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ARTICLE

# Queering Apocalyptic Methodologies: Enacting the Utopian Performative through Extended Reality Artwork

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**Abstract**

This paper takes its cue from Koro and Wolgemuth's conceptual writing on Apocalyptic Methodologies as an extended prompt to enact the utopian performative as a form of generative Queer Ecopedagogy. A utopian performative is the performance of future potential that critiques our present political moment, highlighting that the present is not enough. The paper offers a troubling of "nature" and place, in its suggestion that digital space can be a refuge for EE practice. It looks to virtual reality as a realm used to create space free from the constraints of colonial history or normative prescriptions of the non/human binary. The VR artwork Thalu: Dreamtime is Now, by Indigenous Ngarluma creator Tyson Mowarin is analysed to make a case that the digital realm can act as a reclamation and resistance to present colonialist realities, thereby enacting the utopian performative. By queering apocalyptic methodologies, the aim is to transcend traditional boundaries and reimagine the role of researchers, educators and custodians of the environment through apocalyptic imaginaries. In this endeavour, the utopian performative is only permissible through the digital space and therefore the political present, is not enough.

**Keywords:** Apocalyptic methodologies; digital art; queer ecopedagogy; utopian performativity; virtual reality

> *We live in a world that is both coming undone as much as it is becoming.*
>
> (Russell, 2021, p.2)

> *To challenge settler colonial perception requires reorienting the form by which we share knowledge, . . . this involves reorienting the normative places, flows, and relationships wherein we share this knowledge.*
>
> (Robinson, 2020, p. 15)

> *Through technology, First Nations people make an uncolonised world virtually real.*
>
> (Anderson, 2018)

A glib listing of the environmental disasters the world faces would not suffice by way of introduction, yet they cannot be ignored. Reports, such as those from the Intergovernmental Panel on Climate Change (IPCC, 2023), detail the current and impending impacts, which are already

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being felt by communities and the ecosystems supporting them. In Australia alone, the past five years have witnessed wildfires, floods and droughts. The emergency has transcended its status as an existential threat of impending destruction and has become a political reality. As Koro and Wolgemuth (2023) so aptly put it, '[w]e are "in" the apocalypse now' (p.654). In this capitalistic, individualised system, the environment is a resource to be extracted from to aid (certain) human life and capital. Hierarchies of worth mean that the non-human's use-value exists to privilege the (white, cis-gender, able-bodied) Human. Exploiting natural resources is considered reasonable because they are valued less than human worth. A privileging of the Human hierarchical order of domination and acquisition has led the world to the climate emergency that we face (Haraway, 2016; Shotwell, 2016). The restrictive and isolating rhetoric around what is human or who is more human than others affects how the outcomes of this crisis are felt. The climate emergency is unevenly distributed: Pacific islands slowly sink, extreme weather displaces historically marginalised peoples, and gender, racial and economic disparities make some groups more vulnerable to these changes, with their lives deemed less valuable (Butler, 2004).

Within Australia, the 2023 referendum to recognise First Peoples of Australia in the Constitution and give Indigenous Australians a voice in parliament was rejected (NIAA, 2023). This outcome too, represents the devaluing of certain groups within the Australian system and its socio-political frameworks, and a denial of the past and present wrongs born from the attempted genocide of colonisation. The systematic disparities that exist are glaring and were actively supported through the outcome of the 'no' vote by much of the Australian public. How then, can a space be created that is free from the constraints of colonial history, where the violence of the system enacted across species, lands and ecosystems, is dissolved? If we are in the apocalypse; if the emergency is so insidiously multifaceted, what can be done and how, and where does Environmental Education (EE) and its political ecologies sit amongst this? In thinking what this means for Environmental Education political discourse, what can be learned? Is it about deep listening, or slow attunement, and if so, paradoxically, do we need to do this at speed?

There is no one saviour in this story, and no one solution. Clearly, a quick fix is impossible. In this paper, I propose some actions shaped through scholarship and offer outputs that while place-based, are digital in nature and are therefore not directly experienced in place. Namely, I look at a virtual reality (VR) artwork directed by Ngarluma man Tyson Mowarin (2018b). This work is but one amongst many Extended Reality (XR) artworks made by Indigenous Australians, with First Nations stories and representations as the focus (Anderson, 2018; Harle, Abdila, Newman, 2018). My analysis is twofold: it critically examines "the political" within current systems, driving activism and anti-colonial efforts, while also celebrating a contemporary digital space that fosters decolonisation. In both instances, the digital realm is presented as a performative space for place relations.

## Digital space, place and kin

Just as Western imperial logic contributes to uneven power relations, the digital technology within these structures advances extractivist business practices that propel industry forward. The top-down control that these systems promote, is again, another binary. Technological systems are harnessed to fix mistakes created by previous technologies, or utilised by some, to leave the world burning while they find life on other planets. The dominant system continues to be propped up in a destructive march forward. In their call to 'decolonise the digital', Harle, Abdilla, and Newman (2018) reiterate this view, noting the beliefs constructed in a positivist Science 'reproduce bias and inequality at a cost to the environment' (p. 10).

Science and technology are culturally loaded practices of access and privilege (ibid; Ellison, 2016; Elwood, 2021). However, technology can serve as a powerful tool to dismantle colonial power structures and amplify repressed and silenced voices, knowledge and histories. It has the

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potential to challenge and reshape the historical narrative that has traditionally excluded those outside the dominant system (Crawley, 2016; Elwood, 2021; Russell, 2012). If digital technology offers this opportunity, question Lewis, Arista, Pechawis and Kite (2018), how can the online world be positioned alongside Indigenous territories, creating agency, belonging and embodiment to specific lands? They argue that in essence, the framework of relations towards technology and machines needs to fit into an Indigenous epistemology of kinship networks. In this worldview, humans are not central to ways of knowing; rather, they are integral parts of kin relations that collectively form our 'computational biosphere' (p. 2):

> Indigenous epistemologies are much better at respectfully accommodating the non-human. We retain a sense of community that is articulated through complex kin networks anchored in specific territories, genealogies, and protocols. Ultimately, our goal is that we, as a species figure out how to treat these new non-human kin respectfully and reciprocally - and not as mere tools, or worse, slaves to their creators. (ibid)

Kanien'kehaka (Mohawk) artist and theorist, Jackson 2Bears aligns this belief with Indigenous animism where all elements of the universe, even seemingly inert objects, are believed to possess life and spirit. He agrees that this perspective of animism extends to technology. He conceives of an *Indigenous Theory of Virtuality*:

> that does not rehearse the usual codes of disembodied immortality, and one in which our narratives and stories as Indigenous people find new meaning – where ensoulment and an internalizing [sic] bond is formed, where an Indigenous "psychology of place" becomes also a "psychology of virtuality". (Jackson 2Bears 2010)

From an Australian perspective Harle et al. (2018) note the promise of digital technological storytelling that promotes an Indigenous worldview as a step towards a decolonising space. This is not a finished endeavour but a process that goes forward in 'the active awareness of the pathology, implicit racism, cultural assumptions and bias within Western systems and the championing of the repressed and silenced voices/knowledges/histories which challenge the historical narrative that excluded them' (p. 10). As I will explore below, XR place-informed work that privileges Indigenous stories and worldviews are politically critical spaces that can be harnessed within EE, as spaces of learning and encourage counter-hegemonic activism.

As I write, I am acutely aware of my position as an uninvited settler on the lands where I grew up. My childhood and education unfolded in inner-city Naarm/Melbourne, Australia, on the traditional lands of the Wurundjeri people of the Kulin Nation. It was not until my university years that I encountered Indigenous place names. I acknowledge the privilege inherent in my education and upbringing in Australia, facilitated by the 'invisibility' of white skin. Recognising that all knowledge is partial, it is crucial to consider the intersectional effects of structural oppression, where power dynamics shift across groups and individuals in various contexts and configurations, as I analyse the impacts of XR in EE (Cho, Crenshaw, & McCall, 2013). I approach Indigenous Australian content and issues from the perspective of a white settler. While striving for an anti-colonial framework in EE, I remain part of the colonial system and cannot deny this reality. Consequently, Indigenous-led XR serves different purposes for different people. My aim in this paper is not to appropriate Indigenous land relations. My queer ecopedagogical and counter-hegemonic analysis aims to disrupt existing hierarchical structures and propose new ways to integrate Indigenous knowledge and practices within current educational frameworks. I have cited Indigenous scholarship to underscore the power of the digital as a possible decolonised/ing space, and noted the *ensoulment* mentioned above by Jackson 2Bears. In contrast, this paper reflects my own exploration of digital art practice as an educative tool in EE, fostering a politics of resistance and critique against prevailing colonial perspectives. I am aware of the political complexities of

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these two differing positions, where culture, history and for some its attempted *erasure*, are experienced and presented differently.

## Queering Apocalyptic Methodologies: the capricious nature of our world

I take my cue from Koro and Wolgemuth (2023), who propose a change in methodology within EE that they term *Apocalyptic Methodologies*. They hypothesise a methodology that embraces the unpredictable and capricious nature of our world. It moves beyond a notion that methods and situations must be controlled in a strict adherence to Enlightenment assurances of a singular truth. They argue that '[t]hinking only the thinkable leaves citizens and scholars stuck. As such, the apocalypse is a useful solvent for stuckness, simultaneously thinkable and unfathomable' (p. 655). This re-thinking or *unthought* as they term it can exist within and outside the academy. A methodology that is not static, is ripe as a tactic to confront the folly inherent in the prevailing extractive and utilitarian paradigms that seem entrenched within our academic disciplines and institutional frameworks. The rigid adherence to methodologies that treat method as stagnant, inert and singularly interpretable becomes complicit in these extractive logics, where knowledge is commodified and wielded as a tool of authority and power, traded and reclaimed as if it were a coveted prize for the "deserving" (Haraway, 2008; St. Pierre, 2021). Instead, a dynamic approach to learning and teaching in EE, one that accommodates uncertainties has become necessary. Place, context and locatedness are key. We are in the apocalypse, not waiting for it, so the urgency of learning to reconsider the 'known' is happening in the now and is also always being adapted in the now of the local and contextual. Following Koro and Wolgemuth, inquiry needs to be grounded in a perpetual interrogation of our current actions, the realities we are shaping, and the potentialities inherent in emerging contexts. This is integral to the politics of collectivity, community, relationality and responsibility that is necessary with an ethics of Apocalyptic Methodologies:

> [A] real/becoming/imaginary apocalypse enables us to (un)think what is currently thinkable, to postulate, speculate, and hesitate as we stretch to imagine inquiry and knowing in more immediate and deeply responsive and responsible ways of living and inquiring. (p. 652)

Apocalyptic Methodologies are optimistic because they work with what is at hand. Koro and Wolgemuth point out the difference between apocalypse and catastrophe, the latter suggesting an end time or termination, whereas an apocalyptic perspective shapes our perceptions of future possibilities and temporal promise. In their words, 'apocalyptic thinking offers more perpetual and potential event horizons' (p. 604), whereas with a catastrophe, everything is already lost so there is no reason to move forward. The *potentiality of the possible* is of interest here, as it is joyful and dire all at once. Here, events and their consequences are ongoing and theoretically limitless in scope. With Apocalyptic Methodologies, the futurity at play is not predictable, so the present moment must be grappled with in the immediacy of the relational. Through Apocalyptic Methodologies there is no singular or correct way that teaching and learning must exist. There is not a rigid curriculum marker or end point.

Working with a methodology that is fluid, ongoing and becoming, is a queer methodology. Just as Apocalyptic Methodologies are not singular, queerness rejects binary thinking, and questions proscriptive categories of what is considered 'natural' or 'normal'. Queerness celebrates the relational, is always dynamic and never rests on a singular definition (Sedgwick, 1990). Queer practices reject essentialising ideas around fixed and innate sexualities and rejoice in an open embrace of however one wants to live their gender, rejecting dualistic assumptions around a 'proper' way to live a life. Queer practices comprehend the mechanisms of control linked to shaping individual identities, which are constructed by systems of power that prioritise patriarchy, racism, classism, colonialism, heterosexism, the able-bodied, the neurotypical and cissexism.

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The logics around hierarchies of placement and categorisation extend further into an attempt to break the human-non/human bind (Giffney et al., 2008; Tallbear, 2011), where entanglements of matter are relationally interwoven and shifting, rather than being segregated and contained (Barad, 2007).

Russell (2021) writes about these discursive inter-weavings through his concept of queer ecopedagogies, which "are counter-hegemonic, and thus not only seek to negate but to *undermine* the logics and values of a dominant, Capitalist, colonial worldview that persists in destroying life" (p. 2, emphasis in the original). He views queer ecopedagogy as a deliberate approach to knowledge and action aimed at complicating discussions within education, pedagogy and cultural narratives, which either amplify or suppress that which lies beyond the limitations of what's considered 'natural' or 'normal'. Just as with queer theory, he states that '[t]here is not a consensus on what is queer about nature, pedagogy, gender, or sexuality ... so a queer ecopedagogy movement should be thought of as plural, as a home for multiple pedagogies' (p. 2). I take this as a scholarly cue from a queer ecopedagogical position to *queer* Apocalyptic Methodologies. Ultimately an Apocalyptic Methodology is already queer in nature, however, in claiming its queerness, I propose a methodology that is counter-hegemonic upfront and following on from Russell's quote above, seeking '*to undermine the logics and values of a dominant, Capitalist, colonial worldview*' (ibid, my emphasis). I will analyse how a VR artwork can function as a utopian performative, which acts as a queering of apocalyptic methodologies for EE.

## The Utopian Performative: what should be

The Utopian Performative was theorised by Muñoz (2006) who built on Ernst Bloch's proposition of utopia, emphasising the *potentiality* of the future, which Muñoz calls Queer Futurity. This anticipation of potential does not yet exist but is on the horizon. He asserts that '[u]topia is not prescriptive; it renders potential blueprints of a world not quite here, a horizon of possibility, not a fixed schema' (p. 97). Muñoz cites Theodore Adorno's definition of utopia as 'the determined negation of that which merely is', suggesting this negation points towards 'what should be' (p. 64). Utopia is contradicted by the present we exist in. Therefore, a queer ecopedagogy that performatively insinuates a better time and place, is creating a utopia that can be felt and understood but does not exist now. It is recognised now and a promise for the future, but it will also never be able to occur due to our current, present circumstances. This recognition of the potential for utopia, that if our present was in some way different, utopia could be achieved, is a queer futurity. The *potentiality of the possible* that Apocalyptic Methodologies can encourage is also at work. In recognising what should be in the future, the present can be responded to in the now again and again. Citing Swyngedouw, Koro and Wolgemuth write that in terms of environmental apocalypse, the '"apocalyptic future, forever postponed, neither promises redemption nor does it possess a name"' (2010, as cited in 2023, p. 655). They therefore conclude that 'unthinking the thinkable enables us to act without "proper names" and common signifiers' (p. 655). I suggest that a presentation of the utopian performative runs parallel to that of the apocalypse in reference to time, and also in reference to possible potentialities. Both are on the horizon but not yet here and both modes can be methodologically thought. Adding enactments of the utopian performative to apocalyptic methodologies in essence queers it by recognising that responses must happen in the now of the relational, while also adding a counter-hegemonic push to this method. Methodological approaches that can enact this exist in art practice. Art practice is particularly effective because it transcends traditional discursive boundaries, allowing for imaginative and experiential engagement with complex concepts and politics, thus nurturing a deeper understanding and embodiment of a queered apocalyptic methodology. Art practice can be a powerful means of transforming how meaning is shared. It has the potential to disrupt

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settler colonial understandings, challenge established narratives and move beyond singular interpretations.

Following this notion, Muñoz aligns the idea of *what should be* with Bloch's aesthetic theory, which focuses on the anticipatory illumination of art:

> A Blochian approach to aesthetic theory is invested in describing the anticipatory illumination of art, which can be characterized [sic] as the process of identifying certain properties that can be detected in representational practices helping us to see the not-yet-conscious. This not-yet-conscious is knowable, to some extent, as a utopian feeling. (p. 3)

Aesthetics holds political potential by enabling us to envision a future where the not-yet-conscious becomes conscious, extending current material into future possibilities of being different and improved (Bloch et al., 1995). For Muñoz, recognising the potential for a better future is a rejection of the oppressive present. Art awakens us to future potential while highlighting the discrimination inherent in our current political reality. The anticipatory illumination in art offers glimpses of future possibilities. These are not fantasies but hopeful anticipations. There is a horizon of possibility within utopia, which transcends the present to other times with better potential. The present, as Muñoz describes, is dangerous for queer bodies, especially those who are not white. While the political potential for a different and better future exists now, it is not realised in the present. These are not fantasies but hopeful anticipations. A utopian performative is the performance of future potential, creating a space in the horizon, unfixed in time and ongoing. It critiques the present moment without dictating its futurity.

The connection between Koro and Wolgemuth's work and Muñoz's concept lies in their shared emphasis on the transformative potential of anticipatory practices. Both frameworks challenge the dominant narratives surrounding catastrophe and oppression, advocating for a reimagining of alternative futures. Koro and Wolgemuth's call to 'unthink the thinkable' echoes Munoz's insistence on the importance of envisioning utopian possibilities as a means of resistance and empowerment. Whether through the act of unthinking established paradigms or through the performative gestures of marginalised communities, there exists a shared recognition between both these concepts of the power of the speculative and the artistic in effecting political change. In this sense, Koro and Wolgemuth's apocalyptic methodologies and Muñoz's concept of utopian performativity converge in their commitment to challenging hegemonic structures and fostering alternative visions of the future, following a queer ecopedagogy. Within EE, by promoting the idea that the future can be different and better, but only if the present is changed, educators can encourage questioning and resistance to the exploitative practices and policies rooted in dominant paradigms such as colonialism and anthropocentrism.

From a queer ecopedagogical perspective that is active in offering a counter hegemony, and particularly an anti-colonial position, I would now like to *unthink the thinkable not-yet-conscious* that digital XR can offer in EE pedagogy. As Elwood (2021) notes, 'digital objects, praxes and ways of knowing always contain possibilities for unanticipated forms of agency, subjectivity, or sociospatial relations' (p.211). The extended spaces that XR offer are social and material. As I will go on to argue through the aesthetic and speculative, they enact the utopian performative as both a counter-hegemonic anti-colonial gesture and a storying of relations presenting futurity. I offer a reading of the virtual reality (VR) work *Thalu: Dreamtime is Now* directed by Ngarluma man Tyson Mowarin, with concept art by Stuart Campbell (also known as Sutu).

## Thalu: Dreamtime is now

In the Ngarluma language, "Thalu" signifies "totem" and culturally refers to sacred ceremonial sites. In the VR artwork the 'thalu' serves as a spiritual portal linking two realms. It transports

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participants into the Spirit World, where they encounter their guide, Jirri Jirri. In the game, Jirri Jirri turns into human form and introduces participants to the spirits of the elements, land, plants and animals, teaching them about the interconnectedness of these spirits and the natural world with humanity. As Mowarin explained in an interview (2018a):

> you're taken down into the Burrup, or the Pilbara - it's all the same sort of landscape - surrounded by all the ancient rock that holds on the petroglyphs, the rock art. Each of the virtual spaces is typical Pilbara landscapes. The spinifex. The specific or the iconic Pilbara rocks landscapes, some of these rocks are unlike anywhere in the world, or anywhere in Australia at least. Each of those worlds is what I call the cultural or the spiritual warehouse, where the spirits of all those elements, flora and fauna, live. (Mowarin, p. 148)

It can be difficult to fully communicate the experience of this work in the written form, as the way it is related to is *bodily*. Meaning is created through an embodied form of communication. Below I will attempt to explain what the experience of interacting with this artwork was for me personally:

*I am in an office-like space with a physical guide who explains how to put the VR headset on and makes sure it is calibrated for my eyesight and hearing. He explains that I can move around and that he will make sure I don't bump into anything. I have controls also connected to my hands. Already I feel a degree of vulnerability in letting go of a clarity of spatial awareness and "cool factor", knowing he is watching me as I react to the world in the VR eyes, clumsily swiping and bobbing and gasping with glee. Thinking back to this experience the aspects that stayed with me the most, were visual and physical. The stylised colouring of the landscape feels intense in its hyper-reality. It is incredibly detailed where swirls of colour move through the vision across the landscape, with the sound reacting as different elements are introduced. The game begins in what feels like a swirling mist of sky, with 'the creator's' massive hands moulding a circular object that could represent the Earth in front of my vision. Suddenly it shatters, and resembles an orange land, that I am now standing upon. Then my perspective changes again, and my body is descending into the ground and underneath. I am inside this land, which I assume is the Earth, with a bright orange sunset, rocks and water swirling around me. I become aware that my hands are digitally connected so that I see an animated version of them in the vision of the headset, mimicking my flesh hand movement. Has my body fallen through the non-descript office space? I know it hasn't, but the distinct feeling of having fallen into another realm is real. The sound is loud in my ears, and I am suddenly aware I am audibly gasping in reaction to the work. I decide to let go of my embarrassment and embrace it. 'This is amazing!', I exclaim. Jirri Jirri is in front of me, a swirling sketch of purple neon in human form. He addresses the landscape as 'Country' and then speaks directly to me as 'Custodian'. He motions upwards and to the hole that I have come through and says, 'them people up there, they're wrecking our sacred sites. We call those sites "thalu"'. He explains that he needs my help to send the sacred spirits up, in the first instance to protect the fish, that he points out in the rushing water. As I turn my head to look to the side, the sound moves so I can be closer or further away from his voice. Jirri Jirri gives me two digital boomerangs (named wirra in digital text) that my flesh hands reach out to grab, which means that I can see my digital hands doing so also. Text explains that I should tap the ends of the boomerangs, which I do, and the fish start to float from the water, upwards into the other realm. I assume these must be the sacred spirits mentioned earlier. After I have done this, I am travelling through a circular, coloured neon portal and I end up in a dark orange desert-like environment. Jirri Jirri tells me that I must send rain and lightning and dust upwards. To do this I have to shake the boomerangs up and down. My flesh hands that control them do this, and as they move, so too do my digital hands that hold the boomerangs. It's physical work. The next portal I enter brings me to a place with colourful, yet see-through flora and fauna. Jirri Jirri explains that the animals leave this world when they are born into my world, 'they give themselves to us, to feed our families'. I then must gather birds by waving the digital boomerangs in square motions. The birds seem to follow the actual movements that my hands are making. I am in synch with these birds and contributing to a cycle of*

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*life between dimensions. The next realm is where the flora is stored. The digital boomerangs must be scratched in a slicing action and dust-like coloured patterns shoot off into the distance. The trees rock from side to side, and I turn in full 360-degree circles looking at the changes my movements are making on the landscape. Finally, I am in a red sky with a bearded person whose face is made up of clouds. He speaks to me saying that I have been in the place where 'our people, our animals, our knowledge, lives until it is needed in your world … We send what you need for your family. … But our lands, our sites, our thalu are being destroyed. If our thalu are destroyed, then we can't send the spirits to you. If we don't protect our thalu, then the animals up top will die out and we can't send you rain. Our beautiful world will be lost'. Credits of the production team appear, indicating the end of the experience. I take the headset off. The room is still non-descript, nothing compared to what I have been witnessing for the last fifteen or so minutes. I feel energised. I feel emotionally and physically connected to the game and its message. I am connected to the flora and fauna, just as much as my feet are connected to the carpet I am standing upon.*

The affective connection I experience while playing *Thalu* is not solely the result of wearing a VR headset. Multiple skills and techniques that can be applied across various art forms draw me in as a participant. Like all art, some works achieve this connection more successfully than others. Mastering any medium requires time, practice, study, control and skill. Stuart Campbell's hyper-real graphics evoke a heightened sense of the world that is entered. These graphics are aesthetically pleasing and illuminating, creating a spatiality that feels realistic and possible. Distances and backgrounds change as the body or head moves, enhancing immersion. When I move my feet, I feel the ground I stand on, and the realistic dimensionality of the virtual world makes me believe that my steps are part of the game's universe. I can see my hands in digital form when I put them in front of my eyes, and my physical actions have direct effects in the digital world as I move fish or birds in the intended directions. This sense of agency is further enhanced by Jirri Jirri standing on the same ground I feel beneath me and speaking to me directly, asking for my help. Additionally, the audio places me within the landscape, changing its distance as my body moves, and activating other sounds as I trigger different digital movements.[1]

Following Muñoz, this artwork has allowed me to envision a better future. I feel connected to the world beyond myself, and just as I did in the game through multiple senses, I yearn to protect it. I see the horizon of possibility where this could happen, but I also recognise that this potential cannot be realised in our current times and politics. Mowarin notes in a 2018 interview that he wants people to be aware of the consequences of mining. Since then, sacred sites in the Pilbara have been destroyed, such as Rio Tinto's blasting of a cave in Juukan Gorge in the Hammersley Ranges in 2020. This cave revealed 46,000 years of uninterrupted human habitation and established a 4,000-year-old genetic connection to contemporary traditional custodians (Wahlquist, 2020). The game has not stopped the destruction of sacred sites, but after playing it, I understand better that sacred sites for Indigenous people are not just historical. They are embedded in a living connection to Country. This is a space of learning, a space of politics, and through the utopian performative, drives an activist counter-hegemonic political ecology of EE.

*Thalu: Dreamtime is Now* educates about the environment but not how it is currently experienced in a material way. Instead, it promotes relationality, conservation, and Australian Aboriginal storytelling. As Mowarin states, "[h]eritage should be protected by everybody. … I think something like Thalu can be for everyone, black, white, or it doesn't matter who you are or where you're from. It's teaching a story that everybody needs to know" (p. 151). Indirectly, the game speaks of loss. As a utopian performative, it brings the not-yet-conscious into awareness, revealing environmental degradation and its detrimental impacts on biodiversity and ecosystems. It also highlights the disparity between the stories and cultures commonly presented in the Australian educational system and this Indigenous story of relationality. After playing the game,

[1]Much has been made of VR as an 'empathy machine' promoted in a 2015 TED talk about VR by Chris Milk, but an analysis of this is beyond the scope of this paper.

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I didn't just learn about an interwoven environment where everything is connected, *I felt it*. I felt the promise of a more relational understanding of being a part of multiple ecologies rather than above them. I also realised the potential of embracing this connection through an artwork for EE. However, I understood that this approach does not exist in our hierarchical system. The potentiality of the possible, its queer futurity, was there for me to witness. The call to struggle for this was immediate.

This work and other digital artwork made by Indigenous Australians is necessary. In effect, Indigenous stories and representations are decolonising digital spaces. As Wergaia and Wemba Wemba woman, Anderson notes:

> Armed with tech skills and agency, Indigenous developers are imagining a more utopian present-day coexistence with our colonisers. Create spaces for healing where language can be taught, culture and country can be preserved. After so long appeasing and adhering to settler rule, technology now allows us to centre our own ways of being and doing. (2018)

At a recent seminar, *Art, Fire and Flood: A Symposium on Extreme Weather and the Creative Arts* at the Western Australia Museum Boola Bardip, artist and scholar, Koreng Wudjari Noongar woman, Cass Lynch, stated that she had been speaking to many Noongar elders who were telling her that 'the crisis isn't in the future, the crisis is in the past. It's really the rest of the world that's in crisis' (Lynch, 2024). The violence and attempted genocide of colonisation to First Peoples and to the land that they occupied has already happened and continues to do so. Yet, Indigenous Australians are still here. A responsive EE must re-envision a relational and accountable way forward. To quote Russell (2021) 'to *queer* our path forward in environmental education (EE) is to recognize, or accept, that way may never arrive at the destinations we desire'. (p. 7, Russell's emphasis). Following Apocalyptic thinking, in comparison to the conclusive end of the catastrophe, the temporal promise of a better future that pedagogy must continue to respond to is revealed. Queering Apocalyptic Methodologies by enacting the Utopian Performative, with worlds and stories that position Indigenous connection to the land front and centre is a nod to a futurity that is not-yet-conscious – and why? – because of our current political realities. Therefore, continued learning through the experiential of XR artworks reminds us that the present is not enough. We experience in relation, adapt, and then do it again ... and then again.

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