and Gabrys (2011: 529) state, 'our ability to imagine other possibilities, to embrace decidedly different futures with creativity and resolve, to learn to let go of the sense of permanence we may have felt about certain landscapes that have seemed to be always so, and to embrace change, is paramount to building resilience and adaptive capacity'.

iv) Moving beyond Anglophone-accessible texts and contexts

Whilst English affords vast intercultural communication, there are also limits to its use, with cultural nuances becoming lost in translation. Furthermore, there is a crisis in the inheritance of a colonial language and culture in Africa elucidating negative consequences for biodiversity and nature conservation as biocultural diversity is diminished. Whilst there are over 2000 languages in Africa, only 29 are used as national official languages, with 9 of those codified in the South African Constitution. Not only colonial languages, but also other African languages have endangered marginalized languages (Swanepoel, 2013). A diversity of language also needs to be a central focus of a decolonial futures project. This needs to be taken seriously in academic practice that aims to be more inclusive in its quest for solutions to address sustainability.

## 5. Conclusion

In describing a UNESCO Futures Literacy Lab for young citizens for a sustainable planet, the workshop leaders described that "the visions of 2040 continued to resemble the problems of today. For instance, troubles such as the threat of terrorism loomed large, even if it was hoped that in the future development of aviation technology and cognitive robotics would solve the problem" (Marasco et al., 2018: 182). Examples like this demonstrate the limitations of the imagination to conceive of radically different futures where things could go right. We are indeed surrounded by dystopian stories of how bad our current trajectory in the Capitalo-Anthropocene is for people and planet (Bennett et al., 2016). Indeed, modernity's science fiction depicts cultures of catastrophism, which have displayed a distinct fascination with disaster at moments in history, as in the present moment, when it has become easier to imagine the end of the world than alternative futures (Yusoff and Gabrys, 2011). Although narratives of risk and disaster have their place, the emancipatory agency of being able to imagine and enact a desirable future for oneself and one's people should also not be underemphasised.

Whilst there is much to be anxious about globally relating to climate change and biodiversity destruction and social unrest, many would argue that several communities in Africa and the Global South in general, as well as indigenous peoples have already undergone an apocalypse induced by colonial dynamics, and somehow navigated through (Whyte, 2020). Hence, the 'crisis' narrative to act immediately, fed by dystopian conceptions of the future, negates alternative framings of time that offer more time for reflection, such as that offered by Whyte (2021) who refers to 'time as kinship'. Furthermore, focusing on histories of the future, historian Thomas Moynihan (2020) argues that the concern with the loss of a future and the coming of an uninhabitable planet lies rooted in Western culture and has its onset in the Enlightenment. This crisis narrative erases the experiences of countless peoples and non-humans that have experienced the end of the world due to colonialism or capitalism and we argue that it is necessary to bring these perspectives back in order to chart a more equitable and sustainable trajectory with caution and humility.

When looking into the future of the African continent, we cannot only glance into an apocalyptic crevice, rather we should be peering into a realm of possibility and resurgence. Forms of animism, prophecy, dreams, collective singing and oral storytelling are a crucial part of envisioning futures that have historically been violently suffocated and considered inferior forms of knowledge. Here we have offered that by engaging with different modes of storytelling - speculative fiction, traditional cosmologies, oral histories and stories- Africanfuturism has the potential to bring together narratives for decolonial imaginaries that span timescales and nurture more threads of connection.

Throughout we have maintained that there is a diversity of ways of futuring, and so we offer the Entangled Time Tree heuristic that emphasises a multi-storied, and thick set of presents from which to imagine many futures, embedded in and cycling through multiple pasts. From this place it may be possible to live beyond values of extraction, violence, profit maximisation, and collapse, and instead towards a more spirited awareness of entangled human-nature relationships across time, founded upon values of reciprocity and justice, or Ubuntu. From this place we pose that it might be possible to hear differently about how multiple pasts and presents act as guides to reimagine potentially better futures. This is not about grasping at utopia, but about generating a more diverse agency of how preferable futures can be imagined and animated.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data availability

No data was used for the research described in the article.

## Acknowledgements

This work has been made possible through a grant by the Swedish Research Council FORMAS Project No. 2020–00670 and through the Future Ecosystems for Africa programme in partnership with Oppenheimer Generations Research and Conservation.

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