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Creating Aesthetic Encounters *of* the World, or Teaching in the Presence of Climate Sorrow

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This paper explores education as a context for facing what Susie Orbach has termed 'climate sorrow' and asks: what 'relations to the world' are we imagining might help youth stay with difficult feelings about the future by enabling them to develop a living relationship to the more-than-human world in the present? By way of response, the paper offers a conceptual shift from 'relations to *the world' to 'encounters* of *the world'. I draw on the work of David Abram to reframe our relations as sensory encounters and on the work of Bruno Latour to reframe the world as a living multiplicity. What both authors enable is a complex understanding of the temporality of our living in and with our environment. To explore this further, I offer a reading of Olafur Eliasson's climate artwork,* Ice Watch. *Consisting of 24 blocks of melting glacial ice outside the Tate Modern in London, the installation holds two temporal dimensions together through the kinds of encounters it makes possible: chronological time (*chronos*) and living time (*kairos*). In the final section , I locate the time of environmental teaching at the juncture of* chronos *and* kairos *as a way of creating encounters of the world that educate about the climate emergency while also giving time for climate sorrow.*

> Humans are tuned for relationship. The eyes, the skin, the tongue, ears, and nostrils – all are gates where our body receives the nourishment of otherness.
>
> David Abram, *The Spell of the Sensuous*

> The expression 'relation to the world' itself demonstrates the extent to which we are, so to speak, *alienated*.
>
> Bruno Latour, *Facing Gaia*

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INTRODUCTION

In December 2018 Danish-Icelandic artist Olafur Eliasson deposited 30 chunks of glacial ice into central London as part of an interactive artwork entitled, *Ice Watch*. The transported ice had broken off from Greenland glaciers and 24 blocks were laid in front of the Tate Modern for the public to interact with. From the documentation, it is evident that the relation to this relatively small slice of the world was a deeply sensual one, involving people touching, rubbing, licking, listening, smelling and observing. It was a complex relation that moved between the concreteness of the pieces of ice, their liquid melting and their eventual evaporation into air. It was a relation, in other words, that spoke of transformation, transition, loss and to the passing of time as well as to the present immediacy of the ice as it was experienced through the senses.

Eliasson's work reminds us that the enormity of the current climate emergency can be felt through singular moments of encounter. Indeed, one might say it is the very task of an artist to stage encounters that can provoke and offer a 'perceptual shock', as Jacques Rancière (2006) would put it, that reorder our relation to the world. While the work of the teacher carries with it different responsibilities, it also echoes the installation artist's considerations as it too stages encounters between students and elements in the environment (through contact with plants, insects, water, soil, stones, animals, etc.). In this sense, teaching, like art production, is very much about a certain form of 'curation' (Ruitenberg, 2015) that takes place both within and outside formal schooling contexts,[1] and offers opportunities for students to have new and life-enhancing experiences. In this teachers devise the form their pedagogies will take by designing activities, planning their duration, setting up the physical space, creating conditions for interaction and choosing the content, objects and material that students will interact with; as such it is not dissimilar to the aesthetic decisions that artists and curators have to make. But it is also very different, since there is another kind of educational responsibility built into our practices as teachers, particularly acute when working with children and youth: to help them live and lead fulfilling lives in a context that is sensitive, attuned and responsive to their concerns and experiences. Such an overt educational and ethical sensibility is not a formal obligation for the artist.

Teachers create opportunities for students to explore their relations to the world through encounters that are not only aesthetic, but must also be educationally responsive. As such, it is important to see how the encounters we stage can reflect life-enhancing experiences as well as possibly prompting anxiety, dread and fear for students in contemplating the possible end of life as we know it within their lifetimes. Indeed, we are compelled to ask ourselves as teachers what relation can we have to the world in the present when the climate emergency puts into question the futurability[2] of life itself? Do we sidestep the horror of our collective predicament and proceed with business as usual, pushing it into place of denial, or do we face up to its magnitude and begin the work of dealing with what feminist psychoanalyst Susie Orbach refers to as 'climate sorrow'?

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As Orbach (2019) writes, climate sorrow

> opens up into wretched states of mind and heart. We can find it unbearable. Without even meaning to repress or split off our feelings, we do so. I am doing so now as I write. Staying with such feelings can be bruising and can make us feel helpless and despairing. It is hard, very hard, to stay with, and yet there is value in this if we can create contexts for doing so…[3] (p. 68)

For me, Orbach's passage raises the question: Can education, particularly for youth, become such a 'context'? For as she suggests, if we are going to change the course of the current path of destruction, then we need to face up to those difficult feelings that prevent us from acting for change in the first place. And, insofar as environmental education seeks to encourage such transformation, then we need to take not only our own feelings into account as adults, but offer an educational space and time for youth to confront and begin to deal with their own existential worries and concerns. Thus if education is to become a context for facing climate sorrow, what 'relations to the world' are we imagining might help youth – and indeed ourselves – to stay with difficult feelings about the future by enabling them to develop a living relationship to the more-than-human world in the present?

After situating the importance of relations to the 'natural world' within environmental education,[4] the next part of the paper delves into the reframing of 'relations *to* the world' as 'encounters *of* the world'. As indicated in the epigraphs to this paper, there are (at least) two ways of thinking of our 'relation to the world': that our relations are always constituted through a sensory encounter with otherness, as the quote from David Abram (1997) above suggests; or that relation *to* itself presumes that we are already disconnected and alienated from the world *of* which we are a part, as Bruno Latour (2017) intimates. Despite the apparent incommensurability of their positions (Abram positing a phenomenological approach to questions of our existence; Latour taking an immanent view of existence through relational ontology), I explore how the sensual dimension of our singular experiences is indeed also an important part of our human inseparability from the world and as such can inform the way we teach through encounters with elements of the environment. I then turn to a more in-depth exploration of Eliasson's climate installation *Ice Watch*, and particularly focus on the way it holds two temporal dimensions together through the kinds of encounters it makes possible. Here, I discuss its relationship both to chronological time (*chronos*) and to living time (*kairos*), drawing on Marianna Papastephanou's work, and reflect on what teaching can learn from such an artwork. In the final section, I locate the time of environmental teaching at the juncture of *chronos* and *kairos* as a way of responding to our duty to educate about the future and to our responsibility to do so in ways that contribute to students' living well in the present – that is, to create encounters *of* the world that educate about the climate emergency while also giving time for climate sorrow.

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RELATION TO THE 'NATURAL' WORLD IN ENVIRONMENTAL EDUCATION[5]

Many scholars advocate that one of the best ways for engaging students in sustainability issues is to create encounters that allow students to build a *living* relationship to the natural environment. Michael Bonnett (2007) for one notes how students' relationship to the natural world is often neglected in formal schooling curriculum in environmental education. Similarly, Anne Liefländer *et al*. (2013) observe that curriculum and pedagogy in sustainability education are frequently focused on 'knowledge and attitudinal outcomes' and argue instead that developing feelings of connectedness with nature can lead to developing feelings of protection toward it (p. 370). The development of such relationships has long been the aim of outdoor and experiential education, with which environmental pedagogy, especially with young children, has been intertwined (Dyer, 2007). Encounters with plants, animals and insects are regularly staged by teachers as a means to encourage children's curiosity, imagination and wonder (Dyer, 2007; Hauk *et al*., 2015; Jørgensen, 2016) and many authors cite Rachel Carson's *Sense of Wonder* as an inspirational text in this regard. Thus, there is a broad, if varied, consensus that environmental education is not merely about the cognitive accumulation of facts about the effects of climate change, nor is it solely engaged with the domain of the intellect, but is dependent on developing relationships with the world that are both sensual and affective.

Hauk *et al*. (2015) speak of teaching in this regard as a form of 'creative curation'. For instance, in the activities collected in their extensive article, there is a strong sense of the aesthetic dimension as central to our experience with 'nature': each activity is designed around a form of embodied relationality through sound, scent, taste, touch and vision. Aesthetic, along these lines, speaks not to a theory of art *per se*, but to the Aristotelian sense of the term, as that which is directly related to sensory perception: derived from the Greek *aesthetikos* which means to feel or pertain to the senses. This has not been lost on either environmental educators or climate artists who are also involved in staging sensory encounters with elements in the environment as part of augmenting awareness about sustainability.[6] For Hauk *et al*., environmental education is necessarily about 'sensory entanglement' as a means for attending to and having compassion for the natural world.

In this respect, calls for environmental education indeed echo Abram's (1997) emphasis on the centrality of the sensual and perceptual dimensions of those relations. However, what constitutes this sensory 'relation to the world' is far from straightforward, since it is not always immediately clear what 'relation' or 'world' mean in these educational contexts. Is the 'world' simply a substitute for 'nature', for all that we hold outside of 'culture'? And if so, where am *I* in that world? Moreover, is 'relation' that which exists between an already defined self and an 'other' from the realm of the 'natural'? And if so, how do we conceive of ourselves as human within this 'more-than-human' realm? I think these questions warrant further attention given that 'relationships with nature' are seen

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to be beneficial both for students' present lives and for the future of the planet itself. Abram and Latour offer some conceptual distinctions that are useful for reframing what we are doing as teachers as we stage relational and aesthetic encounters with the world. It is to these that I now turn.

REFRAMING RELATIONS THROUGH SENSORY ENCOUNTERS

For Abram our sensory entanglements are complex arrangements. Although drawing on a phenomenological heritage that can sometimes be construed as anthropocentric (Langer, 2003) or colonial (Ahmed, 2000) in its universalising of singular experience, Abram (1997) seeks to utilise its perceptual framework to reconsider the kinds and qualities of relations we have to the 'world' that respects the plural dimensions of more-than-human life forms. Indeed, he insists that we do not only receive the world (as one reading of the epigraph might suggest) but also that we *enter into* the world through our perception – a perception that is necessarily partial:

> Yet it is also our insertion in a world that exceeds our grasp in every direction, our means of contact with things and lives that are still unfolding, open and indeterminate, all around us. Indeed, from the perspective of my bodily senses, there is no thing that appears as a completely determinate or finished object. Each thing, each entity that my body sees, presents some face or facet of itself to my gaze while withholding other aspects from view. (1997, p. 40)

For Abram, the way I encounter the world is necessarily constantly shifting, as are the things and lives with which I come into contact. Our sensory relation to the world is not, therefore, only partial because of our subject positionality, but because as a living being among other beings and existents, I live in and through time: the time of continual flux and change. In this, our perception is something to be neither overcome nor perfected so that we may 'grasp' the world in some all-encompassing gesture that freezes time. Instead, as Abram makes clear, our sensory encounters with the world enable us to attune to change and alteration, each encounter not quite like the one that comes before. He gives the example of looking at the seemingly static object of a clay bowl:

> Even a single facet of this bowl resists being plumbed by my gaze once and for all. For, like myself, the bowl is a temporal being, an entity shifting and changing in time, although the rhythm of its changes may be far slower than my own. Each time that I return to gaze at the outward surface of the bowl, my eyes and my mood have shifted, however slightly; informed by my previous encounters with the bowl, my senses now more attuned to its substance, I continually discover new and unexpected aspects. (1997, p. 40)

Abram (2011) is clear that our modern ways of conceiving of 'nature' have ushered in a particular (negative) view of the senses. He attributes this

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initially to the heliocentric discoveries of Copernicus, Kepler and Galileo that needed to hive off our sensory experience from thought and knowledge. As such, 'sensory perception was increasingly derided as deceptive; only that which could be measured and analysed mathematically could be taken as true' (2011, p. 452). Abram's point is not that we should 'return' to a pre-Newtonian worldview, but that the stark division that devalued the ways we actually live through our bodies and the senses has led to a distorted sense of ourselves and the environment, with calamitous results. Indeed, Abram (2011) suggests that even some environmental activists themselves keep at bay 'creaturely sensations' in a bid not 'to succumb to an overwhelming grief' (p. 23), preferring instead to focus on statistics and abstractions to champion their cause. For Abram, this is yet another indication of how 'we shelter ourselves from the harrowing vulnerability of bodied existence' (2011, p. 24) – and indeed, I would add, climate sorrow. Avoiding the senses becomes a way of averting the horror.

A remedy for this, as I read Abram, is to rethink the world not in terms of 'objects' to be known and measured by a 'subject' in a grand gesture of mastery, but in terms of encounters that bring me into commingling, connection and tension with the things and lives around me. In other words, that brings me into *qualities* of relationship with the environment – and for Abram, particularly the 'natural' or more-than-human environment. Drawing on Merleau-Ponty's (1968) idea of the 'flesh of the world', Abram sees that it is not simply a singular body that perceives objects but that there is an exchange or interaction of flesh, a reciprocation in the encounter. 'From within the depths of this encounter, we know the thing or phenomenon only as our interlocutor – as a *dynamic presence* that confronts us and *draws us into relation*' (1997, p. 43 – emphasis added). Thus, our flesh is entangled, wrapped around one in the other, the folds of which are at times unclear. This does not mean we are 'one' with the environment; rather that our very perception is a form of *participation* that takes on the rhythms of history as one of intrinsic plurality. 'For these other shapes and species have coevolved, like ourselves, with the rest of the shifting earth; their rhythms and forms are composed of layers upon layers of earlier rhythms, and in engaging them our senses are led into an inexhaustible depth that echoes that of our own flesh…. They are all composed of repetitive figures that *never exactly repeat themselves…'* (1997, p. 47).

It is thus that our encounters are singular in the sense that while we might encounter a familiar 'object' (for instance, a tree, rock or bird in our local park), it is a non-repeatable event, a moment of the variation in time that can never be replicated. Encounters are also, therefore, dynamic, since each one is solicited, active and open. Abram writes:

> To the sensing body *all* phenomena are animate, actively soliciting the participation of our senses, or else withdrawing from our focus and repelling our involvement. Things disclose themselves to our immediate perception as vectors, as styles of unfolding – not as finished chunks of matter given once and for all, but as dynamic ways of engaging the senses and modulating the body. (1997, p. 56)

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It is this unfolding of perception that suggests we are never in a static 'relation to' something, but in a constant flow of relation, an immersion with a world which is itself vibrant and subject to alteration, differentiation and endless variation. In this sense, our encounters are not merely *with* the world, but are *of* the world: moments of contact in the present that open up to the unfolding and shifting reality of the things and lives we meet.

Although Abram's position is rich in its depiction of the 'more-than-human' world as it is *experienced* I want to delve a little further here into a conception of the world that highlights even more significantly its relational qualities. I do this in order to probe deeper into the animate dimensions of the world which do not simply offer themselves up to our sensory *experience*, but exist as a network of interdependent relations that link me to life on this planet. Thus while Abram quite clearly sees that the more-than-human world shapes itself according to its own rhythms which 'echo our own flesh', Latour actually takes this a step further to assert that our inseparability from the world as humans is not only an aspect of experience, but is part of a ontological condition of the world itself. As I argue below, this strengthens the idea that our sensory encounters are *of* the world in a manner that is both immersive and interdependent.

REFRAMING THE WORLD IN TERMS OF GAIA

Latour (2017) asserts that the New Climate Regime has ushered in a 'profound mutation in our relation to the world' (p. 8). However, rather than placing 'relational' qualities at the centre of a phenomenological analysis as Abram does, he instead reconceptualises the world itself *as* relation. This requires accepting that it is now no longer possible to think of Nature as separate from Culture (if it ever was) when we speak of the 'world' itself.

> The difficulty lies in the very expression "relation to the world," which presupposes two sorts of domains, that of nature and that of culture, domains that are at once distinct and impossible to separate completely. Don't try to define nature alone, for you'll have to define the term "culture" as well (the human is what escapes nature: a little, a lot, passionately); don't try to define "culture" alone, either, for you'll immediately have to define the term "nature" (the human is what cannot "totally escape" the constraints of nature). Which means that we are not dealing with domains but rather with one and the same concept divided into two parts, which turn out to be bound together, as it were, by a sturdy rubber band. (Latour, 2017, p. 15)

Like Abram, Latour traces this division to the heliocentric discoveries of the 16th and 17th centuries; yet in distinction from Abram's critique, he emphasises that this division has contributed to how humans live between two worlds:

> one is where they have their habits, the protection of law, their deeds of property, the support of their State, what we could call the *world they live in;* and then, in addition, a second world, a ghostly one, often

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> far remote in time and space, that benefits from no legal protection, no clear delineation of properties, and no State to defend its rights: let's call it the *world they live from*. (in press, p. 4)

Thus what the New Climate Regime ushers in is a reframing of the world that dispenses with the split itself, and that re-envisions the world beyond the nature/culture divide. Latour speaks instead of a 'Critical Zone': 'we reside inside a thin bio-film no thicker than a few kilometres up and down, from which we cannot escape - and, 'Critical Zonists' would add, whose *reactions* (chemical alterations and geological mechanisms, as well as social processes) are still largely unknown' (in press, p. 3). More importantly, this Critical Zone is neither a 'chunk of space' (Latour 2014, p. 4) nor territory nor land, but depicts a spatio-temporal zone where life transpires on this planet. It is 'critical', for Latour, in the engineering sense of feeling stress, signalling a structure's potential collapse under certain conditions. This Critical Zone is, in other words, the world of life itself, subject to stresses that are brought now to a point that does indeed threaten its ruin (2014, p. 4).

Underlying this formulation is Latour's reading of James Lovelock's Gaia hypothesis. In his Gifford Lectures, published under the title *Facing Gaia*, Latour (2017) argues that we need to 'place ourselves inside this world' (p. 36) in a way that understands the Earth in all its complexity and not simply as an effect of 'Nature' or as that which is untouched by 'Culture'. He asks:

> how to speak about the Earth without taking it to be an already composed whole, without adding to it a coherence that it lacks, and yet without deanimating it by representing the organisms that keep the thin film of the critical zones alive as mere inert and passive passengers on a physio-chemical system? (p. 86)

For Latour, in line with Lovelock, we cannot understand the Earth, its behaviour or the way it works, without having a sense of the actions 'accomplished by living organisms'; the Earth is teeming with the proliferation of life 'between the top of the upper atmosphere and the bottom of the sedimentary rock formations'; it is a veritable 'seething broth' (2017, p. 93). Living organisms are not, however, to be seen as 'parts of a whole', as if Gaia were one thing, one unified totality. For Latour, Gaia represents an attempt to name the plurality of life not to mark yet another 'organism' such as 'Nature' with its own 'laws' and 'moralities' separate from the organisms that make up life in the Critical Zone. Instead, Gaia is a multiplicity and 'captures the distributed intentionality of all the agents, each of which modifies its surroundings for its own purposes' (2017, p. 98). On Latour's view, then, what Gaia, unlike 'nature', moves to encompass is the pulsing, ever-changing reality of liv*ing*, not the context in which such living occurs. As Latour emphasises, 'Organisms… do not develop "in" an environment; rather, each one bends the environment around itself, as it were, the better to develop' (2017, p. 98).

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Importantly, this means that we cannot so easily distinguish where the action of an organism ends and the world begins; this is not merely a conceptual issue for Latour, neither is it a problem of perception, but is part of the facticity of the multiplicity of living. ‘Since all living agents follow their own intentions all along, modifying their neighbours as much as possible, there is no way to distinguish between the environment to which the organism is adapting and the point at which its own action begins’ (2017, p. 100). This has a profound bearing for not only the ways in which we conceive the ‘environment’ as a space that we inhabit or can have a *relation to* as though it is separate from us, but encapsulates a time of encounter; Gaia is a history of those encounters and relations that organisms, including human, viral, bacterial, atmospheric, animal, vegetal, create through their own activity as living organisms. As Latour writes:

> There is nothing inert, nothing benevolent, nothing external in Gaia. If climate and life have evolved together, space is not a frame, not even a context: space is the offspring of time. Exactly the opposite of what Galileo had begun to unfurl: extending space to everything in order to place each actor within it, *partes extra partes*. For Lovelock, such a space no longer has any sort of meaning: the space in which we live, that of the critical zone, is the very space toward which we are conspiring; it extends as far as we do; we last as long as those entities that make us breathe. (2017, p. 106)

What this means is that as humans we are neither at one with the world, nor are we separate from it. We are instead *of* the world as other organisms are as well: acting in ways that continually transform and change our environments, blurring the distinct edges between nature and culture we have created for ourselves. The problem of course is, for Latour, that humans have not recognised ourselves as participating in this history of planetary life and thus our actions (as culture) have been seen as separate from this history. Indeed, he sees that rather than trying to find our rightful place in Nature (a spatial notion) we need to think more in terms of ‘learning to participate in the geohistory of the planet’ (2017, p. 107). Reconceiving of the world in this way suggests that our encounters with things, animals and plants, are an expression of our ‘of-ness’ – an ‘of-ness’ that challenges us to notice change as indicative of time: our inseparability is thus not only spatial but temporal. For Latour, Gaia is living history itself.

Following both Latour and Abram, encounters *of* the world, I would like to suggest, are thus not merely spatially oriented, as meetings that occur in a physical context, but are also temporally marked. They are occurrences that transpire from one moment to the next in an arc of chronological time that opens up to both history’s precedent and the future’s probable and potential consequences as well as in a living time of sensory experiences in the present. I turn now to explore how one rendering of these encounters *of* the world brings together these two temporal dimensions in ways that can inform educational encounters in environmental education.

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ICE WATCH AND THE PRESENCE OF TIME

Olafur Eliasson worked with geologist Minik Rosing to create *Ice Watch*, which required the harvesting and transportation of 30 blocks of ice from the Nuup Kangerlua fjord in Greenland. As a participatory installation, *Ice Watch* stages encounters *of* the world by offering the public a spatial and temporal experience of glacial ice melting.[7] The installation outside the Tate Modern in London was set up in December 2018 and coincided with a recent UN-IPCC report. In fact, *Ice Watch* had been mounted twice before, both times coinciding with important climate meetings and events: once in Copenhagen in 2014 at the release of the IPCC's Fifth Assessment Report and once in Paris in 2015, during COP21 that led to the Paris Agreement.[8] The installation in London consisted of 24 blocks of ice arranged in the rough formation of a sundial on Bankside outside the Tate (while six were on display in front of Bloomberg's European headquarters in the City). People were encouraged to interact with them in any way they wished, inviting them into both an immediate sensory encounter with the ice and into a temporal zone that collapsed two worlds, to echo Latour: the one *in* which we live and the one *from* which we live.

The ice blocks themselves date back thousands of years and Eliasson encourages the public to 'witness the ecological changes that our world is undergoing' (2018). The *Ice Watch London* website[9] not only describes details of the project but contains scientific graphs and statistics about the significance of glacial melting, which themselves continue the installation in a virtual form. However, Eliasson is concerned that facts alone are not enough to ignite action: 'feelings of distance and disconnect hold us back, make us grow numb and passive'. The main idea behind Ice Watch is to 'arouse feelings of proximity, presence, and relevance'. Eliasson (2018) particularly invokes the sensory dimensions of our encounters: 'Put your hand on the ice and feel the cold, smooth surface against your skin. Put your ear to the ice and listen to the crackling noises it produces as it melts.' The photos and videos documenting *Ice Watch* do indeed show children, youth and adults interacting physically – and indeed intimately – with the ice and its slow transformation.

One might legitimately question whether Eliasson's work harkens back to an earlier romanticism (Barry and Keane, 2019), which links *Ice Watch* to traditional invocations of the sublime and as such glosses over the multifaceted dimensions of the public's interactions with the ice. As environmental art critic Christopher Heuer (2018) notes in relation to the installation in Paris, the piece 'maybe somewhat inaccurately universalizes the idea of the "human" who is actually behind Anthropocene warming' (p. 302) in that it overlooks the corporate and capitalist element of the climate crisis as well as the way the global south and impoverished peoples currently bear the brunt of ecological change. As part of a 'neo-materialist turn in Arctic art practice', *Ice Watch*, according to Heuer, misses the climate crisis' 'actually existing (and unevenly distributed) effects upon social spheres' (p. 302). In other words it is pitched, in Heuer's view, in a tenor that does not sufficiently interrogate the differential aspects of climate justice.

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While these issues are not insignificant either to the actual *effect* the artwork might have to arouse action and to chart a course of change, or to the much needed, urgent critique of climate inequality, I do think the installation is nonetheless instructive for the way it pedagogically illuminates a chiasmic crossing of time that captures the complexity of living in the spatial and temporal presence of climate emergency within the Critical Zone. The piece is indeed marked by a 'time of out of joint'; the presence of ice literally disrupts the flow of city life by their hulking and uncanny presence and introduces two rogue elements into the present: that of the sedimented weight of geological history and that of a vanishing future. In this, the ice is part of chronological time, a measured time, the time of marked events that have led up to its display in London, telling a condensed story of its beginnings in a Greenland ice sheet, its severance from that sheet due to warming temperatures and its final resting place on the banks of the Thames. It also gestures to a future that is yet to be defined and which we cannot witness: the evaporation of the melted ice water into literal thin air. That is, while we can see and feel the transformation of ice into water, the final vanishing act is actually hidden from the powers of our perception. It is the predicted future of the climate emergency, obeying a logic of chronological time that is not completely within view.

Marianna Papastephanou (2014) writes critically of this view of time as *chronos* (past, present, future neatly laid out within a linear topography) which so dominates educational efforts, signalled by cultures of performativity and managerialism. We 'know' the future and thus work backward not to change that future, but to live up to it. Chronosophy is 'the discontent with mere empirical observation of the here and now and as the tendency and practice to make the future accessible, to make it an object of knowledge' (p. 722). This means that if *Ice Watch* were a work solely in the time of *chronos*, its pedagogical trajectory would become the re-telling of a narrative with a fixed ending (from ice sheet to vanishing ice), and it would be a statement of inevitability instead of a call to action. Instead, it intersects with another temporality, the time of *kairos*, or the living present, as a disruption of this linearity. As Papastephanou writes, *kairos* is 'a qualitative sense of temporality, bearing associations of chance, opportunity, lived experience and relationality to time…' (p. 719). For Papastephanou, *kairos* is the time for thinking and reflection, it introduces neither finality nor certitude, but openness to the vicissitudes of life itself. As such, it is a time of living and staying with our experiences – even in the face of a vanishing future.

As the time of living, the present does not only become, as Jan Masschelein (2011) has called it following Arendt, a 'break between past and future' but it also contains within it different temporalities. First, as we see in *Ice Watch*, the arc of chronological time, with its distinct linear phases of past, present and future, can never simply disappear from view – rather it is held in a moment of engagement, providing a rich source of experiential reflection. Secondly, the living present of *kairos* unfolds through the sensual experiences of our encounters with ice as well as through the ice's own interaction with its environment. From the vantage of the present, the ice

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we touch, smell, taste and listen to is thereby caught within multiple lines of relationality: these blocks are not only 'representatives' of or 'stand-ins' for ecological crisis, but are material existents that are undergoing continual transformation under our eyes, ears, fingers and tongues. In this sense, they are *of* the world, expressive of Gaia itself as living history, to follow Latour. Additionally, 'we' are also caught up in this transformation: the warmth of our hands and breath, the saliva from our mouths, along with the infinitesimal particles and waves of heat, wind and water in the surrounding atmosphere contribute to the ice's shapes, textures and rates of melting. As such, the ice (and its melting) is forged through a complex network of relations. Each block is singularly different from the next one, and each human 'interlocutor' with each ice block senses something different and partial. As Abram suggests, we perceive not the thing in itself as complete, but in a flow of relation. The shifting light, temperature and mood alter the conditions of interaction and therefore our attention. *Ice Watch* does not create a generalisable (or generic) encounter between 'glacial ice and the human', but creates a series of living encounters that move to another rhythm than conventional, chronological time. Each experience of the ice opens up both to our own human inseparability from the world by allowing us to sense, to notice, to reflect on the living dimension of time and to our own capacity to be *with*, to sit *with*, the world as it is in all its relationality. Thus, to be with one of the ice blocks is not simply to witness its vanishing; this would turn *Ice Watch* into a predictable piece of theatre, like Greek tragedy. Instead, the cutting through of *chronos* with *kairos*, links the time of transformation (from solid to liquid to air; from ice sheet to harbour to Thames Embankment) to our own senses of the world as both vital and vanishing. It thus a poignant – if not shocking – entry into loss, and the ensuing sorrow, grief and horror of the predicament we share as Earthbound beings[10] (who are unequally affected by the climate emergency) with the 'living' ice itself.

TEACHING IN THE PRESENCE OF CLIMATE SORROW

My primary focus has been to explore what relations to the world are possible in light of the enormity of climate issues facing youth today, and to suggest that education needs to concern itself with creating contexts in which students' existential concerns can be faced in ways that fall into neither denial nor paralysis. I admit this is perhaps asking much of teachers, but given that teachers make curricular and pedagogical decisions daily in order to 'curate' student encounters of the world, then some clarity is needed to guide those decisions and to enable a reflection not only on the *kind* of encounters to choose (e.g. the design of the activities, the conditions in which they take place, the objects to be studied), but also the *quality* of those encounters teachers are enabling through their choices (e.g. do they give time and space to allow students to be with loss?; do they allow for complexity, openness and uncertainty?). As Affifi and Christie (2019) argue in their advocation of a 'pedagogy of death', encounters with loss are central to creating opportunities for emotional and existential growth that contribute both to living well in the present and to developing affective dispositions

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needed to deal with the future. The quality of encounter, therefore, is central to bringing students' present reality into contact with environmental destruction and alternative ways of formulating life in the future.

The temporal dimensions of *Ice Watch* reveal what is possible to achieve when *chronos* and *kairos* are traversed. Chronological time is perhaps more familiar to us as educators; it sets the trajectory of development, breaks up the day into linear chunks of time and structures lessons from start to finish. It also often permeates our narratives of human and more-than-human history. Like the story of the blocks of ice, there is a geohistorical element to teaching about the environment, whether this be in terms of evolution or geological epochs – all of which are fundamental to understanding the climate emergency as an issue of (urgent) time. Indeed, climate sorrow can be seen to arise from the sheer bombardment of information letting us know that within 7 (or 12, or 15 years) we will reach a tipping point from which life as we know it cannot be saved. This is also part of *chronos* – the stretch between the first planetary life forms and a future without humans to mark the passage. As Eliasson, Abram and Latour are all aware, however, it is not just our awareness of time *as it measured* that matters to life; indeed life itself occurs on another register: the past interrupts the present; the future looms to alter present conditions; the present becomes a denial of history and also stands in rebuke of what is coming. Bringing this complexity of living into our educational lives together with *chronos* requires a pedagogy that is also committed to *kairos*.

From an educational point of view, the time of *kairos* is about students' bodily engagement with elements of the environment, forming sensations of connection, commingling and tension (Abram) that recognise their interdependence, while also acknowledging that the world itself consists in a multiplicity of living (Latour): the world that I encounter is not just 'my' world. The 'world' is dynamic and animated, continually undergoing processes of change. *Kairos* as a living presence, we might say, *is* this incessant time of alteration and transformation – not in a linear progression, but as proliferation, creation and generation. As such, students' aesthetic experiences *of* the world tap into and become entangled with the teeming life of the Critical Zone. Encounters *of* the world, in my meaning here, are not entered into from some 'bird's-eye' perspective, through which I become a voyeur into processes of 'nature' that are detached and alienated from me as a 'human', imitating the magisterial gaze of scientism. Instead, our sensory encounters as Earthbound beings can offer students an experience of the very interdependence of life – an immersion into the 'seething broth' of the Critical Zone, the offspring of living time.

Latour (in press) calls upon aesthetics 'defined as what renders one sensitive to the existence of other ways of life' in order to help us deal with 'the flood of terrifying news pouring in every day… Artists are challenged to render us sensitive to the shape of things to come' (p. 8). While, as we have seen, both in terms of Abram's phenomenology and Eliasson's artistic practice, that the senses play a central role in this aesthetic endeavour, it is not only artists who bare this responsibility. Indeed, in line with what I see as teachers' educational and ethical responsibility to help youth live and

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lead fulfilling lives in a context that is responsive to their concerns and experiences, they are particularly well-poised to consider how their staging of encounters can respond to climate sorrow in creating temporal encounters *of* the world located at the juncture of *chronos* and *kairos*. In this sense, the quality of those encounters that are staged can be seen as opportunities for sensory exploration in ways that neither dictate nor demand what feelings, sensations and dispositions students 'should' have by the end of a lesson or unit. This is not to say that we teach without purpose, factual information or development, but that to allow *kairos* a place means also accepting – and indeed privileging – another quality of relationality to the world that is more about students' grappling with their place in it – a place that is not 'given' or 'fixed' but in flux and change. The striated texture of melting ice, the roughness of tree bark, the coolness of water from a brook or the smell of damp grass do not simply 'connect' students to things that are external to them, but generate sensory experiences that become entangled in the emergence of who they are (a 'me') in the present within an already existing relational world – a world that is composed not simply of solid objects (ice, trees, water, grass), but of variation and flow. Such fleeting sensations, coupled with the knowledge of climate change, the extinction of species, the threat to the air we breathe and the water we drink can indeed initiate feelings of loss, sadness and despair. However, the work of education is not to teach as though they do not matter, but to teach in a way that allows students to attend to a mode of being that is not solely defined by factual knowledge (however important that knowledge may be). As such, teaching in the presence of climate sorrow is an aesthetic practice that says living time matters and that recognises that what is difficult to bear can indeed be life enhancing.

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NOTES

1. Ruitenberg (2015) discusses some of the overlap and distinctions between artist, curator and teacher, although I will be discussing the curatorial aspects of teaching slightly differently here.
2. The term originates with Franco 'Bifo' Berardi (2017), *Futurability. The Age of Impotence and the Horizon of Possibility* (London, Verso).
3. Orbach is clear to emphasise however that 'facing feelings is not a substitute for political action, nor is it a distraction from action. Feelings are an important feature of political activity' (2019, p. 69).
4. In this paper, I am not making any conceptual distinction between sustainability education, environmental education, ecological education or education for sustainable development. My focus here is instead on investigating what is often a shared commitment to developing relationships to 'nature' across these various strands of pedagogical thought and practice.
5. I use scare quotes around natural here since I take up Latour's critique of this usage next and argue that the living world cannot be simply captured by the term 'nature'.
6. See, for example, Marina Abramovic's new app *Rising*, the Kapu collective's transient murals, Mel Chin's *Unmoored* (2018), and Gemma Anderson's audio piece, *Observation and*

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Operation: A Plant Meditation, 2020, in addition to Olafur Eliasson's work *Ice Watch*, which I discuss next.

7. While Eliasson's artwork has drawn some criticism both in terms of its apparent 'derivation' from process art of the 1960s and 1970s (Nechvatal, 2015) and more importantly in terms of its own carbon emission levels (Nechvatal, 2015; Barry and Keane, 2019), his studio has worked closely with the NGO Julie's Bicycle who write emission reports for cultural organisations in order to encourage sound environmental practices. According to their report, the offset contribution exceeded the installation's carbon footprint.
8. In Paris, the installation also ended up coinciding with the Paris terrorist attacks in November 13-14, 2015. As Christopher Heuer (2018) notes, the Place du Panthéon where *Ice Watch* was mounted became a site of pilgrimage and 'the ice accrued (for some) the poignancy of loss and tears…' (p. 301).
9. https://icewatchlondon.com
10. This is a term used by Latour to move away from the 'human' in order to highlight the boundedness of all life in the critical zone.

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