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IMAGINING DIFFERENCE: TECHNOLOGICAL POSTHUMANIST METHODS FOR ARTS-BASED FUTURES LITERACIES RESEARCH

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Abstract: *While the future does not exist, narratives of futurity have powerful sway upon the way things unfold in the present. Teachers' implicit feelings and beliefs about futurity can impact student outcomes and their sense of agency to make a difference in the world. This paper describes an arts-based research project that seeks to both explore and cultivate creative ways of feeling, imagining, and writing futurity among a group of teacher candidates in a teaching writing course. The paper describes a futures literacies writing workshop along with an assemblage of methodologies that instrumentalize technological posthumanist theory towards imagining and storying future difference. This research positions and challenges the posthumanisms as an invitation to engage with the discrete centrality of human desire for preferable outcomes and to instead cultivate interest in the deeply entangled processes of knowing and becoming that constitute the (other-than) human. The project reaches imaginatively into the unknown, seeking not answers but creative possibility. By engaging with posthumanist and digital arts-based methodologies in teacher education and qualitative research it is hoped that new intra-agential narratives of both futures literacies praxis and futures-oriented qualitative research might emerge.*

Keywords: *futures literacies; narrative; technological posthumanism; meanwhile; creative writing; digital writing prompts*

Introduction

[I]f all the future is already given in the past, if the future is merely that modality of time where previously determined possibilities become realized, then true innovation is impossible. To avoid this mistake ... we must struggle to model the future as truly open-ended (de Landa, 1999, p. 34).

The need to invigorate and proliferate our capacity to imagine the future has been touted as an imperative for dealing with the troubles that humanity now faces. UNESCO, for example, describes a contemporary “malaise of a poverty of the imagination” that is characterized by “the illusion of

certainty and the fragilities this creates” (UNESCO, n.d., para. 4). Given the extent and complexities of our planetary troubles, there is a sense of urgency to not only anticipate risks and predict “certainties,” but also to develop our imaginative capacities, and what many are referring to as Futures Literacy(ies) (e.g. Facer & Sriprakash, 2021; Miller, 2007), towards the creation of real alternatives and differences in future outcomes. Central to this work is the premise that the many ways human beings do and do not read and write futurities in the present have implications for who and how we are becoming in time. In other words, the stories we tell of the future(s) matter, using Barad’s (2007) multiplicitous meaning of the word. Narratives of futurity are embedded and entangled in the material world, the co-evolution of our technologies, our sense of self and other, human and other-than-human, probability and possibility (Polak, 1961). Studies have shown that the many ways educators do and/or do not engage with futurity in the classroom have consequences in terms of student outcomes and their outlooks on futurity (Damber, 2009; Sachyani et al., 2023). Educators’ own futures literacies, including their beliefs, feelings, associations, and orientations towards futurities and futuring technologies, implicitly infuses their pedagogy (Bateman & Sutherland-Smith, 2011). Via technological posthumanism, this research aims to bring teacher candidates’ futures literacies to the foreground by inquiring into and provoking how they “perceive, sense, enact, envision, and create the future in the present” (Horst & Gladwin, 2022, p. 1). This project aspires to provoke and perform the pedagogical potential of posthuman futures literacies research praxes and pedagogy. In the following pages, I will share the technologically mediated workshop at the heart of this study, along with a selection of texts and technologies, and explore how this method/curriculum can inspire creative exploration and experimentation via critical, reflexive, decolonializing, and experiential futurities in educational spaces and literacy research. I will first situate the study both materially and conceptually. Next, I will situate myself and my creative, techno-posthuman ontology. I will then illustrate the main texts and technologies of the futures literacies workshop, indicating their potentialities for futures literacies research and pedagogy. Finally, I will share a brief discussion of the pedagogical and research potential of this methodology, along with future directions and possibilities. Throughout this work, I will model my own approach to creative non/representation (Drucker, 2020; Vannini, 2015) and hybrid digital/analogue data analysis. This article may be of use to anyone interested in futures literacies and technologically mediated creative imagining, as well as those investigating technological posthumanism and/or digital arts-based research methods.

Contexts

This research project revolves around a 2.5 hour futures literacies workshop event that took place with two sections of LLED 367, Teaching Writing, an elective course for teacher candidates in the teacher education program at The University of British Columbia in the fall of 2021. Everyone in both classes was invited to engage in the workshop, and a total of 43 (of approximately of 75 students) consented to participate in the study. Participants ranged in age from 18 to 50, but were predominantly

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under the age of 30 with a little over half of the participants identifying as being on the female side of a gender spectrum. Participant consent allowed me to analyze the data resulting from the workshop, including their answers to a futures literacies questionnaire (see Appendix A) and their creative writing, which was produced in collaboration with the digital writing prompts that I created for the workshop/study (available at <https://futuresliteracies.ca/creative-writing/>). A total of 12 of the 43 participants agreed to attend additional Zoom focus group sessions scheduled two weeks after the workshop. During the focus groups, we discussed participants' experiences in the workshop, their futures imaginings, as well as their thoughts on the pedagogical potentiality of creative futures literacies as a proposed curriculum. Included in the data are my own experiences of the research event and subsequent futures literacies workshops I have given that are not included in the study, my creative futures imaginings, field notes taken during and after the workshops and focus groups, as well as ongoing creative analysis. Due to limitations of space, in this paper I will share data that focusses specifically upon the perceived pedagogical potential of the workshop and texts/technologies.

During the time of the workshop, a series of atmospheric rivers ("2021 Pacific Northwest Floods," 2023) unleashed unprecedented amounts of water upon the vicinity, washing away huge swathes of provincial highway and roads, and causing massive flooding damage to homes, properties, and infrastructures along the coast. Everyone in both classes would have been affected to some degree by the rains; at the very least, on the day of the workshop, the excess water impeded traffic across the city making it difficult to get to campus. Compounding what many experienced as the effects of global warming and climate change, was the ongoing experience of a global pandemic. At the time of the study, there was a momentary reprieve of strict social distancing due to COVID-19, which was why we were able to meet in person. Everyone wore masks in both classes (except for myself at the front of the room) and there was still a mandate to observe physical distancing in public spaces. These situated and historical layers of context are inextricable from the subjective futurities and fabulations that emerged during the workshop and in the data.

Technological posthumanism and decoloniality

[T]echnological posthumanism might foremost mark an (un)askability of the human, where the parenthesis indicates a necessity of asking that is put into play in and as the question's impossibility (Cecchetto, 2013, p. 160).

This work is situated within the ontological turn¹, which has been variously referred to as the posthumanist turn (i.e. Hayles, 1999; Braidotti, 2019; Cecchetto, 2013), the nonhuman turn (i.e. Grusin, 2015), the new materialist turn (i.e. Barad, 2007). Post qualitative research (St. Pierre, 2018), non-representationalism (i.e. Vannini, 2015), and vital materialism (i.e. Bennett, 2010) are imbricated in the turn. Grusin (2015) further thickens the theoretical moment with actor-network theory, affect theory, queer theory, animal studies, assemblage theory, new media theory, speculative realism, object-oriented realism, and systems theory. In one way or another Grusin (2015) suggests that all these divergent and diverse discourses share a refusal of “human exceptionalism, expressed most often in the form of conceptual or rhetorical dualisms that separate the human from the nonhuman—variously conceived as animals, plants, organisms, climatic systems, technologies, or ecosystems” (p. x). My methodology has been shaped by insights drawn from across this spectrum of theory, which shares four key themes: 1) deep attention to objects, artifacts, and technologies 2) a rejection of representationalism 3) adoption of a posthumanist ontology, and 4) the politicization of ontology (Zembylas, 2017, p. 1404). I take up posthumanist theory in research to foreground “the inescapable entanglement of matters of being, knowing, and doing, of ontology, epistemology, and ethics, of fact and value” (Barad, 2007, p. 3). Methodology from this perspective, is inextricably entangled with and co-productive of ontology — indeed, method is performed ontology — the resulting data of any research inquiry is inextricably entangled with the contours of the research and researcher, the context and materialities of the study, as well as the technologies that are co-productive of the research, data, and analysis.

Meanwhile²

The motivation to shift away from a human-centric ontology is a political expression that seeks to repair the harms, ruptures, and erasures caused by anthropocentric desire. However, many critical scholars are quick to point out that this anthropocentric desire is neither universal nor representative of all human desire. Posthumanism and the ontological turn are figurations that engage with pre-existing and previously inhabited conceptual terrain; they reject/critique/interrogate a very specific,

¹ I echo here Braidotti’s (2017) request: “Please don’t get irritated by the occasional specialized language... Don’t dismiss it as jargon, just approach it as if it were a formula or a specialized code. We are dealing with the posthuman condition after all” (9:00-9:18). I take up this terminology-as-code seriously and creatively, to map possibilities and constrictions within the theoretical landscapes; the affordances and limitations of academic prose and what I have called elsewhere “the gorgeous ineptitudes of language” are my cartographic technologies (Horst, 2022).

² Here I am intentionally evoking a number of methodological approaches to the concept and process of *meanwhile* (e.g. Guyotte, et al., 2020) but especially Bogost’s ontographical use of the term. “To create an ontograph [via a tool like meanwhile] involves cataloguing things, but also drawing attention to the couplings of chasms between them” (p. 51). The word *thing* here for me, also refers to *concepts and constructs* like posthumanism that “exist not just *for us* but *for themselves* and *for one another*” (p. 50-51). With this problematization of posthumanism and futurity I am attempting to “reject... the singularity of the now in favor of the infinity of *meanwhile*” (p. 5).

western, exclusive and always-incomplete image of ‘the human’. As Iman Jackson (2020) argues, “gestures toward the ‘post’ or the ‘beyond’ effectively ignore praxes of humanity and critiques produced by black people, particularly those praxes which are irreverent to the normative production of ‘the human’ or illegible from within the terms of its logic” (p. 215-216). While posthumanism attempts to move beyond a Euro-Western notion of the subject, as Ravenscroft (2018) explains, “[t]he Western subject slips in, installs itself, and assumes the sovereign’s mantle even in those new materialist [and posthumanist] writings that sustain some of the most profound critiques of this very centrism” (p. 356). There are modes of being in the world that do not require the interventions of the ontological turn to become attuned to the other-than-human. Scholars like Watts (2013) remind us that Indigenous cosmologies do not contain the kind of epistemological-ontological divide that the ontological turn seeks to remedy.

Futurity is similarly contested conceptual terrain. Critics from different disciplines and positionalities posit that contemporary conceptualizations of futurity and the turn to futures-forming research and scholarship are inherently linear and progress-orientated, privileging white (e.g. Jackson, 2020), able-bodied (e.g. McRuer, 2017) and cis-gendered perspectives (e.g. Edelman, 2004). In an Indigenous anti-futurist manifesto, for example (Indigenous Action, 2020), the authors call for the end of futurity entirely, thereby enabling a “re-emergence of the world of cycles” (para. 25). Wilderson (2021) argues that the future is inextricably entangled with notions of “the Human” which is founded upon an inherent anti-black ontology – any possibility to imagine an alternative future for him is “epistemologically impossible” (p. 39). Sylvia Wynter, on the other hand, foregrounds how it is possible to give “humanness a different future by giving it a different past” (McKittrick, 2015, p. 9). In her work, Wynter explores the “double-entwined assertion that we are, simultaneously, scientific (biologic) beings and narrative (storytelling) beings” – all of us “stifled by the Darwinian *genre-specific* version of the human” (McKittrick, 2018, p. 867). Along with Wynter, I wonder if we can interrogate “*genre-specific*” and prescribed humanities and futurities and instead engage in more agential and creative *performances* and *narratives* of selves and futurities as verbs “rather than nouns” (McKittrick et al., 2018, p. 33).

This research “*also and at the same time*”³ aspires to engage in Fryer’s (2015) postnormative queer thinking and an understanding of “identity and expression as open to various instantiations, as having multiple, even infinite modalities, as never what we assume them to be from surface appearances or uninterrogated presuppositions” (p. 6). Via posthumanism I hope to engage in a decolonizing praxes of the human as a doing and striving and becoming that is affirmative, joyous, nonrepresentative, and postnormative from “a position of possibilities in which identity is open, fluid, lived” (Fryer, 2015. p. 11). As Fryer continues, “[W]hen we extend this thinking, we connect struggles against racism with

³ I will use this quotation from Braidotti (2017) as a kind of refrain, indicating the paradoxical qualities of representation, and how many things can be true simultaneously.

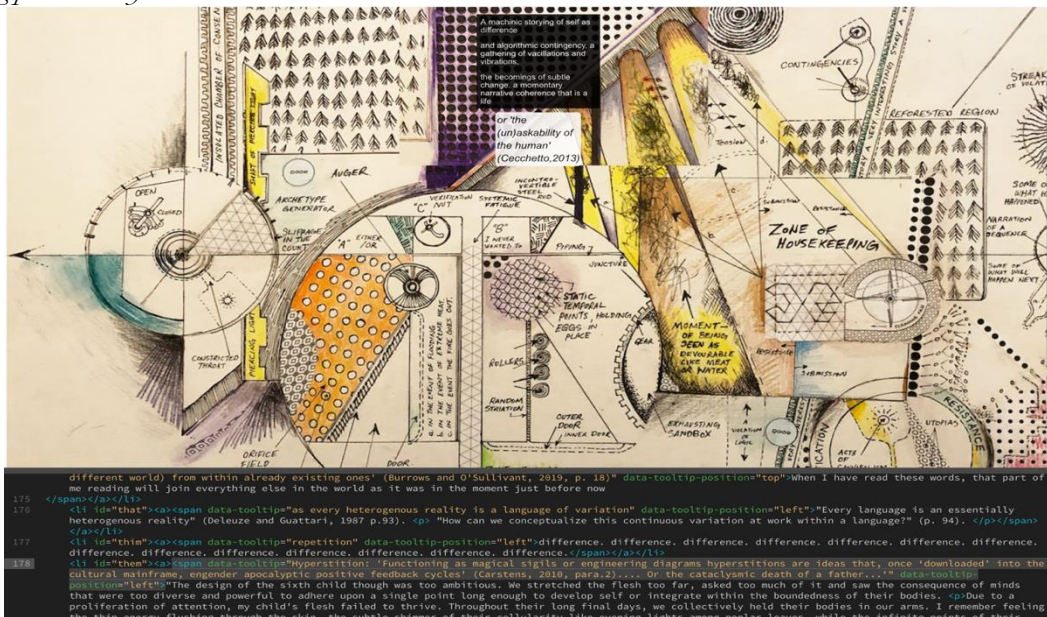
struggles against heteronormativity, and with all struggles for human freedom, and we do so without sacrificing the specificity of any of them, for each is a valid instantiation of the wider project; and making these connections is essential” (p. 11).

Fabulations of positionality

I have taken an arts-informed and creative approach to the ongoing design of the research tools as well as my own inquiry and analysis of the data. Fictioning (Burrows & O’Sullivan, 2019), fabulation (e.g. Conrad & Wiebe, 2022; Fabbula TV, 2016; Flaxman, 2012) and storytelling (e.g. McKittrick, 2021) are central to this pedagogy and research praxis (Author, 2021); this is a methodology that explores the very real virtualities and potentialities inherent within empirical observation and technologically mediated subjective experience.

Figure 1

Modelling positionality⁴



⁴ I am *also and at the same time* a white, middle-aged, cis-gendered, able-bodied woman, mother of two, daughter of a Mennonite construction worker and a Jewish psychiatrist, one dead, one adrift on a sea of depression. I am sister to an angry and lost forever-boy and stranger, auteur of his own unravelling— a dreaming white man consumed by alcohol and Hollywood narratives; I am an uninvited settler on colonized land, an embedded nomad in the hypocrisy of my staying; I am always already with nowhere to return to, a body in the world, entangled in the codes and algorithms of privilege and contingency; my futurities are striated with advantage: my birth in the global North, a (so far) working female body that I have grown to love and forgive and find pleasure in, having always (so far) been housed, rarely hungry, and all the many ways I have moved through institutionalized times and spaces; how I sit here, even now, at this desk and write these words in the struggle “to model the future [and myself] as truly open ended” (de Landa, 1999, p. 34) while so many others are consumed by the struggle to simply persist—

Note. The screen capture image is available live here <www.rachelhorst.ca>

Figure 1 is a partial mapping of my intimate entanglements with the posthuman theory/methods/narratives/identities as integrated into my life, body, narrative, code. The figure began as a hand-drawn meditation upon positionality; I aimed to create a mechanized self-portrait of de/re/territorializations via theory and banality— the ways in which my psyche is striated, dis/organized, institutionalized, contingent. But also how I yearn to *rewild*⁵ a new imaginary and reforest regions, knowing I cannot replicate a wilderness prior to institutionalized normativity, and yet creating the possibility for new wilderness to emerge among the dis/organization of trees. I then created a digital html-based interactive map in which I added layers of digital text, quotations, and digital manipulations of the source drawing/schematic. My engagement with code is a skimming upon the surface of an algorithmic language that I do not speak fluently. Like Cecchetto (2013), I wonder here if posthumanism "might be initially defined as a recognition that the static term human has entered into discourse, where it flows, mutates, amplifies, exchanges, and propagates according to the various and often paradoxical logics of language" (p. 8). With this map and this project, I aspire to push futurity into a similar discourse via the "paradoxical logics" of language-drenched imaginaries. Figure 1 allows me to resist the closures and repetitions of conceptual definition and methodology and to instead engage with "the creative inquiry process of arts-informed research [which] is defined by an openness to the possibilities of the human imagination" (Cole & Knowles, 2011, p. 122). I see this figure, in addition to the digital writing prompts and the resulting narratives of the study as a practice of futures fabulation that

allows something non-human to arise from the human. It is a kind of performance, or, again, a mechanism, for the production of a different kind of affect. Another way of putting this is to say that fabulation involves resistance to the world [and self] as it is perceived or understood (Burrows & O'Sullivan, 2019, p. 17).

I have nailed the schematic to the wall above the desk where I work and I occasionally visit it in virtual space, moving across and through the machine, keeping it oiled with attention, imagining the sound it makes as its parts interact, reorienting myself back to "resistance" to sedimentation and closures in research; that is to remind myself, as I work, to stay supple, imaginative, and truly open-ended.

The futures literacies workshop

⁵ "wildness is conceived by rewilders as a fluid category that can occur in all types of land- and seascapes, and on a micro as well as a macro scale... self-consciously geared not towards achieving the human-defined end state of 'wilderness' but rather aims to set in motion natural dynamics that will ultimately result in autonomous habitats and self-managing landscapes" (*Posthuman Glossary*, 2018, p. 389).

In this section, I share the texts and technologies that comprise the futures literacies workshop: the questionnaire, the mapping metaphors activity, the multimedia futures text set, and the digital creative writing tools. I offer these technologies as both pedagogy and research praxes that can be taken up in different educational settings to interrogate and promote creative futures literacies among learners.

The questionnaire

The initial futures literacies questionnaire (Appendix A) was an analogue tool built to both gauge and activate participants' feelings, associations, beliefs, and fictions about the future. The questions probed teacher candidates' perceived sense of personal and collective human agency and impact, their level of care in personal and global outcomes near and far, their narratives of time and temporal distance, their predictions about the quality and consequentiality of technology and art upon the world and the future unknown. After having time at the opening of the workshop to engage with the questionnaire, we discussed their answers and their experience answering as a group. Many of the students described the questionnaire as fun and enjoyable, though perhaps skewing their subsequent imagining towards the negative. In the focus group a couple participants described how the questionnaire allowed them to think "in a serious way" about questions they are not usually permitted to think about. Things like "are aliens coming, or is the whole world, you know, going to explode, or stuff like that." As one participant described, the workshop legitimized her creative futures imagining that was neither scientific extrapolation nor pure entertainment. As she explained:

a lot of the time when we talk about the future, it's more scientific terms, like this is what's going to happen, these are the events, this is how often, and this is how we know, right? ... [T]hen the more creative aspects of the future tend to be science fiction, right? Like war of the worlds and stuff like that...

It's interesting to think about it [the future] by yourself and reflect that way instead of like reading the... percentages and going from there.

This participant speaks to her experience of being permitted to take up the creative agency to imagine futurity *herself* rather than simply receiving and reproducing futurities from literature, genre cliché, or 'certainties' embedded in the news and scientific reports.

Relevant to the ongoing re/design of the workshop is how students articulated a reluctance to "put things down" on the questionnaire. As one participant later explained in the focus group, "I think I was unsure about my own answers and committing to my own answers, or if I'd expressed [them] in the right way." This sense that there was something *at stake* in answering the questions came up frequently in our discussions. One participant expressed a kind of obligation to balance out any overly positive futurities held by his classmates. As he explained, "I feel like I was also wanting to make sure the information wasn't skewed or something, I dunno, reacting against positivity." The physical nature of the questionnaire, how it was done in class on papers that were more visible to each other than

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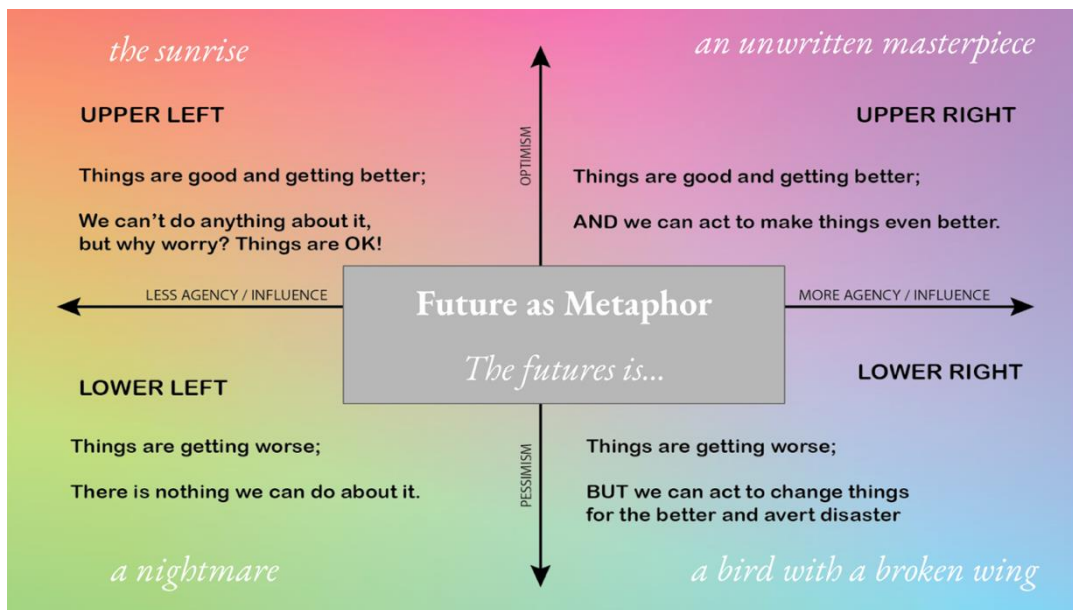
screens would have been— this made the questionnaire a more public and collaborative event and their answering gained a sense of physical permanence, which was something I had not intended nor anticipated, but which became a contributing factor in the futures thinking and imagining. Students modulated their responses to each other, influenced by their sensing of one another. As one participant explained, “I think I was very conscious the whole time about how ... pessimistic my outlooks were.... I was quite cognizant of what other people were writing and if I was just being way too, you know, dismal about it all. So yeah, that was quite interesting to sort of see that insight into myself.” While participants engaged with the questionnaire individually, the collaborative space of the workshop as a social event was important to their experience. Another participant brought up the “by yourself” quality of creative futures imagining: “thinking and imagining the future *by yourself* can be scary, but like in a group *to try on these things* and hear what other people are thinking can maybe make it less scary.” She expressed a comfort in sharing the futures imagining collectively and allowing this thinking to be a kind of public and performative experimentation rather than holding the responsibility of representing the future all on one’s own: “so no one feels like it’s only their reality or the future is only on them.”

The negotiation of personal/public, individual/collective futurities, is an important feature of the workshop and pedagogy. As we embarked upon the more collaborative and digitally-mediated components of the workshop, and in responsiveness to our discussions about their experience with the questionnaire, I invited the teacher candidates to release themselves from the need to ‘get it right’ – to give themselves permission to be creative and to experiment and play within their expressions and feelings of futurity and not to worry about how they might seem in answering. I explained that part of a futures literacies pedagogy is to make visible our futures narratives in order to interact with them as creative and alterable texts and metaphors.

Metaphor mapping

Figure 2

The future is...



Note. This activity evolves from the ‘Polak game’ (Hayward & Candy, 2017) and is a collaborative digital mapping of futures metaphors using the www.padlet.com platform.

Next, I asked students to compose metaphors of futurity and then to spatialize their metaphor upon a virtual grid with a horizontal axis of agency/influence and a vertical axis of optimism/pessimism (see Figure 4). As we worked with the virtual metaphor map, I asked students to think about the kinds of meanings and narratives that were made possible by the grid and those insights or futures associations that might be cut off from such a spatialization. We discussed the nature of different representative models of futurities, from the narrative to the metaphorical to the diagrammatic, and how each figuration necessarily enforces an organizational structure that cuts off other possibilities and experiences. As we worked with the virtual metaphor mapping game, I asked students to think about the kinds of meanings and narratives that were made possible by their metaphors. How does a metaphor such as “the future is a sunrise” work? What stories and relationalities become possible within that metaphorical modelling; what possibilities are no longer imaginable in the worlding of a sunrise? Rather than attempt to represent a fixed relationship with futurity, I asked them to explore their metaphors as experimentation in possible futurities and futures subjectivities, and to consider what narrative possibilities emerge when they move their metaphors to a different location upon the map.

The futures text set

[Technologies are] profoundly implicated in our being. That is, technologies are not tools that we use, nor objects in relation to which we are servomechanisms, but are rather pathways through a relational ontology (which may be another way of saying that technologies are also all those things that they are not) (Cecchetto, 2013, p. 5-6).

“Moving yourself into different spaces can introduce different types of futures.... Like views on the world.” – Participant describing engaging with literature about the future.

Next we engaged as a group with four different technologically mediated textual representations of possibility. Only the first text overtly addresses the future; however, each text (and I would suggest that all texts) can be read through a futures literacies perspective, seeking out the implicit futures metaphors and futuring relationalities and subjectivities embedded in the narrative. I asked students to play close attention to how technology does or does not operate in each futurity. I asked students to consider the embedded futures-oriented narratives, values, and materialities and to consider *what* and *who* is included and excluded from the representation. Where does each image/narrative lay on the axes of human agency and optimism. What would the central futures metaphor of each text be? What were the underlying systems at work to make these very different futurities im/possible?.

Figure 3

Built Ford Proud.



Note. As Ford denied my request to use a screenshot from the commercial for this publication, I fed an online snapshot from the commercial into the www.midjourney.com artificial intelligence bot and asked it to refigure the image along with the prompt:

“driving across the desert in a ford commercial.” This image does a good job of capturing the mood of the commercial, which is available for public viewing [here](#).

This text is a Ford (2018) commercial entitled “The future is built Ford proud”. The actor, Bill Cranston, stars in this short narrative, appearing in a series of archetypal characters: from corporate CEO to scientist to explorer to cyborg. As a humanoid cyborg, Cranston turns his roboticized head to the camera. “Some will talk about the future,” he says, “but you’d be a fool to believe them. You see, talk doesn’t get things done. Building does” (0:24-0:35). The cyborg wears a military-style uniform, the cables visible in an exposed region of the neck. Following this scene, Cranston’s voiceover carries us through a series of images including: an explosion in a desert; an oil slick male face in the darkness, eyes bright and gazing upwards; the earth erupting in a stream of molten liquid; a man pulling chains causing a fiery object to raise into the air; historical footage of the Ford auto plant. The commercial ends with Cranston driving a pickup truck alone across a desert highway. “So, let the other guys keep dreaming about the future,” he says with a smirk. “We’ll be the ones building it” (0:52-0:59).

I chose this narrative for how obvious it is; the images are violent, masculine and drenched in a swaggering bravado and anthropocentrism that is in opposition to the ethos and politics of this futures literacies workshop and research. As a coherent and well-packaged corporate narrative and commercial, it was easily decoded and engaged with by the students. The next two texts I shared were far more difficult and resistant to interpretation.

Figure 4

Hibiscus Rosa Sinensis (2010)



Note. I received permission to use this screenshot from the artist, Angela Tiata.

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This short art film was part of an art exhibit entitled “Sāmoan Hxstories, Screens and Intimacies,” the first exhibition in a larger project that explores the creative practices of Sāmoan filmmakers and artists “engaging with bodies, sexualities, kinships, cultural knowledges and futurities” (ImagineNATIVE Film, 2020, para. 5). In the film, the camera takes the viewer into a lush and tropical plant world. We hear birdsong as the camera pans across a mass of thick green leaves to a woman crouching within the plant, an enormous pink blossom obscuring the lower half of her face. As she stares fiercely at the camera, she begins to eat the blossom. She slowly consumes the blossom, the sounds of her chewing the flower are audible and she stares fiercely and unwavering at the camera. She finishes eating the blossom then wipes her lips and the camera moves on.

The relationship this text sets up with the viewer is very different from that of the first text. Whereas Cranston’s character invites the viewer into complicity – a kind of ‘in-joke’ about the real workings of futurity, here Tiata’s overtly sexual and embodied presence is in direct opposition to the viewer’s gaze – (or more specifically, in my opinion, the colonial, white, and male gaze); Tiata seems to dare the viewer to object to her incontrovertible presence. The intensity of her gaze made many students in the class feel quite uncomfortable.

As one participant later described:

I watched that and I was like, oh my God, lock eyes with me and eat your flower. And like, let me just get uncomfortable and feel, you know, whatever it is that I'm going to feel like— I love that experience. And I think there were other people at our table who hated that experience.

I chose this text because it puts the viewer, especially the non-Indigenous Western viewer, *outside* the imagined futurities of the narrative; I wanted to provoke an unsettling or disorientation among those students as a way of disrupting their narrative experience, seeing futurities also from the perspective of the outside. One participant later described the divergence of opinions at her table:

Who is the woman representing? Is she representing mother earth where it's like, she's showing you a gift [the flower] and then you're not appreciating it.... So she's taking it away. Or is it *us* as that woman and we're consuming the planet.

I found it fascinating to observe that the very central aspect of the artist’s Indigeneity was carefully skirted in most of the discussions in both classes. Without guiding the discussion, I attempted to prompt and prod the conversation, asking students to observe who is excluded from the narrative and why. The discomfort in the room was interesting. As one participant described, the first video was so “over the top that it was easy to identify things.” But then there was “a huge jump into the second

and third video in terms of accessibility...” The texts required “mental gymnastics to sort of conceptualize that... in terms of futurisms.” He concluded on the topic, “You didn’t need to stretch us that much.” I wondered to what extent the discomfort of stretching had to do with the abstraction of the art film versus the more accessible narrative of the commercial, or whether it was also the stretching of perspective taking (from white male subjectivity, to Indigenous female subjectivity, to other-than-human aesthetic subjectivity) that required the “mental gymnastics”.

Figure 5

Another Generosity.



Note. Permission to include this photo was received by Andrea Ferro Photography / ReportArch

This text is a 360° video of an architectural installation entitled *Another Generosity*, at the Nordic Pavilion at the Venice Biennale, curated by Ero Lundén and Juulia Kauste. The balloon structures are designed with umbilical-like tubes that attach them to the larger structure-as-womb that contains them. These balloons have soft sides that appear pliant and they are illuminated from within. In this text, the humans move around and into these structure-beings, pressing upon their sides and entering their inner cavities. The structures are designed to respond to the environments and the human beings they share space and air with. The installation “seeks to create a spatial experience which heightens our awareness of our surroundings. Moreover, it is an attempt to foster dialogue, debate and criticism to help reveal

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new ways we can shape our world with another generosity. A generosity not just between humans, but between humans and nature” (Lunden Architecture Co, 2018, para. 1).

Figure 6

Clothes that dance.



Note. Permission to include this photo was received by director Will Hazel

The final text is a short film *Clothes That Dance*, created by director Will Hazell, that follows dancer Masumi and her child Towa “as they explore the simple pleasure of being outdoors together, slowing down and moving freely.” This “slowing down and moving freely” is facilitated by the clothing they are wearing, which is designed and fabricated by aeronautical engineers, neuroscientists, and designers at the company [Petit Pli](#). The pleated fabrics are engineered to grow and shrink according to a body’s movements and growth, and to be responsive to temperature and environment in a similar way to the structures from the previous text. The film follows the two human beings through a series of vignettes over the course of one year, as they dance together through the natural environment, laughing and murmuring, a spontaneous choreography and growth together in time and the world.

Pedagogical connections

Each narrative in the above text set was chosen to story different possibilities for technological posthuman futurities; the resulting conversations in both classes were provocative and rich. A couple

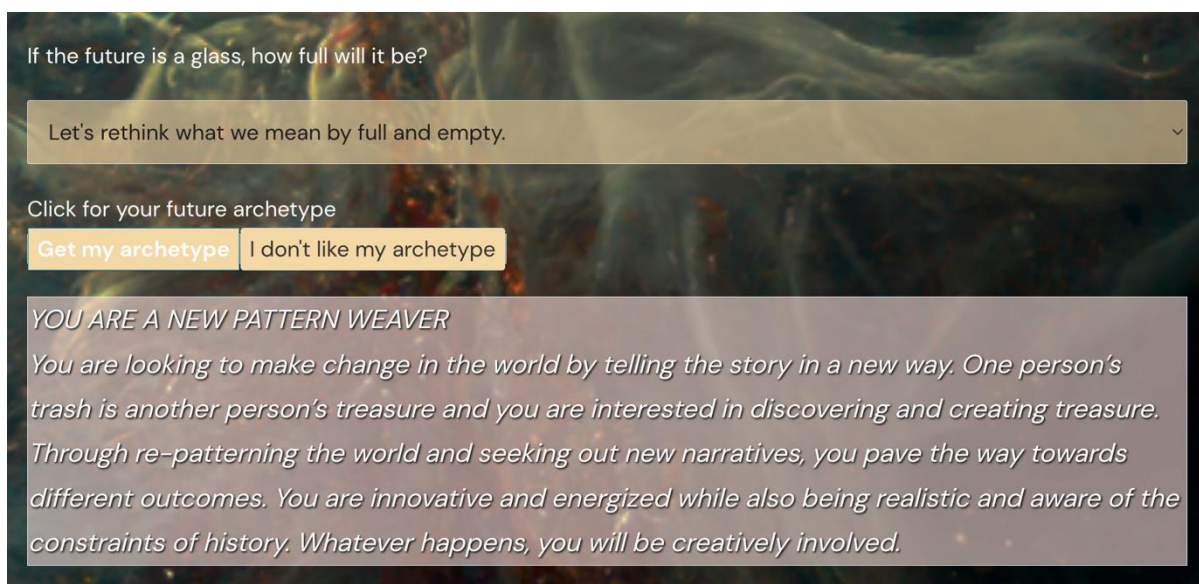
students, however, argued that these specific chosen texts were too abstract and/or difficult to unpack both on their own and with future secondary students. The quality of the conversation, however, belied this difficulty. I have noticed in this workshop as well as subsequent iterations, that students sometimes resist the difficulty or complexity of an activity (such as modelling futurities or unpacking a futures text), yet their efforts and analysis are philosophically complex and multi-layered. The experience of there being no single answer or correct interpretation can be uncomfortable or unsettling for students, especially those who are used to the experience of being *correct*. The workshop and futures literacies pedagogy is about problematizing ‘correctness’ and the rightness or wrongness of futurities, and trying on perspectives in which futurities might be characterized (*also and at the same time*) by uncertainty and multiplicity.

Productions of futures subjectivities – the digital writing prompts

The workshop culminated in student engagement with two digital writing prompts that I created for the workshop and study (see Figure 7).

Figure 7

Futures archetype prompt.



Note. This is a screenshot of the part of the prompt available at <https://futuresliteracies.ca/creative-writing/>

The first prompt/game is a simple archetype generating machine that I created from a series of questions that ask user/participants to engage narratively with the future (as genre, as character, as plotline). I designed this prompt as a narrative device to play with and foreground the algorithmic contingencies of futures orientation and how the contours of personhood – the archetypal persona — can be thought of as useful fictions and alterable texts, mediated by the technologies we use to understand and co-design our subjective experience.

The prompt culminates with the question: “If the future is a glass, how full will it be?” The instructions are as follows:

*Based upon your answer to this question, you will receive a FUTURES ARCHETYPE. This archetype is **designed to be disrupted**. We encourage you to resist your own futures definition and instead to rethink your own archetypal orientation towards the future unknown. The idea that you can design your own archetype is a playful paradox. Archetypes are traditionally inherited from history, they are reoccurring types, prisons of characterization that determine your actions – we invite you to explode this notion [the glass] and redesign your future self again and again and again.*

Upon pressing submit, the archetype is generated (comprised of a title and a paragraph of fictional characterization that I wrote for this purpose) along with the button: ‘I DON’T LIKE MY ARCHETYPE’ (see Figure 7). Not a single participant (nor any user of this prompt – and there have now been hundreds) has entered an alternative archetype. In the workshop, I noticed instead that students tended to self-identify with their archetypal output, seeking reflections within the narratives in a similar way to engaging with a horoscope. The six archetypes are as follows:

1. “the glass is empty” = professional mourner
2. “the glass if full to brimming, yeah!” = evolutionary cheerleader
3. “hold the glass while doing a jig, then ask me again” = cyborg trickster
4. “who cares?” = ambivalent bystander
5. “let’s rethink what we mean by full and empty” = new pattern weaver
6. “I will fill the glass myself. Hold still while I pour” = catalytic instigator

As reviewers of this paper have pointed out, this glass metaphor/cliché foregrounds human relationality with futurity and therefore thwarts a more posthuman perspective. My rationale for taking up this familiar metaphor was because it is already coded as a kind of parable about perspective-taking; I wanted to re-story the familiar with an array of possible subjective implications. In subsequent redesigns of the archetypes, while I have retained the glass metaphor, I have shifted the language of the archetype descriptions away from the specifically human to open up to a multiplicity of other-than-human agential interpretations.

Figure 8.

Futures tarot cards.



“[H]aving a space to interact with it in some way ... my mind was in a sorrowful tone ... and having a space to creatively process that was actually relieving...”
- Participant describing the creative writing activity

The final prompt is inspired by Candy and Watson’s (Candy, 2018) *Thing From the Future* card game. This iteration of the randomized prompt game is not geared towards design, but rather creative writing. Four cards are drawn by clicking on a series of buttons. The prompt generates a randomized sentence that includes timeframe, character, mood, and object (see Figure 8). Writers can continue to click the buttons until they arrive at a collection of factors they wish to work with. The prompt proved engaging and generative for students in both classes as they shared arrangements of cards that were humorous or surprising. Examples of prompts might be:

The future is moving in circles. You are a thinking machine. You are feeling disgust. You focus your attention upon a tree.

The future is one hundred years from now. You are a blade of grass. You are feeling wonder. You focus your attention upon a weapon.

The futures is two weeks from now. You are an injured animal. You are feeling clever. You focus your attention upon communicating something difficult.

With the time remaining in the class/workshop, teacher candidates composed their creative futures narratives, writing in a textbox embedded upon the page. When they were ready, they were invited to

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press the submit button, which automatically emailed their work to my own email address as well as theirs, if they wished to include it. I did not keep or analyze the creative writing of students who had not consented to participate in the study. Due to restrictions of space, I cannot include discussion of the breadth of futures imagining on display in participant stories. However, I will include one narrative as it has stayed with me over the years since the workshop.

The prompt: *The future is generation from now. You are a dream. You are feeling calm. You focus your attention upon a ship.*

We are all just drifting, slow moving liquid bodies in a liquid world. Shapeless minds. If this is the end, we are glad it is blue. It reminds us of the deepest ocean, the deepest space and under the Blue Pressure, we can rest. Liquify. Slip in and out of each other without losing any part of ourselves. Cut only by pirate ships dripping with gold, leaving Honey Yellow trails through our blue-black ink. If this is the end, we are glad it is gooey. Thick with time, thick with space, thick with loss and lined with gain. There is no fear, there is no hurt. There are no hearts to race, and no heads to spin, no eyes to watch, and no hands to mould. We are only what we are - eternal and slippery. If this is the end, we are glad it is now.

Conclusion: Narrative futurities and making room for difference

This project continually emerges in narrative, via narrative. Like Hayles (2012) I suggest that “[t]he primary purpose of narrative is to search for meaning, making narrative an essential technology for humans, who can arguably be defined as meaning-seeking animals” (p. 180). Narrative is part of what Bogost (2012) calls the “logics” of being human; we need narrative technologies to imagine beyond the human, beyond the present, beyond the actual. I take up futures literacies as an inherently creative and aesthetic narrative practice within a Deleuzian process ontology in which art, like the future “is never an end in itself; it is only a tool for blazing lifelines” (Deleuze and Guattari, 1987, p. 187). Futures literacies as a concept and creative research praxis is an invitation to engage in radical and technologically mediated forms of self and futures experimentation in educational contexts, not with the goal of any single output or outcome, but rather as a way of engaging with possibility and the possibility for becoming otherwise. I see this work as a way of making room for new narrative possibilities and forms of (non)representation (e.g. Vannini, 2015) to proliferate within futures-oriented qualitative research.

I see a posthumanist and arts-based approach to methodology/ies as a way of making fluid the binaries and boundaries of entities (human/other-than-human, digital/analogue, present/future, science/art), thereby enabling and provoking new narratives, relationalities, and understandings of educational research and futurity to emerge. I see this kind of thinking as inherently creative and experimental and therefore take an arts-based approach, engaging and performing what Jack Halberstam (2013) describes as a “wild theory” that lives in “spaces of potentiality” (para. 17). Informed by decolonial

theory, this work strives towards new forms of expression and modalities of thinking, theorizing, and working together in difference towards enacting difference. The premise of this work is that human beings are deeply entangled in and with the world and time and that our technologies and narratives are not something separate from us but rather are imbricated with our knowing and being in the world – but that we can cultivate the creative agency to *read and write* ourselves differently. A futures literacies pedagogy asks us to un-story readymade narratives of futurity— which is also an un-storying of readymade humanity. These readymade narratives have proven disastrous to the manifold humans who have been excluded representation, they have stifled our collective imaginaries with repetitive and reductive archetypes and plotlines, they have enacted their narrative hegemony upon the earth and the climate. The imperative here is to story against the tide of determinism, to un-story the future as well as capitalist desire and to remodel and refabulate narrative pathways that make room for difference to become imaginable.

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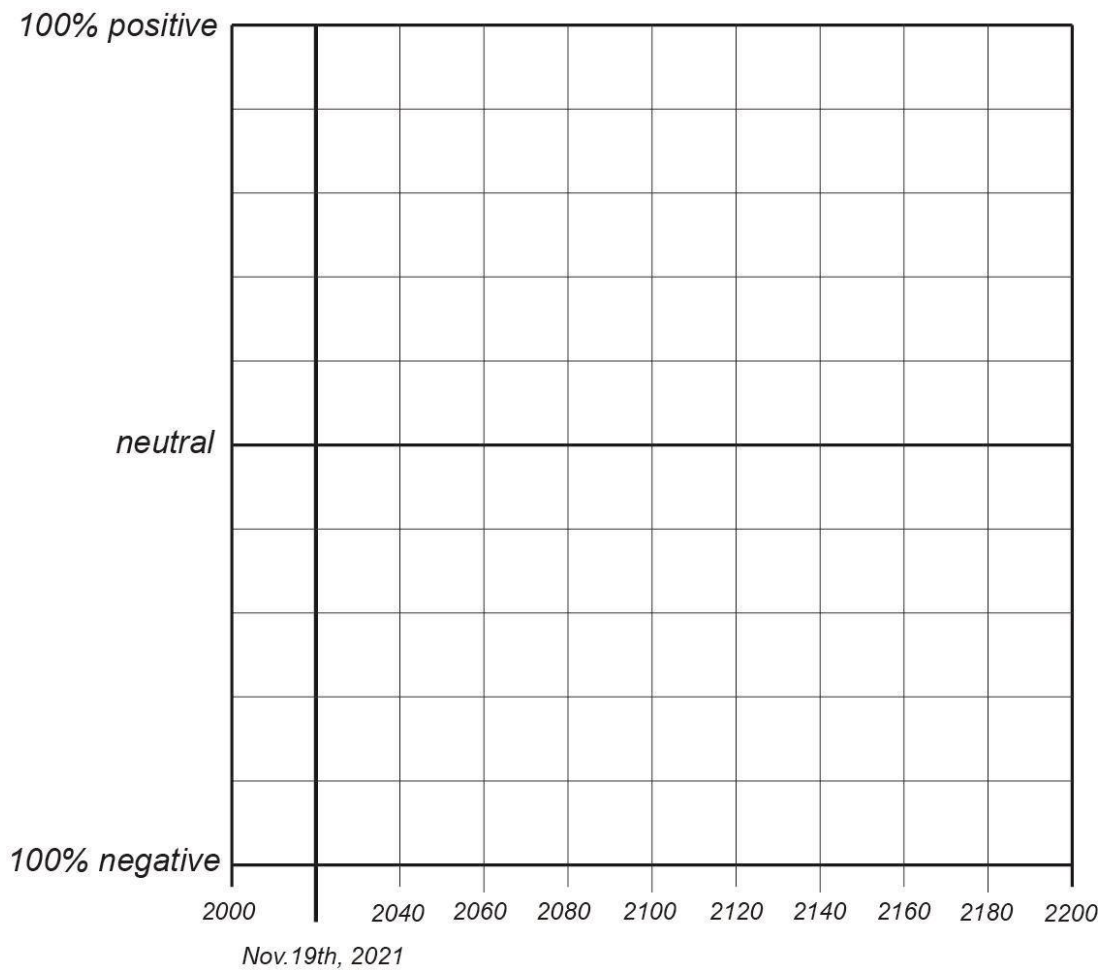
Appendix A

Futures Literacies Questionnaire

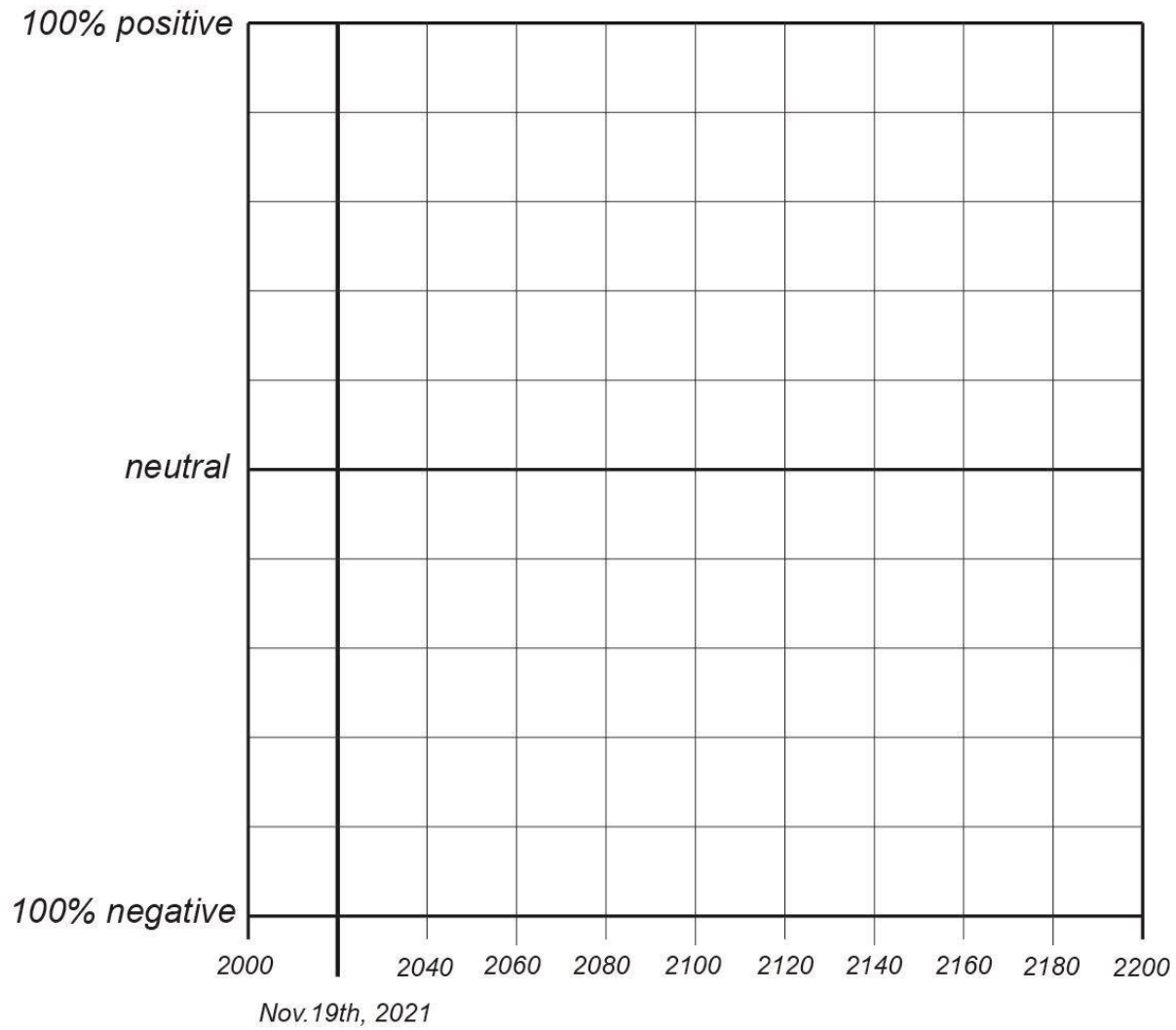
Name: _____

Email: _____

1) **Instructions:** Starting on the left side of the graph, please pick a point between 100% positive and 100% negative, indicating your sense of the total well-being of humanity for the year 2000. Drawing a line or curve, indicate how humanity's well-being has changed over the past twenty years (each horizontal cell on the graph represents 20 years). Continue drawing your line to indicate how the well-being of humanity will change over the next 180 years.



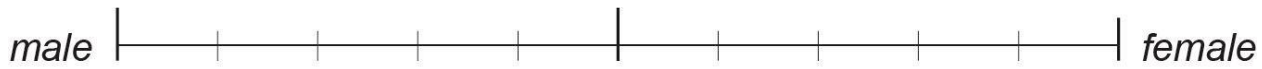
2) Now do the same, but this time indicate *the total well-being of the planet*:



3) How old are you?

- 18-25
- 25-30
- 30-40
- 40-45
- 45-50
- 50+

4) Please place a mark where you reside on the following gender continuum:



5) Provide **one** to **five** words that describe or represent your feelings about the future at this moment in time:

6) I think of time as (please select **one** that is **most** applicable):

- Linear
- Cyclical
- Progress
- Decline
- Eternal
- Finite
- Other (please specify): _____

Instructions: Please circle the response that best characterizes how you feel about the statement, where: 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, and 5 = Always.

	Never	Rarely	Some- times	Often	Always
7) I think about the future within my own lifespan	1	2	3	4	5
8) I think about the future beyond my own lifespan	1	2	3	4	5
9) I think about the future of humanity	1	2	3	4	5

10) What contributes most to your views about the future? **Choose the top three** and order them in ranking of their importance to your views: Most Important= 1, Second Most Important= 2, Third Most Important= 3

- _____ Religion
- _____ Philosophy

- _____ Literature
- _____ The news
- _____ Social media (i.e. Facebook, blogs, discussion forums)
- _____ Popular media (i.e. Netflix, Hollywood, Youtube)
- _____ Documentaries
- _____ Scientific Reports
- _____ Cultural heritage and tradition
- _____ Other: _____

11) For each of your three choices in question 10, please provide an example that most influences or reflects your views of the future. *For example:* 1) The news: *BC forest fires*, 2) Social media: *Instagram*, 3) Literature: *Brave New World*

- 1) _____
- 2) _____
- 3) _____

Instructions: Please circle the response that best characterizes how you feel about the statement, where:

1 = Strongly Agree, 2 = Agree, 3 = Neutral, 4 = Disagree, and 5 = Strongly Disagree.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
12) I believe all the Earth's systems (from the climate to the economy) are interconnected.	1	2	3	4	5
13) I have had the experience of being <i>at one</i> with nature.	1	2	3	4	5
14) My actions have impact upon the future.	1	2	3	4	5
15) I care about what will happen beyond my immediate family's lifespan.	1	2	3	4	5
16) I am open to alternative ways of doing things.	1	2	3	4	5
17) My feelings about the future impact my choices and behaviour.	1	2	3	4	5
18) I believe the preservation of traditions is important.	1	2	3	4	5
19) We must protect humanity at all costs.	1	2	3	4	5
20) Human beings <i>can</i> change the future	1	2	3	4	5
21) Human beings <i>will</i> change the future.	1	2	3	4	5

22) Art will save us	1	2	3	4	5
23) Science and technology will save us	1	2	3	4	5

24) Please include a statement you feel strongly about regarding the future that has not been touched upon in the above statements:

25) For each of the following events please indicate:

a) likelihood of the event occurring **within the next 100 years**. (0 never going to happen, 10 will certainly happen)

b) impact the event (-10 = most terrible, +10 = most wonderful)

c) how much you care whether this event will happen (0 = don't care, 10 = care deeply)

	Likelihood 0 (never going to happen) to 10 (will certainly happen)	Impact Level - 10 (most terrible impact) 0 (no impact) + 10 (most wonderful impact)	How much you care 0 (I don't care) to 10 (I care deeply)
a) Environmental disaster			
b) Cure for cancer			
c) Killer virus			
d) Widespread food shortage			
e) Reversal of global warming			
f) Asteroid hits earth			

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<i>g) Sea levels rise to catastrophic levels</i>			
<i>h) Artificial intelligence dominates humanity</i>			
<i>i) Technology dramatically reduces human suffering</i>			
<i>j) Contact with aliens</i>			
<i>k) Provide an event not listed here:</i>			