

Para-Anthropo(s)cene Aesthetics Between Despair and Beauty: A Matter of Response-Ability

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ABSTRACT

The Anthropocene is gaining recognition as an epoch in Earth's history in which mankind is changing the environment and the biosphere (Steffen et.al. 2011). Hotel Pro Forma's visual opera *NeoArctic* (2016) and Yggdrasil Dance's dance meditation *Siku Aapoq/ Melting Ice* (2015) explore how to aesthetically shape the ecological impact on human existence. The article discusses the performances' impact on potential responses to the climate crisis.

In *NeoArctic*, human activities have caused "overflow feedback": a constant flow of digital vistas of pollution, raging weather, temperature rises alternate with the planet's eternal processes, while underscored by ambience and operatic electro-pop. The images are front-projected onto the stage backdrop to create a literal overflow of the steadfast choir-performers, in which they almost disappear or become ghostly shadows, implying their imminent demise or insignificance on a planetary scale.

Siku Aapoq engages with Greenland's melting icecap: two dancers, Norwegian and Inuit, interact with a fabric understood as the melting ice, while enveloped in evocative lights, the crackling of glaciers, Inuit chants, ambience, and jazz. The Norwegian and the Inuit take turns enacting the ice, suggesting the interconnectedness with nature of both cultures.

Both performances seem to invite acceptance of inevitable disaster. Yet, human prevalence is implied in the stagings by convergence of past and future in the present, which suggests that the future is still undecided, and survival depends on an ability to respond to the materiality of the environment that we are already entangled in through a profound sense of beauty.

Theoretically, the analyses mainly draw on agential realism (Karen Barad) in order to outline a "para-Anthropo(s)cene aesthetics" that may reach beyond the human and engage spectators in realizing their ethical entanglement and the call for climate action. Considering intentions and reception, and the dystopian nature of the performances, the responses to climate change that the aesthetics may instigate are discussed.

KEYWORDS

Anthropocene, climate change, aesthetics, performativity, dystopia, utopia

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Introduction

Humans, like all mammals, are heat engines; surviving means having to continually cool off, like panting dogs. (...) [I]n the jungles of Costa Rica, for instance, where humidity routinely tops 90 percent, simply moving around outside when it is over 105 Fahrenheit would be lethal. And the effect would be fast: within a few hours, a human body would be cooked to death from both inside and out.¹

A catastrophic scenario like “Heat Death” is what has made journalist David Wallance Wells’ 2017 cover article for the *New York* magazine, “The Uninhabitable Earth”, a difficult read for many readers. Shortly after its publication, it went viral on social media and was fiercely debated for its in-your-face approach to anthropogenic climate change. Today, it could be claimed that the ethical issue of the worst-case scenarios remains: does such a shock strategy really serve the intention of making audiences realize the severity of the changes – enough for them to act against the looming climate disaster? Would not the likely psychological responses rather be more de-motivation, depression, despair, and denial among an already doomsday-worn public?² Arguing this counter-productiveness of such apocalyptic stories, climate psychologist Per Espen Stoknes has called for the opposite strategy: telling the optimistic stories in the face of climate change.³ Stoknes asserts positive storytelling holds a self-reflexive performativity that will change our behaviour: “The more we tell these stories, the more we will begin to live them.”⁴ As soothing to the troubled mind as

1 Wells 2017. 105 Fahrenheit is the equivalent of 40.55 degrees Celsius.

2 Cf. Clayton et al. 2017.

3 Stoknes 2015, 135-147. These stories are exemplified by, at least, four inspirational master narratives “The Green Growth Narrative”, “The Well-Being Narrative”, “The Stewardship Story: The Greening of Religion and Ethics”, and “The Rewilding Story: Bring Back the Wildness”.

4 Ibid., 135.

this strategy may seem, it is however difficult to overhear the extreme urgency with which the UN Intergovernmental Panel on Climate Change in October 2018 called for political action, leaving us – as of today – little more than 9 years to *limit* catastrophic climate change.⁵ Recently protest movements such as #FridaysForFuture⁶, School Strike for Climate,⁷ and Extinction Rebellion⁸ have risen worldwide and responded with hope- and community-generating activism, exactly by not shying away from uncompromising direct messages to politicians and governments about the severity of the situation. There is a resonance between the UN report, the protest movements, and Wells' justification of his journalistic dramaturgy: “[W]hen it comes to the challenge of climate change, public complacency is a far, far bigger problem than widespread fatalism – that many, many more people are not scared enough than are already ‘too scared.’ In fact, I don’t even understand what ‘too scared’ would mean.”⁹ The stories of Greta Thunberg and other climate activists seem to suggest that their resolve has grown out of and *in spite of* their grief and anxiety; that it is the very *doing* something to avert disaster that brings soothing and the overcoming of debilitating states and inspires a sense of purpose and hope in both themselves and others.¹⁰

Approaching the anthropogenic changes to our planet from the point of view of theatre and performance studies, we, as scholars and concerned citizens of the world, are interested in the performative strategies – in the wide sense of the aesthetics – that performing arts might employ in efforts to address the challenges of the new epoch of the Anthropocene (colloquially the epoch of the human). Of course, it would be preposterous to claim that (performing) arts can save civilisation; this, we believe, can only be achieved politically in terms of socio-economical changes on an unprecedented planetary scale. However, on an experiential, performative level, the arts may facilitate audiences' embodied knowledge of the ecological issues. Through their material organization, artistic performances condition spectators' perception, and therefore merit our interest in adopted strategies to present their subject matter. With the aforesaid psychological concerns in mind, we ask how artistic performance stages the ecological crisis. Using two recent performances as examples, we imagine a “para-Anthropocene aesthetics”. One major critique of the concept of the Anthropocene is that it has reinstated anthropocentrism when humankind might be better off moving past this epoch.¹¹ By adding the suffix of *para-* to

5 IPCC special report *Global Warming of 1.5 °C*, <https://www.ipcc.ch/sr15/>. Even the worst-case scenarios of change in this report have been criticized for being too conservative and its scientific models for not taking into consideration all possible feedback processes in the ecosystems that could rapidly accelerate climate change, such as eruptive methane hydrate gas releases following permafrost melt-off in the Arctic. See, for example, Harvey 2018.

6 <https://www.fridaysforfuture.org/>

7 <https://www.schoolstrike4climate.com/>

8 <https://rebellion.earth/>

9 Wells 2017.

10 Haynes 2019; Cafolla 2019.

11 A list of contenders to the Anthropocene exists: Capitalocene, Technocene, Homogenocene, Manthropocene, and Chthulucene shifting its emphasis away from the human.

Anthropocene we want to acknowledge the nonhuman perspectives that affect the conditions of life on this planet while at the same time suggesting their possible unattainability to human action, perception, and comprehension; it is not easy to reach beyond the human, despite the intention to do so.

Our examples are two performances that aesthetically experiment with the Anthropocene and climate change: Hotel Pro Forma's visual electro-opera *NeoArctic: 12 Songs. 12 Soundscapes. 12 Landscapes. 1 Planet* (2016) and the dance meditation *Siku Aappoq/Melting Ice* by Yggdrasil Dance (2015). Both of these companies work experimentally with artistic research. Hotel Pro Forma was established in 1985 in Copenhagen as an intermedial/interart place for refining form, and has more than 50 productions in its portfolio. Yggdrasil Dance was formed in 1995, taking its name from Old Norse mythology, the world tree Yggdrasil, whose roots reach out far, each of them being a different culture that come together in the trunk of the tree and through its branches and leaves create new cultures.¹²

We attempt to qualify a preliminary para-Anthropocene aesthetics building on the two performances. Based on multisensory experiential performance analyses, we take theoretical cues primarily from physicist, feminist, and philosopher Karen Barad's *agential realism*. This is typically understood in terms of a radical posthumanist performativity, ultimately challenging concepts of all kinds of matter, connecting it with discourses of meaning-making and destabilizing dichotomies of nature and culture, human and nonhuman, female and male, even raising ethical questions about scientific practices, but also any other part of life. Although not developed for understanding the aesthetics of theatre and performance, Barad's theory seems apt for addressing meaning-making processes in contemporary artistic performance, which emphasizes different materialities. This is an issue theatre and performance scholar Maaik Bleeker has discussed as a process which "proceeds through setting up intra-actions that allow matter its due in the performance's becoming."¹³

Central to agential realism is the concept of *intra-action* that queers notions of individually and inherently constituted agents or entities. Usually, such entities are presumed to already exist before they act upon one another in what is called an interaction. This is commonly referred to as the Cartesian cut between subject and object. In Barad's agential realism – inspired by quantum physics – the cut between agents is relativist; what she calls the "phenomena" appear or materialize in their relational constituency through intra-action agents;¹⁴ though they do present a difference, they often appear without it being possible to explicate any certain causality, time or place for their origin. In ontological terms, they only exist as inseparable components intra-acting agentially. This means that pre-existing representation in the encounter between subject and object is replaced by meaning-making performativity between agents. Applied to a comprehensive understanding of matter proposed by Barad, agential realism has a radical impact on all levels of ontology, epistemology as well as

12 See: <http://www.yggdrasildance.dk/about> (27 June 2019).

13 Bleeker, 2017.

14 Or in an abstract sense, *agencies*.

ethics, that is, in an extraordinary combination of being, knowing, and taking on responsibility for the world that we are agentially entangled in. Through our performance analyses we claim that elements, i.e. agents, of the performances inter-act to create their own material discourse, implicating the spectator in the totality of intra-action, the performance's ethical imperative, its "response-ability".¹⁵ What Barad conceives of as *onto-ethico-epistemology* is the prioritizing of a certain materiality, excluding others – or to put it in Barad's use of the present continuous tense – the *mattering*, i.e. the material conditioning of intra-action which always has ethical consequences; applied to the theatre, these consequences mean that no one watching the performances can withdraw from their ability to respond to the performances' ethical calls.¹⁶ In the case of the chosen performances, those are calls for climate action.

In the discussion of para-Anthropo(s)cene aesthetics, we shall introduce other theories to connect Barad's philosophy to the performing arts and climate science. We will introduce these theories throughout the analyses and subsequently.

In choosing our examples, we sought out activist performances more subtle in their scope than usual. Not that we consider activist performance (actions, protests, etc.) in lesser terms; on the contrary, we are interested in extending the notion of it. In our assessment, *NeoArctic* and *Siku Aappoq/Melting Ice* grapple with the intricacy of human relations to the changing planetary environment and existential implications, and may come across as dystopian – yet, still provide incentive for climate action. We explore how the two performances stage the interrelation of humankind and environment and make both the anthropogenesis and its para-state, i.e. the climatic conditions beyond human influence, realizable through watching as embodied learning. In our discussion, we consider both reception and intention, and relate the performances to the crisis coping strategies suggested by Wells and Stoknes. We discuss if their stagings correspond with the scientist/activist call for action without potentially leaving spectators insensitive or defeatist.

Overflow Feedback

NeoArctic (2016) is a visual electro-opera directed by Kirsten Dehlholm for Hotel Pro Forma, which premiered at the Old Stage of the Royal Theatre in Copenhagen. It features singers from the Latvian Radio Choir, original ambient and techno music by Andy Stott, a contemporary choral work by Kristis Auznieks, a libretto written in English by the Icelandic writer and poet Sjón, costumes by designer Wali Mohammed Barrech, lighting design by Jesper Kongshaug, and digital visuals by Adam Ryde Ankarfeldt and Magnus Pind Bjerre. According to the concept, the performance is an investigation of how to express the Anthropocene.¹⁷ The title, *NeoArctic*, suggests that the Arctic is an indicator of the changes reshaping the planet.¹⁸ The performance's subtitle states its

15 Barad 2010, 265.

16 Barad 2010, 266.

17 <https://www.hotelproforma.dk/project/neoarctic/> (2 June 2017).

18 Steffen et al. 2011, 858. Depending on aerosol emission levels, it is estimated that the

planetary scope: “12 songs. 12 soundscapes. 12 landscapes. 1 planet.”

The performance attempts to convey a performative experience of the (para)-Anthropocene through different materialities. Inspired by an exhibition, *The Anthropocene Project* at Haus der Kulturen der Welt, Berlin (2013-2014), it identifies the characteristics of the epoch as three categories of materiality, “Grain”, “Vapor”, and “Ray”, and their separate and interrelated dynamics, “mobility of the materials (Grain), the continual change of phases (Vapor) and the transportation of energy (Ray)”. These categories are implied by the performance: its shifting, intervallic structure; the magnitude, colour, and texture of visuals, the physiological and emotional impact of entailing songs and immersive soundscapes. The performance employs an intermedial dramaturgy, incorporating an intricate interplay of digital video, body, voice, sound, lights, and set design to produce affects and sentiments referable to the anthropogenic changes to the planet and its effects on humans. Typically for a Hotel Pro Forma performance there are no psychological characters and no conflict-driven narrative, only a visual-musical score that unfolds in accordance with principles ascribable to post-dramatic theatre, a non-causality, non-linearity of stage actions and scenes, with elements juxtaposed in a parataxis assigning equal significance to all.¹⁹

As the performance opens, a surface of a plastic ocean of packaging, bottles, bags, more or less morphed into one another, comes rolling towards the auditorium as it is front-projected onto the huge horizontal backdrop and visually “drowns” out the grey and white-clad choir on stage. The choir chants “Song for Plastic,” a repetitive enumeration of chemical names for plastic while mechanically nodding their heads: “poly-ester, poly-thene, poly-amide,” etc. We choose to see *NeoArctic*’s “plastic ocean” as a Baradian mattering of humankind “overflowed” by mindless production and consumption of plastic, of which enormous quantities end up in the oceans. Whilst part of what in Barad’s terms could be called the principal staging *phenomenon*, the choir’s intra-action with the visual projections and/or the music is what determines the relation between the agents, in this case the overflowing. Overflowing as material discourse is the main principle of the performance’s staging. It is the mattering whereby the constitutional cut between agents appears to the spectator’s perception, either as visual and/or aural overflow of the choir (minimal action compared to singing).

In other scenes, “Song for Dust”, “Song for Mud”, “Song for Turbulence”, “Song for Temperature”, the overflow of the performers, we suggest, alludes to processes of positive feedback that are self-perpetuating and whose effects, as part of the Earth system, could increase exponentially. For instance, drought reduces water vapour in the atmosphere leading to even more drought. Rather than graphically demonstrating the processes through some kind of informational visuals, they are performed in terms of movements and materialities in the kind of asymmetrical relation characteristic of the Anthropocene, between the

Anthropocene could see average surface temperature rises of 4 degrees Centigrade in the Arctic compared to 0.8 degree C on most continents leading to a catastrophic rise in the sea level.

19 See Lehmann 2006, 86-87.

seemingly insignificant human action and the Earth system. In this context, movements by the human choir (like nodding the head or trudging on site) are not directly attributable to the changing environment, yet may convey a presentiment of the hidden prolonged effects of human activities, especially through the obstinate repetition with which they are performed. At the same time, the seemingly disproportionate effect of the sensorial overflow drowns out their appearances enveloped as they are in the materialities, the visuals of dust, mud, wind, energy rays, as well as the intrusive sounds they produce, the drizzle of grains, the bubbling of gas, the howl of the wind, the sizzle of heat. “Song for Mud” reminds us of the thawing of the permafrost in the Arctic that releases unstable pockets of methane hydrates to the atmosphere, which further warms, leading to frequent freak weather phenomena. In “Song for Turbulence”, a montage of documentary video snippets sends hurricanes, hail storms, floods, forest fires, tsunamis against the performers, who strike a pose as if they are weathering the heavy onslaught. A warmer atmosphere melts the polar ice caps and glaciers, and the albedo or surface reflectance is reduced causing further temperature rises. In “Song for Temperature”, a map of the world displays alternating zones of blue and red, the red colouring gradually taking over until the world is drawn towards the North Pole, distorted and sucked as if into a black hole. Obviously, this is not a scientifically accurate rendering of the process but the conveyance of a sentiment underscored by the choir’s increasingly sped up chanting, reaching a desperate crescendo. These scenarios might be thought of in terms of sensational feedback loops as anthropologist, sociologist, and philosopher of science Bruno Latour calls for an understanding of what it means to be of this planet.²⁰ Consecutively, the use of front projection and the resulting visual overflow of the choir may be explained in terms of Baz Kershaw’s “theatre ecology” understood as “the ways theatres behave as ecosystems.”²¹ He points out that “included in this is how the word’s etymology implies that organisms – including humans – are both a part of and apart from their environments, more or less reflexively alert to themselves as agents in/for environments.”²² Thus, the partial blurring of the choir by their stage environment may be interpreted as humankind’s inseparability from its planetary environment, whilst it offers the awareness of (failed) agency. On the sensorial level of the event, a simultaneous overflow of the spectator’s senses takes place, allowing for her immersion into the formidably magnificent vistas that reconstruct the unrelenting forces of Earth. Here, Karen Barad’s agential realism might contribute to understanding the aesthetic process – the inclusion of the spectator in its total intra-action, which is indeed a posthuman performativity diversifying and queering agency. Compared to the philosopher, theologian, and historian of ideas Dorthe Jørgensen’s idea of the “experience of beauty”, which is a profound experience of being out of oneself, an ecstasy of giving up the intentionality of one’s subject as well as that of the observed object, we think that this, in fact, is an intra-action in which the spectator

20 Latour 2017.

21 Kershaw 2009, 15.

22 Kershaw 2009, 16-17.

realizes that the dualism of subject and object has been cancelled, between human and nonhuman, living and non-living matter.²³ The overwhelming scope not only between the projections and the choir, but also between the projection backdrop and the spectators in the auditorium contributes to this experience, together with the immersiveness of the music and projected landscapes. There is correspondence between Barad's intra-action, Latour's being of the Earth, and Jørgensen's experiences of beauty. *NeoArctic* is full of these experiences.²⁴

Our description of *NeoArctic* may, so far, have given the impression of the performance progressively building towards the cataclysm. This is not the case. Compared to a geological chronology of the planet, the performance unfolds a non-linear composition of musical tableaux and movements that, in terms of tempo and sentiment, comprises the bustling and disconcerting as well as the serene and meditative, which are interspersed within the totality of the experience. Hence, it also takes the spectator through sensory overflow feedbacks of processes that transcend the anthropogenic changes – para-states – and further envelopes humankind in the slow and persistent *deep time*²⁵ of the Earth. Sustaining the visual overflow of the performers, “Song for Minerals”, “Song for Infinity”, “Song for Respiration”, “Song for Chance”, “Song for Electricity”, and “Song for Colours” are related to processes that contrast human existence against their eternities, like mineral crystals wrought in rock formations (commented on in the libretto: “to be paraded from deathbed to deathbed”) and the coming and going of human generations (“no listener lives long enough to hear the end of the story”), or fragility, like breath (“inhaling/exhaling”) and the evolution of life (as colourful projections of nonhuman life forms – insects, microbes, sea creatures – onto the performers' bodies seemingly overtake the humans).

A further understanding of the function of the choir in the performance is provided by Hans-Thies Lehmann's description of the body in post-dramatic theatre. Following the post-dramatic paradigm, the performance is driven by scenic dynamics of the visual/planetary forces rather than dramatic dynamics; hence there is no narrative and character development. The costume worn by the post-dramatic body is not less important than the body itself. As Donatella Barbieri points out, “costumes are co-authors [of] the performance with the performer.”²⁶ The choir wears voluminous, hooded costumes and coloured goggles, eliminating any trace of the choir members' individuality. Most of the time, they stand still, while singing and performing repetitive acts, e.g. lifting feet as if freeing them from imaginary mud or waving their hands in front of

23 Jørgensen 2006, 7.

24 This is an observation confirmed by reviewers, see Winkelhorn 2016; Galbraith 2019.

25 It is James Hutton, a Scottish polymath (1726–1797) who introduced a notion of deep time: by studying the rock layers in sandstone, he rightly claimed that the Earth had a much longer history than dated human history (as believed in his times). See Baxter 2006. Bronislaw Szerszynski points out the difference between human and geological history: “just as the time of humans was becoming historical in a new way, the Earth too became historical – the subject of a history that extends in deep time, independent of, subtending and radically conditioning human history.” See Szerszynski 2017, 116.

26 Barbieri 2017, XXII.

their goggles in a dust storm. At the same time, their mostly white and grey attire serves to make their bodies into projection surfaces. Thus, it is often difficult to make them out against the projected images on the huge backdrop, paradoxically diminishing their co-authorship through costume. Sometimes, footlights cancel out the projected image, and lit from below, the performers appear strangely distant, almost supernatural figures. As Lehmann puts it, “[t]he dramatic process occurred *between* the bodies; the postdramatic process occurs *with/ on/ to* the body.”²⁷ Since these figures do very little, only repetitive movements, it becomes a stubborn insistence on bodily presence. This emphasises a contingency of meaning typically connected with the post-dramatic body according to Lehmann: “Theatre of the body is a *theatre of potentiality* turning to the unplannable ‘in-between-the-bodies’ and bringing to the fore the potential as a threatening dispossession [...] and simultaneously as a promise.”²⁸ In *NeoArctic*, we take “unplannable” to mean a sought-for undecidability of the spectators: what does one make of these insisting figures? Are they doomed by the Earth’s feedback overflow? Or will they prevail? May this costumed choir herald a transformative moment in our society and culture, like many choruses in theatre and performance history?²⁹ The design of the costumes and the props might give us a hint.

The costumes are a mix of ancient Inuit anoraks and what looks like modern raincoats; combined with the coloured goggles, the figures appear futuristic – as survival gear comprised of different knowhow and recovered items. They are holding props that also may point back to the Arctic hunter communities, such as reindeer horns, bows (for shooting), and maybe spears. Some of the spears and bows have plastic bottles fitted to them in a makeshift way or they are made of recovered tools. It is as if the human figures belong to the past, the present, and the future all at once. One scene, a silent interlude preceding the “Song for Infinity”, seems to support this notion: we see the choir members wander back and forth along the stage while footlights make them cast shadows on the white backdrop shifting at different angles and densities, hence doubling and tripling the performers. The performers are both there, in the flesh, and not there, as shadowy spectres, condensed, statuesque, and depersonalized slow-sleep-walkers – according to the theatre critic Monna Dithmer, typical features of Hotel Pro Forma’s performers that transcend immanence: “[T]he residents of the hotel belong in the middle world, not just aesthetically but in the existential sense, to be midway, between physical, abstract, and intangible beings, between being alive and dead.”³⁰

Applying the notion of the choir as ghosts is compelling and ominous given the context of the climate crisis. In “Song for Respiration”, the breath and heartbeat of nature are gradually accelerated, accompanied by an expanding-retracting circle in differently coloured landscapes. It resonates with Dithmer’s suggestion that “[t]he in-between-ness of the ghost is comparable to the spacing

27 Lehmann 2006, 163.

28 Lehmann 2006, 163.

29 See Barbieri 2017, 29.

30 Dithmer 2015, 48; our translation.

between inhaling and exhaling.”³¹ In this sense, we – as spectators – are all already spectres, precariously poised within that span of breath. Perhaps what we see on stage are spectres of the past – ourselves – not realising that the cataclysm has already occurred. “Song for Colours” possibly ends with the last human alive making her exit. Or perhaps the figures’ insisting on their presence throughout the performance inspires the hope that there is – after all – a human future. Both endings – extinction *and* survival – are indeterminable. In *NeoArctic* the future is a spectre of our despair and hope, indeterminate until the future arrives.³² The performance haunts us as a future undecided.

Meditative Entanglements

Although *Siku Aappoq/Melting Ice* by Yggdrasil Dance³³ has the same intention of engaging spectators in an epistemological mattering of ethical consequences, it is a very different performance than *NeoArctic*. To capture its overall effect, we have chosen to call *Siku Aappoq/Melting Ice* a “dance meditation”. It makes the spectator contemplate its actions. It has a much more concentrated and intimate format than *NeoArctic*, and even suggests a narrative, which makes it possible to relate to the individual figures of the dancers. Conceived by the Danish/Norwegian choreographer Birgitte Bauer-Nilsen for two dancers, Alexander Montgomery-Andersen (Greenland) and Thomas Johansen (Norway), the immensity of material scope and scale in *NeoArctic* has given way to a single setting, which, as a theatre ecology, allows the spectator to delve into a specific aspect of connectedness, what we, with Karen Barad’s posthuman performativity, will explore as existential and ethical entanglement both between humans, and between humans and non-humans, i.e. melting ice.

The performance uses frugal means of expression. The two male dancers on stage wear grey shorts, and the skin of their bodies is painted in a whitish pale shade. On the one hand, this makes them take on the shifting colours of the stage lights and merge with the suggested atmosphere and environment, yet without visually disappearing, and, on the other hand, they bring to mind ghosts. Like *NeoArctic*’s figures, they make one question the temporality of what one sees: is it the present seen as the past from the future (meaning climate collapse has already happened, and it is too late to intervene) or is one haunted by the future? The only object on stage is a large white see-through piece of fabric with plastic elements attached to it, designed by artist Marianne Grønnow. It serves as a malleable landscape installation manipulated by the dancers. The fabric represents the ice (with the plastic elements sparkling like ice crystals). The lights, by Jesper Kongshaug, change with the scenes and sentiments: dim shades of white, blue, and green evoke ice and water, while the intense orange and red suggest temperature rises and crisis. For most of the time, the lights are low and the dancers appear as shadowy figures moving

31 Ibid., 49; our translation.

32 The physicist Schrödinger’s thought experiment about a cat whose death or aliveness is not determined before its enclosure, a box, is opened, illustrates the indeterminacy of the future. See Barad 2010, 250-51.

33 It premiered 2015 in Nuuk, Greenland.

in the barrenness of the suggested icescape, underscoring their ghostliness. Ambient sounds further realize the environment: one hears water dripping, ice cracking, and a female voice whispering “Siku aappoq” (Inuit for “the ice melts”). Those ambient sounds alternate with contemporary jazz compositions and electronic music by Carsten Dahl, and a lone female vocal, Greenlandic singer Aviaja Lumholt, accompanied by drums and horns in what sounds like Inuit folk and shamanist songs. The music brings together nature and culture in a way that implies and contrasts indigenous Greenlandic and modern Scandinavian ways of life, the hunters and the city dwellers, as Lumholt’s Inuit songs are associated with the dancers’ interplay with the fabric/ice, whereas the jazz and electronica connect with the scenes where the dancers abandon the fabric suggesting their detachment from nature. The sounds of dripping water are both soothing and ominous: they are familiar, meditative, not as such threatening, yet they remind us that the glacial ice is unrelentingly melting drop by drop, which is confirmed by the cracking sounds of the ice breaking apart. The implied conflict of cultures is further amplified by the fact that we know from the programme that the two dancers are from Greenland (Dancer G) and Norway (Dancer N): the first, the country where the melting of ice is increasingly visible and influences everyday life, and the second, a large producer of fossil fuel (North Sea oil) and CO₂, which – as of yet – climate change has had less impact on (although this is showing signs of changing with glaciers melting, fish migrating further north east, permafrost melting, etc.). The relationship is, however, not only of contrast, as its complexity is reflected in the choreography: sometimes the dancers’ bodies are in a conversation with one another, other times they seem not to notice each other; sometimes they are in sync, other times more like in agon. Throughout, they co-exist on stage, always influencing one another – as in the real world where people affect each other through their impact on nature. In Barad’s terms, they are *entangled*. In quantum physics, *entanglement* designates the “spooky” phenomenon of two particles sharing identical energy levels and other qualities despite the fact that they are separated by distance and time. By applying her quantum inspired philosophy to the dancers and the ice means that they are not merely intertwined as “two (or more) states/entities/events, but constitute “a calling into question of the very nature of two-ness, and ultimately of one-ness as well. [...] Quantum entanglements require/inspire a new sense of a–count–ability, a new arithmetic, a new calculus of responsibility.”³⁴

In the first scene, Dancer G stands covered in the see-through white fabric as if he is in the heart of the iceberg, and moves very slowly. The stage is lit increasingly in orange, what might be interpreted as a sunrise. Dancer N lies on his side on the floor of the iceberg with an outstretched arm facing the audience. Then he starts moving on bended arms and legs as he listens carefully to the sounds that the iceberg makes by placing his ear near to its surface. His face expresses interest, curiosity, and concentration. This makes us perceive Dancer N as a child learning about the power of nature, its complexities, and magic. The fabric/iceberg moves slowly to the rhythm of Dancer G’s breath, up

34 Barad 2010, 251.

and down. It suggests that he knows the iceberg well; he moves with it, he is one with the ice, both in a practical and spiritual way. We interpret this scene as human understanding of nature: there are people who see themselves as part of their environment and deeply respect and understand it – they often come from communities that still deeply depend on nature (those are indigenous cultures); but they also come from other societies/cultures and try their best to understand nature and its changes (like researchers and activists) – and then there are those who consider nature with curiosity, amazed with what it can do, but who are less aware of its impact on their lives, and vice versa. Like Dancer N, they are like children– and there is hope that they may still grow up to be like the ones who do understand and respect the environment.

In the next scenes, the relationship between the dancers constantly evolves, and the initial sense of hope (that Dancer N may learn) is challenged: they dance without noticing each other; they dance in unison; they dance together; and again, they lose touch. Sometimes there is harmony between them, at other times struggle or indifference. The fabric/iceberg is put aside so as not to interrupt the more energetic dance, or be used by the performers to dance under its cover. It is always there, even when it does not get any attention or when it becomes almost invisible in the low lights. Culture and nature cannot be separated. Different humans always coexist and depend on one another, even if they do not agree or do not pay attention to one another.

During the second part of the performance all movement drastically slows down. The ice-fabric is rolled up as if there is only a small floe left. Both dancers step on top of it, squat and look around as if they cannot believe what happened. Their faces show sadness and resignation. They slide off the floe and start slowly rolling on the floor; the ice-fabric is curled back on the stage, barely visible in the low lightning. The dancers are drawn towards each other, rolling on top of each other. In the low light it is difficult to tell which body part belongs to whom. They are visibly entangled. The music slowly fades to the increase of crackling sounds, soon turning into the sound of running water. Dancer N disappears with the last floe. Dancer G is still there, looking towards the place where the iceberg used to be as if he is mourning what is lost and cannot be retrieved.

While *NeoArctic's* spectatorship connects to the environment and ecology on a grander planetary scale, *Siku Aappoq/Melting Ice* builds more intimate relations with the audience: through the expressiveness of human figures one can empathize and feel a connectedness. In this regard, it is more conventional, relying on expressiveness and psychology. While it stresses the human side, *Siku Aappoq/Melting Ice* is just as much about connectedness with the other or the nonhuman. We find this best understood in terms of Barad's philosophical adaptation of quantum entanglement: "All bodies, including but not limited to human bodies, come to matter through the world's iterative intra-activity—its performativity. Boundaries, properties, and meanings are differentially enacted through the intra-activity of mattering. Differentiating is not about radical exteriority but rather agential separability. That is, differentiating is not about othering or separating but on the contrary about making connections

and commitments. The very nature of materiality is an en-tanglement. Matter itself is always already open to, or rather entangled with, the 'Other' The intra-actively emergent 'parts' of phenomena are co-constituted. Not only subjects but also objects are permeated through and through with their entangled kin; the other is not just in one's skin, but in one's bones, in one's belly, in one's heart, in one's nucleus, in one's past and future. This is as true for electrons as it is for brittle stars as it is for the differentially constituted human."³⁵

In terms of this entanglement being enacted, the performance reveals its activism, which lies in the inherent call for the equally entangled spectator to become aware of her radical ethical "response-ability" both toward the kindred human and the nonhuman, the arctic ice, through their shared materiality, which invest her with this capacity: "We [...] are always already responsible to the others with whom or which we are entangled, not through conscious intent but through the various ontological entanglements that materiality entails. [...] Ethics is therefore not about right response to a radically exterior/ized other, but about responsibility and accountability for the lively relationalities of becoming of which we are a part."³⁶ In hindsight, this ethical pronouncement also applies to *NeoArctic*, in its intra-action between performance as matter and spectators as ethically conscious citizens.

Setting the Para-Anthropo(s)cene

The neologism *Anthropocene* (from Greek *anthropo* "man" and *cene* "new" or "recent") is rapidly gaining ground amongst scientists and the public as the term for an emerging epoch in which "humankind has become a global geological force in its own right"³⁷ changing the environment and ecosystems at accelerating rates, "likely driving the sixth major extinction event in Earth history."³⁸ Finding evidence in glacial ice core samples of increased concentrations of atmospheric greenhouse gases (in particular carbon dioxide (CO₂) and methane (CH₄)), since the onset of industrialization in the late eighteenth century, Nobel laureate atmospheric chemist Paul Crutzen and biologist Eugene F. Stoermer proposed in 2000 that the hitherto stable post-glacial epoch of the past ten to twelve thousand years, the Holocene ("Recent Whole") had ended, and that this human-influenced shift called for the new name.³⁹ Thus far, limited to the discipline of geology, the official adoption of the term is still pending ratification on grounds of stratigraphy, i.e. studies of rock layers (strata) and layering (stratification) defining the geological record of the Earth.

The scientific debate on the Anthropocene has left us with a conspicuous example of performativity (i.e. an effecting of a normative change of knowledge). It brings into awareness what it names and measures: the chosen nomenclature and – in particular what Barad notices referring to Bohr's quantum physics⁴⁰ –

35 Barad 2007, 392.

36 Ibid., 393.

37 Steffen et al. 2011, 843.

38 Ibid., 843.

39 Crutzen and Stoermer 2000, 17.

40 Barad 2010, 256

that experimental apparatus *set* a certain way of seeing and understanding the phenomenon, excluding others. Notice here our use of a theatrical metaphor implying the *setting of a scene*, as in the theatre director's interpretation of a dramatic scene. Far from being theatre, science does make models of the world to understand how it works, and their accuracy relies on methods and results being rigorously questioned and tested. Much controversy over the Anthropocene has been caused by the identification of the so-called "golden spike" (the Global boundary Stratotype Section and Point, GSSP), for which currently the deposits of radionuclides by the atomic bomb detonations in the atmosphere between 1945 and 1963 are considered favourites. Opposing views hold that choosing a single clear signal as the epoch's starting point does disservice to the scientific understanding of humankind's impact on the planet.⁴¹ Rather, it should be seen as a stretched-out process, already beginning with prehistoric agriculture and deforestation, making a difference with nineteenth century industrialization until its post World War II increase in velocity, known as "the Great Acceleration", which takes the Earth system out of the Holocene equilibrium.⁴² This development has been quantitatively reconstructed as twenty-four so-called "hockey-stick" graphs including records on the growth in GDP, population, motorcars, international tourism, energy consumption, atmospheric carbon, domesticated land areas, species extinctions, etc., all of which, since 1750, rose evenly at first and then shot up steeply towards the present.⁴³ Even if this conception of the Anthropocene, which is more diverse and wide-ranging in its alignment of human enterprise and its imprint on the environment, might seem better calibrated to register the multitude of changes, the model's principle of representing proportionality could prove to be misleading: one thing is understanding a fairly straightforward cause and effect relationship (say, between the increasing number of motorcars and the rise of atmospheric carbon), which pushes towards a "planetary boundary" of the system's stable envelope; the other thing, which is beyond register – and prediction – by the model are several "positive feedback loops" working together in mutual amplification to cause a systemic "regime shift" that would prove cataclysmic for humankind and most of the biosphere.⁴⁴ Positive feedback takes place in a feedback loop when "the effects of a [relative] small disturbance on a system include an increase in the magnitude of the perturbation."⁴⁵ Recently, such positive feedback loops have gained attention both amongst scientists and in the media: the most worrying developments being the melt-off of the arctic ice sheet, which exposes darker, less sunlight-reflexive sea water, again causing more melting as sea temperatures rise,⁴⁶ and the thawing of the permafrost in the arctic tundra releasing huge deposits of methane hydrate, another greenhouse gas which is 30 times more heat-generating than carbon

41 Subramanian 2019.

42 Steffen et al. 2015a.

43 Ibid.

44 Steffen et al. 2015b.

45 Turco 1996, 42.

46 Kashiwase et al. 2017.

dioxide.⁴⁷

Hence, the issue at hand when it comes to understanding and communicating what the para-Anthropocene is all about is not only one about fallible scientific concepts and models, it is about a very real sense of performativity (i.e. of effecting significant change), as humans and the nonhumans (matter, chemistry, the atmosphere, flora, fauna, etc.) perform (as in *do whatever they do*) and are entangled in the processes on so many levels and in so many ways within the Earth system that the connections escape human comprehensibility (Barad), as well as what is ultimately scalable in terms of scientific models. By employing Richard Schechner's concept of "magnitudes of performance", in which events cause effects on different levels of the world (from the microscopic brain event to the macroscopic social drama), the theatre and performance scholar Teemu Paavolainen addresses the problem at heart, namely the epistemological asymmetry of scale and abstractness of geophysical processes which challenge all of us when we try to comprehend how our seemingly innocent everyday actions contribute to climate change. It is a conflict between two magnitudes of performativity, which nevertheless affect each other over prolonged periods of time: "[A] traditionally vertical model based on individual action and antagonism, and the more extended, horizontal human performance of things like global warming. Whether termed performance or not, we have here two conflicting notions of human action that may respectively be defined as direct and systemic, singular and plural, fast and slow. Where the one sets the entrepreneurial individual against a world reduced to resource, [...] the sheer devastating magnitude of the other – potentially with a sixth mass extinction – escapes both human perception and human concepts of agency, yet cannot but count as the ultimate human performance [...]."⁴⁸

Whereas Paavolainen uses his concept of magnitudes of performativity to analyse the politics of the Anthropocene by aptly connecting it with the Trump presidency, our interest lies with what we find is the usefulness of his concept applied to the aesthetics of stage performance. Here Paavolainen's observation of the asymmetry between the magnitudes of performativity driving the Anthropocene suggests a quintessential feature, which would need to be transposed to the physical stage negotiating the practical challenge of making something like the Earth system fit into its seemingly limited magnitude – which is typically thought of synoptically, following Aristotle's dictum that the plot (of tragedy) should be something the audience "readily [can take] in at one view" (*Poetics* IV).⁴⁹

Considering the same problem of asymmetry, Bruno Latour has proposed a solution that will make the public aware of the planetary conditions of existence by engaging them in the equivalent of the positive feedback loops (in *NeoArctic*): "quasi-feedback loops that tirelessly design it [the globe] in a way that is broader and denser each time".⁵⁰ "What is at stake in the Anthropocene

47 Dean et al. 2018.

48 Paavolainen 2018, 79-80.

49 Cited in Paavolainen 2018, 79.

50 Latour 2017, 122.

is this order of understanding. It is not that the little human mind should be suddenly teleported into a global sphere that, in any case, would be much too vast for its small scale. It is rather that we have to slip into, envelop ourselves within, a large number of loops, so that, gradually, step by step, knowledge of the place in which we live and of the requirements of our atmospheric condition can gain greater pertinence and be experienced as urgent. The slow operation that consists in being enveloped in sensor circuits in the form of loops: this is what is meant by ‘being of this Earth.’ [...] After each passage through a loop, we become more sensitive and more reactive to the fragile envelopes that we inhabit.”⁵¹

What Latour sees as a “sensibility” gradually acquired by going through the loops as reiterated sensate processes constitutes an aesthetics: “Provided that you agree to hear in the word ‘aesthetic’ its old sense of capacity to ‘perceive’ and to be ‘concerned’ – in other words, a capacity to make oneself sensitive that precedes all distinctions among the instruments of science, politics, art, and religion.”⁵² Here, Latour evokes an ancient cognitive sensitivity, which, in our context, may be applied to learning through performative processes that involve the embodiment of the learner. A stage performance as an event that the spectator undergoes – what Barad would prefer as a mattering or material discourse – seems ideal for this purpose.

Concluding Discussion: Despair or Beauty?

Having analysed the offerings of para-Anthropocene aesthetics in *NeoArctic* and *Siku Aappoq/Melting Ice*, we conclude by discussing the performances as activist and the attitude towards climate change they may produce. Do their stagings correspond with the scientist/activist call for action without potentially leaving spectators insensitive or defeatist? Stoknes criticized negative climate story-telling strategies (cf. Wells). Clearly, both performances raise the question, is there much hope left for humankind? This is evident in the reception, both our own and in reviews;⁵³ it is even intended by the artists.⁵⁴ If hope is found in the performances, it is in the way spectators relate and respond to them.

Both performances might rightfully be described as dystopian. But that does not necessarily mean they inspire despair and defeatist attitudes. Dystopia is the antithesis of utopia – as the philosopher John Stuart Mill proposed “a bad place”, but like utopia, a place which does not exist, at least not yet.⁵⁵ As such, it is a hypothetical place, worse than the one the spectator currently lives in. But to claim that it leaves one without hope would be wrong; as theatre scholar Scott C. Knowles clarifies, it “rather becomes its limit case.”⁵⁶ Or as the writer Joni Hyvönen has it: “[A]s a counter image to the present, it constitutes

51 Latour 2017, 125.

52 Ibid., 125.

53 Galbraith 2019; Christensen 2016.

54 In an artist talk about *NeoArctic* in Washington, D.C. Kirsten Dehlholm said that she is a fatalist and that she does not see much hope. See Galbraith 2019. In Birgitte Bauer-Nilsen’s case, she intended her performance to be activist. See Burnard et al 2018.

55 Sargent 2012, 14.

56 Knowles 2016, 7.

a nightmare hoping for change. Dystopia provides optimism on the sly.⁵⁷ By means of their material entanglement of the spectator (Barad), we would assert that the performances realize theatre ecologies (Kershaw), which allow the spectator to experience beauty in its realization of the cancellation of subject and object (Jørgensen) and engage in the being of the planet (Latour) and onto-ethico-epistemology leading to a taking on of responsibility (Barad).

How this impulse may be ignited by negative sentiments can be explained by Knowles' adaptation of Jill Dolan's *utopian performative* for his dystopian variant.⁵⁸ What Dolan means by utopian performative are "small but profound moments in which performance calls the attention of the audience in a way that lifts everyone slightly above the present, into a hopeful feeling of what the world might be like if every moment of our lives were as emotionally voluminous, generous, aesthetically striking, and intersubjectively intense."⁵⁹ No matter how fleeting, a community emerges when spectators feel as part of a whole or, in Dolan's words, when they experience themselves as part of a congenial audience who "experience a processual, momentary feeling of affinity."⁶⁰ This feeling is the affinity towards characters on stage, actors and their stories, or spectators' own real recounted experiences that happened in the past. Utopian performatives can reflect the past or present and offer prospects for the future. Dolan's idea of utopia does not lie in the construction of a better future, but in how utopia could feel.⁶¹ The utopian performative is about feelings, how utopia is experienced and not how it is organized. That feeling does not have to lead directly to action (political or any other), but it may trigger thoughts about a better future; or at least the suggestion for a better future.

Knowles observes that Dolan's performance examples often are negative stories of discontent, while maintaining their effects of hopefulness. He explores how negative emotions may affect an audience, drawing on studies of affect and cognition while using Sarah Kane's plays as case studies, but acknowledges that his theory could be applied to any other form of theatre. To Knowles the "[dystopian performatives are found in the moments that connect cognition and affect/emotion to tackle complex problems [...]. Integrating the body into these discussions elicits more empathy, understanding, and a willingness to act when compared to purely reasoned arguments."⁶² Both Dolan and Knowles focus on the political and social aspects of the performances. What they do not explore is the aesthetics of the event. Looking at our examples, we argue that intra-action (entanglement) and beauty can be as effective as any social or political dimension of the event in bringing out the utopian/dystopian performatives.

If we choose to see *NeoArctic* and *Siku Aappoq/Melting Ice* as creating dystopian performatives with their audiences, they may indeed be optimistic on the sly that correspond with messages of the UN IPCC and the recent

57 Hyvönen 2019, 7; our translation.

58 We want to give thanks to theatre and performance scholar Dirk Gindt, Stockholm University, for conversations about utopian performatives.

59 Dolan 2005, 5.

60 Ibid., 14.

61 Ibid., 39.

62 Knowles 2016, 201.

activist movements around the world. In *NeoArctic*, we either see images of a terrifying future or the beauty of our planet – some of them come directly from our present, others are just possible projections, but altogether they are a mattering of our being of the Earth whatever the future brings. In *Siku Aappoq/Melting Ice*, images are more subtle, but expressions of sadness and anxiety are very visibly present. As Dolan sees the potential of theatre, dystopia does not exclude utopia: “Performance creates ever-new publics, groups of spectators who come together for a moment and then disperse out across a wide social field, sometimes (hopefully) sharing the knowledge they gained, the emotions and insights they experienced at the theater.”⁶³ Hopefully, the experience of the utopian/dystopian performative does not remain bound to the theatre, where it is created, but stays with the spectators and continues to bring about change in their lives and, maybe, in the society of the future they create. To put it in Barad’s terms, they may feel their intra-action and entanglement with the world, which calls upon their response-ability translated into eco-social action which is needed in response to climate crisis.

63 Dolan 2005, 90.

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REFERENCES

Barad, Karen. 2007. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke University Press: Durham, NC.

Barad, Karen. 2010. "Quantum Entanglements and Hauntological Relations of Inheritance: Dis/continuities, SpaceTime Enfoldings, and Justice-to-Come." In *Derrida Today* 3.2. DOI: 10.3366/E1754850010000813 (8 June 2019)

Barbieri Donatella. 2017. *Costume in Performance. Materiality, Culture, and the Body*. Bloomsbury: London and New York, NY.

Baxter, Stephen. 2006. *Ages in Chaos: James Hutton and the Discovery of Deep Time*. Tom Doherty Associates: New York, NY.

Bleeker, Maaïke. 2017. "Thinking that Matters – Towards a Post-Anthropocentric Approach to Performance Design." In Joslin McKinney and Scott Palmer (eds.) *Scenography Expanded: An*

Introduction to Contemporary Performance Design. Bloomsbury: London and New York, NY.

Burnard, Pamela, Peter J. Cook, Susanne Jasilek, and Bauer-Nilsen. 2018. "Performing arts activism for addressing climate change: Conceptualizing an intercultural choreographic practice and dance performance called *Melting Ice*." In *Choreographic Practices*, Vol. 1, No. 1.

Cafolla, Anna. 2019. "Climate change and mental health: the people grieving for the planet." In *Dazed*, 16 May, 2019. <https://www.dazeddigital.com/life-culture/article/44504/1/climate-change-mental-health-grieving-for-the-planet-future?fbclid=IwAR2sGm0Zp5mkL30JrpYieeFd nqrSpOIRg1MflvubKGT6cKtHJH22bqBLAFg> (23 May 2019).

Chemi, Tatiana and Peter Kastberg. 2015. "Education through Theater: Typologies of Science Theater". In *Applied Theater Research*, vol. 3, no. 1.

Christensen, Anne Middelboe. 2016. "Korværk over en smadret planet." In *Information*, 17 Sept. 2016. <https://www.information.dk/kultur/anmeldelse/2016/09/korvaerk-smadret-planet> (8 June 2019).

Christoffersen, Erik Exe. 2015. "Den u-selvfølgelige sansning." In Erik Exe Christoffersen and Kathrine Winkelhorn (eds.). *Skønhedens Hotel: Hotel Pro Forma: Et laboratorium for scenekunst*. Aarhus Universitetsforlag: Aarhus.

Clayton, Susan, Christie M. Manning, Kirra Krygsman and Meighen Speiser. 2017. *Mental Health and Our Changing Climate: Impacts, Implications, and Guidance*. American Psychological Association, and ecoAmerica: Washington, D.C.

Crutzen, Paul and Eugene F. Stoermer. 2000. "The 'Anthropocene'". In *IGPB Newsletter* 41, May, 2000. <http://www.igbp.net/download/18.316f18321323470177580001401/1376383088452/NL41.pdf> (23 May 2019).

Dean, Joshua F. et al. 2018. "Methane Feedbacks to the Global Climate System in a Warmer World." In *Reviews of Geophysics*, 56. <https://doi.org/10.1002/2017RG000559>

Dithmer, Monna. 2015. "Kald dem bare genfærd. De kommer som kaldet," in Erik Exe Christoffersen and Kathrine Winkelhorn (eds.). *Skønhedens Hotel: Hotel Pro Forma – et laboratorium for scenekunst*. Aarhus: Aarhus Universitetsforlag.

Dolan, Jill. 2005. *Utopia in Performance: Finding Hope at the Theatre*. University of Michigan Press: Ann Arbor, MI.

Galbraith, Susan. 2019. "WORLD STAGES' NeoArctic – disturbing, challenging and strangely beautiful" In *DC Theatre Scene*, 14 Feb. 2019. <https://dctheatrescene.com/2019/02/14/review-world-stages-neoartic-disturbing-challenging-and-strangely-beautiful/> (8 June 2019).

Harvey, Fiona. 2018. "'Tipping points' could exacerbate climate crisis, scientists fear." In *The Guardian*, 9 Oct., 2018. <https://www.theguardian.com/environment/2018/oct/09/tipping-points-could-exacerbate-climate-crisis-scientists-fear> (8 June 2019).

Haynes, Susan. 2019. "'Now I Am Speaking to the Whole World.' How Teen Climate Activist Greta Thunberg Got Everyone to Listen." In *Time*, 16 May, 2019. <http://time.com/collection->

post/5584902/greta-thunberg-next-generation-leaders/ (23 May 2019).

Hyvönen, Joni. 2019. "Inta krisberrep, de stora berättelserna anfaller! Dystopin och det ktoniska i svensk 2010-talslitteratur." In *Ord & Bild – kulturtidskrift för samtiden grundad 1892*, Nr 1. Tema: Science fiction.

Kashiwase, Haruhiko et al. 2017. "Evidence for albedo feedback in the Arctic Ocean shifting to a seasonal ice zone." In *Scientific Reports* Volume 7, Article number: 8170.

Kershaw, Baz. 2009. *Theatre Ecology: Environments and Performance Events*. Cambridge University Press: Cambridge.

Kleinmann, Adam. 2012. "Intra-actions", Interview of Karen Barad. *Mousse Magazine* 34/2012, [issue on dOCUMENTA (13)].

Knowles, Scott C. 2016. *Dystopian Performatives: Negative Affect/Emotion in the Work of Sarah Kane*. University of Kansas: Lawrence, KS.

Latour, Bruno. 2017. *Facing Gaia: Eight Lectures on the New Climatic Regime*. Polity Press: Cambridge.

Lehmann, Hans-Thies. 2006. *Postdramatic Theatre*. Routledge: London and New York.

Paavolainen, Teemu. 2018. "Magnitudes of Performativity: Donald Trump in the Anthro(s)cene" In *Nordic Theatre Studies*, Vol. 30, No. 2. DOI: <https://doi.org/10.7146/nts.v30i2.112953>

Sargent, Lyman Tower. 2012. "Theorizing Utopia/Utopianism in the Twenty-First Century." In Artur Blaim and Lumita Gruszevska-Blaim, *Specters of Utopia: Theory, Practice, Conventions*. Peter Lang: New York.

Skjoldager-Nielsen, Daria and Kim Skjoldager-Nielsen. 2018. "Today's Cake is a Log: Remediating the Intermediality of Hotel Pro Forma's Works in an Exhibition." In Sonya Petersson, Christer Johansson, Magdalena Holdar, and Sara Callahan (eds.). *The Power of the In-Between: Intermediality as a Tool for Aesthetic Analysis and Critical Reflection*. Stockholm University Press: Stockholm.

Steffen, Will, et al. 2011. "The Anthropocene: conceptual and historical perspectives." In *Philosophical Transactions* Volume 369, Issue 1938.

Steffen, Will, et al. 2015a. "The Trajectory of the Anthropocene: The Great Acceleration." In *Anthropocene Review* 2:1.

Steffen, Will, et al. 2015b. "Planetary Boundaries: Guiding Human Development on a Changing Planet." In *Science* 347:6223. DOI: 10.1126/science.1259855.

Stoknes, Per Espen. 2015. *What We Think About When We (Try Not to) Think About Global Warming*. Chelsea: Chelsea Green Publishing Co.

Subramanian, Meera. 2019. "Anthropocene Now: Influential Panel Votes to Recognize Earth's

New Epoch." In *Nature*, 21 May 2019. <https://www.nature.com/articles/d41586-019-01641-5> (8 June 2019).

Szerszynski, Bronislaw. 2017. "The Anthropocene Monument: On Relating Geological and Human Time." In *European Journal of Social Theory* Vol. 20(1).

Turco, Richard P. 1996. "Global Environmental Engineering: Prospects and Pitfalls." In Ben Zuckerman and David Jefferson (eds.) *Human Population and the Environmental Crisis*. Jones & Bartlett Learning: Sudbury, MA

Wells, David Wallance. 2017. "The Uninhabitable Earth, Annotated Edition." In *New York*, 14 July. <http://nymag.com/intelligencer/2017/07/climate-change-earth-too-hot-for-humans-annotated.html?gtm=top> (16 May 2019).