

From the Bedroom to the Moon: Tuning into the Relations of Children and Music through Spacetimemattering

SYNNØVE KVILE

Western Norway University of Applied Sciences

Synnove.Kvile@hvl.no

KEYWORDS

Posthumanism; music education; agential realism; spacetimemattering; childmusicking.

DOI

10.54916/rae.141623

DATE OF PUBLICATION

20/06/2024

ABSTRACT

Visiting family homes to intraview children about their relations to music open doors into family houses, digitization of music and children, trampolines, composing songs to stop climate changes, and bodies dancing before the researcher's, and iPhone's gaze. Through stories and visual artworks, the phenomenon childmusicking is diffracted through Karen Barad's concept spacetimematter. This article gives a taste of how spatial, temporal, and material agencies intra-acts within childmusicking. The article articulates how childmusicking is entangled with global matters such as the climate crisis, and it troubles binaries such as adult - child, nature - culture, humans non-humans, matter - meaning.





What?: Childmusicking and Spacetimemattering

Researching the relations of music and children generates all sorts of questions, also big ones such as *what makes a child a child, and when does music become music*? Researching through Barad's agential realism (2007) keeps me asking and researching without ever hoping for a conclusion. Rather, in this article I share some of the "embrained and embodied" (Braidotti, 2019, p. 51) insights from using spacetimematter (Barad, 2007) as a concept to think with (Haraway, 2016b; Jackson & Mazzei, 2012) and diffract through, while exploring the relations of music and child.

In agential realism, the primary ontological unit are phenomena since nothing can exist without relations, which means relations are ontologically prior to objects and subjects: "phenomena are the ontological inseparability/entanglement of intra-acting 'agencies'" (Barad, 2007, p. 139). Thus, the child-music relations, which is the phenomenon this research investigates, is called *childmusicking* to keep the relations at the fore. The question guiding this article is: *how does spacetimematter intra-act with the be/comings of childmusicking?*¹

Why spacetimematter? Did I choose it, or did it choose me? Yes (see Myers, 2019).² Spacetimematter became a generative concept to think with when researching childmusicking, and it diffracted through my life and research in various ways. Rather than doing a theoretical explanation followed by an example that illustrates the theory, I will, in an agential realist manner (Barad, 2007), diffract spacetimematter through a story. This will both articulate how agential realism works as a method and show how the concept spacetimematter is a *doing*. The story tells about a time spacetimematter made itself intelligible to me.

Spacetimematterings at a Threshold

Its summer, the sun shines and the temperature are around 22 degrees. The pregnant body has gradually become heavier the last couple of months but is not sweaty or damp at this walk since the breeze perfectly regulates the body's temperature with its' mild and tender touch. Inside the tummy, a foetus rocks in amniotic fluid to the rhythms of walking legs and accelerating heartbeats. The legs are walking a two-in-one-body towards the house where one of this research's participants live. Bluebells, clover, daisies, and dandelions are blooming, and the colours of blue, pink, white and yellow surround the grey asphalt. Bees are buzzing and birds are chirping. The research participants' mum opens the door and soundwaves of music flush through the door and into our ears while she hurries to turn it off with her phone. "Kings of Convenience have just released their new album and I simply had to listen to it!" she says smiling, as we are welcomed inside their house to do an intraview with her daughter.

During pregnancy, there are certain things you should not do according to the Norwegian Directorate of Health. No alcohol. No nicotine. Be restrictive with caffein. Avoid cheeses made from unpasteurized milk or with certain kinds of mould in it. Don't eat tuna of a certain size. Even vegetables can be dangerous if there's any soil on it. There are a lot of things you can't do without endangering the foetus at the same time. But I could listen to music. Becoming a mum for the second time scared me, especially when the due date was approaching. In the last trimester, when my body was rather uncomfortable and I felt stretched in every possible way, Kings of Convenience became my go-to-remedy that gave a slight comfort, a moment to breathe, be, feel, and float away.

One and a half year after the intra-view, Spotify notified me that out of the top 5 songs I had listened to, 4 of them were from the album "Peace or Love". Spotify also mentioned that I had listened to songs from Kings of Convenience for 2063 minutes that year. All the statistics that Spotify delivered (without me asking) made me even more aware of the impact the album had made on my life, and I started to wonder when exactly it was released. A quick search on the internet told me it came out 18th of June 2021. The same day as we did the intra-view.

Why?: Beyond Humanist Notions of Music and Child

Barad's (2007; 2014) concept spacetimematter emphasize how space, time, and matter never are given nor separate entities, but always intra-acting and be/coming through specific entanglements. In the story above, the timing of the intra-view matched the release date of the album, but timing was not all that mattered in making me become a listener to that specific music. The weather, flowers blooming, pregnancy, technology, doors opening, and many more spaces, times, and materials, were entangled in making me become a listener to "Peace Or Love." By bringing spacetimematter to the table of music education, the aim is to disrupt familiar Western humanist notions (Braidotti, 2013) of both children and music.³ Humanist notions need troubling since it centers a Western, white, adult, male, able-bodied human, thereby making some forms of humans and human practices more privileged and normal than others (Braidotti, 2019).

Researching child(ren) aged 9-10 years old is an act of bringing some of the "missing people" (Braidotti, 2019, p. 162) into music educational research.⁴ Focusing on spacetimematter as intra-acting agencies with/in childmusicking, can contribute to decenter humanist stories that separates "us" from "them", whether this is a separation of adults and children, humans and non-humans, nature and culture, or matter and meaning. It is also helpful when trying to broaden the material-discursive practices of Western music education, which still seems dominated by humanism (Fjeldstad et al., 2024). Material-discursive practices (Barad, 2007, p. 170) are boundary-making practices that regulate who and what gets access, which activities and materials are valued, and what music is being played, taught, appreciated, or even recognized (Kvile & Christophersen, 2023). Spacetimematter produce something "new" in music education, which also other music education researchers have shown (e.g. Burnard & Osgood, 2019; Fjeldstad, 2023).⁵

Putting posthuman theories to work in music educational research might make it possible to grapple with questions that entangles being (ontology), knowing (epistemology), and ethics. Fjeldstad (2024) argues that the quality of posthuman research relates to the question: "What worlds and what futures do our research take part in bringing forth and how do we respond to these?" (pp. 10-11). In this research, such an ethico-ontoepistemological (Barad, 2007; Barad & Gandorfer, 2021) question could be: what be/coming spacetimematterings of music education is enabled and to whom and what are they doing justice? Asking the questions a priori, are not "prior' in a temporal sense, nor 'all the way down' in a spatial sense; on the contrary, space and time are also not given but come to matter in particular ways, particular configurations/ (re)configurings of spacetimemattering" (Barad & Gandorfer, 2021, p. 18). Through a diffractive methodology (Barad, 2007, 2014), this research aims to trouble "humanist logics and dualist dichotomies" (Lambert, 2021, p. 422) and bring the material and

more-than-human agencies, such as spacetimematter, to the fore.

How?: Stories and Visual Artworks

Through three diffractive stories and visual artworks made from intra-views with three children concerning their personal relations to music, this article explores the question: how does spacetimematter intra-act with the be/comings of childmusicking? The children had previously been observed at school before I asked to do intra-views with them in their home.⁶ Intra-views attend to more than words and meaning, rather, intra-views also include the bodily, material, discursive and affective, and challenges the humanist assumption that discreet subjects exist (Fjeldstad, 2023; Kuntz & Presnall, 2012; Warfield, 2017). In addition to audio recordings, a few pictures and videos were included in the intra-views, and I wrote diffractive journals afterwards. Then, I had maternity leave, and it took over a year before I transcribed the intra-views and began writing this article, although one might ask: when does the writing start?

When re-turning (Barad, 2014, 2017) to the office and the securely stored files of empirical material a year later, neither I nor the empirical material were the same anymore. Re-turning is not simply "returning as in reflecting on or going back to a past that was, but re-turning as in turning it over and over again - iteratively intra-acting, re-diffracting, diffracting anew, in the making of new temporalities (spacetimematterings), new diffraction patterns" (Barad, 2014, p. 168). The diffraction pattern made by leaving and re-turning to office after intra-viewing three children and birthing a child, seemed to come through the waves of space, time, and matter. It struck me that both music and child(ren) are spacetimematterings, and how these spacetimematterings be/comes matters not only to music and child(ren), but to music education and even the world itself.

Each diffractive story is written through the intra-actions of transcripts, pictures, and videos from the intra-views, as well as theories, writing processes, conference presentations, journal calls, music playing through Spotify, colleagues, offices, technology, family life, and so on. The visual artworks are made by the artist Vegar Vallestad.⁷ When asking Vallestad to illustrate the stories, I shared the written stories with him, and we discussed his sketches before agreeing on how the illustrations should be. Importantly, he has never seen any pictures or videos from the intra-views, thus the illustrations are not risking the children's anonymity. When the illustrations got involved with/in the writing process, they also affected the stories. The work of Vallestad is not just illustrations anymore, but rather visual artworks that intraacts and are entangled with/in the stories.

Diffractive stories and visual artworks affect and produce knowledge in a more-than-linguistic way. Barad (2003) writes: "Language has been granted too much power" (p. 801); thus, making space for other matters to matter is politically important and needed, also in academia. I have appreciated and been affected by such academic work myself (see Jenssen, 2023). I find that stories and artworks contribute to keep the intra-views on the move; it encourages an exploration of how materials, theories, writings, diffractions, sounds, pictures, readers, researchers, and researched, are co-constitutive, entangled, affected, and ongoing. Thus, the three stories/artworks of childmusicking are not representational, but "posthumanist performative" (Barad, 2007, p. 135) accounts of how spacetimematter is entangled in everyday life and in the be/ comings of music and child(ren). Although each story and artwork are simultaneously *about* spacetimemattering as well as *actual* spacetimematterings, the following three diffractions will keep an emphasis on (1) space, (2) time, and (3) matter.



Figure 1. Songs that save the world. Image: Vegar Vallestad

Story 1: The Spaces of a Song

Ink on paper forms letters, words, and sentences, written by a pen intra-acting with a human hand. An orange book with its blank pages makes room for songs to be written. A singer-songwriter contest broadcasted on National television makes space for not-yet-adult-humans to enter the stage. Worried and inspired, living, and breathing in a small but spacious land, being of and becoming with this world; two friends write a song. It goes like this:

The world makes me so sickly irritated; I can't live in this world. Plastic floats around like dead small fish. Our earth is divided in two and I can't say a thing about it, except from plastic, plastic, no one cares a place, place.

I get so frustrated. The future gets destroyed. What if it is we who have done it? What if the children who live in a thousand years gets plastic, plastic, no one cares a place, place. I get so frustrated and irritated. We can fix it! Divide us and pick litter on land and beach. Maybe you think it is boring, but it was you who littered. Don't come here and whine to me. We must be a bit strict with you because you sit there and raise your glasses even if you should be throwing plastic, plastic, no one cares a place, place. Take some responsibility now because I need to go to the loo.

The childmusicking above is materialized as a song lyric in and of this time, but also with/in certain spaces.⁸ Writing this song was inspired by the singer-songwriter contest MGPjr and 2019's winning song "The Earth is Sick."⁹ MGPjr is a musical and commercial space available through television, media, and digital spaces such as YouTube. Space is never *one* thing but according to Doreen Massey "the dimension of things being, existing at the same time: of simultaneity. It's the dimension of multiplicity" (Haas, 2023, p. 4). In the visual artwork (Figure 1), the spatiality of an ocean flows through the pages of the earthly, carrot-looking book, held open by two human hands. A whale, a strange seahorse, and multiple plastic bags float around, articulating how the child's bedroom is not simply a room within a house on the Norwegian West Coast but a space *of* nature. The ocean, pollution, and the climate crisis are not distant; they are here, only be/ coming more acutely present through the lyrical space of the song. The lyrics mention various spacetimematterings directly, such as "the world", "earth" "the future", "land", "beach", "there" and "loo." However, the spacetimemattering that stands out is the climate crisis, a crisis of our time and in this world.

Both the climate crisis and the lyrics troubles the humanist separation of nature and culture as two (different) spaces. The climate crisis could be explained as the accumulating consequences of such a separation. Through the song lyric, the natureculture (Haraway, 2016a) entanglement is expressed through frustration with the careless littering and indifference of humans, highlighting the consequences of pollution for nature, animals, and the future for "the children who live in a thousand years," implicating that humans are nature as well.

My pregnant tummy in the visualization (Figure 1) is also helpful when troubling the nature - culture binary, since the unborn baby also swims in a mother-earth water that holds the rhythm of life

and death. "To affect and be affected by the world, sensing and knowing through our bodies means to be located within, not outside of the ecological systems of our planet" (Malone et al., 2020, p. 110). Connected to the nature – culture binary is the adult – child binary, which also becomes disrupted by the pregnancy since a pregnant body is both at once: a *childadult* body.¹⁰ Murris (2016) writes about binary thinking that "It cuts child away from adult, mind from body, nature from culture, boy from girl" (p. 120). This story's childmusicking seems to patch it together again.

The artwork (Figure 1), story, and song lyrics articulate space as a dimension of multiplicity, not as a place where events simply unfold. Rather, they entangle Massey's three main definitions of space, which are "interrelations, multiplicity and becoming" (Werner, 2015, p. 200). It's no wonder intra-relations, multiplicity, and becomings are set to work through a song. In music, a melody and the accompanying chords can occupy different spaces of frequency and by such have an individual terrain, as well as being perceived as a whole, at the same time. "Musical space, then, is a space of relationships" (Morgan, 1980, p. 529). This childmusicking be/comes a naturecultural expression through the intra-acting spacetimematterings of MGPjr, pen, carrot-book, friendship, research, and of living with/in a climate crisis that is both near and far.

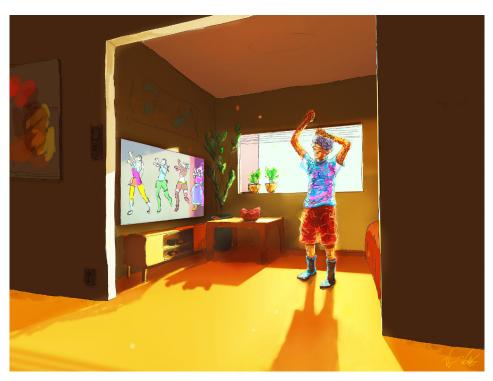


Figure 2. Sound waves, pixels, and human dancing. Image: Vegar Vallestad

Story 2: It's Time to Dance!

Pixels and sound waves flow through the TV-apparatus' screen and speakers. Positioned towards the screen, human hands and feet imitate pixels that resemble both human and non-human hands and feet, matching the tempo and rhythms from the sound waves. "Gangnam Style" plays but the music shifts quickly and many of the musical shortcuts in the YouTube video are unknown. The expressions of the sound waves, pixels, and human harmonise, and their entangled movements are dancing. Standing still, filming with my iPhone, I feel time moves slowly although the different times happening before my eyes and the iPhones' gaze seems quick. When a commercial break pauses the YouTube video, me and the iPhone also stop filming, but immediately when the commercial break is over, the pixels, sound waves and human body start dancing again, and my finger finds its way to the red record symbol and presses it.

In terms of clock time, the video clip recording the YouTube video in this story is about 9 minutes long. It consists of 25 different tunes that plays 20-30 seconds each and are paired with a dance move (or emote) from the video game Fortnite.¹¹ The oldest tune was released in 1987, while 22 of them were released in the period of 2019-2021. Clock time slices everything up in moments, making time become somewhat manageable and seemingly neutral.

Clock time ... is attuned to a succession of discrete moments, where a moment is understood to be the thinnest slice of time and where each successive moment replaces the one before it. This is the time of capitalism, colonialism, and militarism. (Barad, 2017, p. 60)

As an apparatus (Barad, 2007) the iPhone colonializes this story, making it become framed in a certain way, which is never neutral. The video cuts the dance session into a thin slice that shows almost nothing of the "thick" (Juelskjaer, 2013; Murris & Bozalek, 2023) time entangled with/in the story. The smartphone and smart-TV are connected to the internet, a digital space where the materiality of pixels and sound waves let spaces, times, and materials flow through a screen whenever the right symbol on the screen or the button at the remote control is pressed.

How did this research end up in a house, filming a dance session, and now writing an article about it? There are so many things taken for granted a long time before the "data gathering" happened, and still are through the video clip. I have seen these dances

before at school, where I observed the same child (Kvile & Christophersen, 2023), which also was one of the reasons why I wanted to intra-view *this* child. This child dances quite often at school. Even without music being played, the child would, from time to time, stand up beside the desk and perform a quick, silent dance before sitting down again. Now, seeing this dance, the past is already here, I remember the dances and I feel it is important to film this, to record it, to frame it into a video clip, make it stand still and make it possible to revisit again, and again. The history of ethnographic research methods, such as observations of *the* research object in its natural environment, are haunting the story above. This research's "object" is childmusicking, but neither the story nor the visual artwork (Figure 2) does justice to the phenomenon. The human and the TV-screen is visually in the center, leaving my own, pregnant researcher body out of the picture, as well as the rest of the family living in this house, including animals, and materials. Who are the "missing people" in this research? Where are the bodies that matter for *this* childmusicking, and which slices of a body comes to matter more than others?

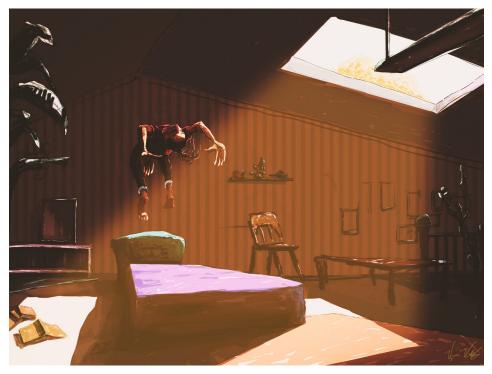


Figure 3. Jumping bodies. Image: Vegar Vallestad

Story 3: The Materials that Matter

Squeaking metal springs of a trampoline, swaying bushes and gras, and a jumping human are making rhythms blow in the wind. Approaching a house with a view and a garden with a trampoline, the sun is high, and two sunbeds are supporting two relaxed, adult human bodies. Inside the spacious house there is a piano, two guitars, a violin, and a record player, all assembled in the living room. All humans in this family play a human made musical instrument. Going upstairs to the loft, an ottoman, a mat, and a mattress lie in a row. Hands open Spotify on a smartphone and presses play on the song "Strangers" by Sigrid. Legs climb up on the ottoman, hands measure the distance to the roof, and a window in the roof lets sunlight stream in from the side. Suddenly, a body tumbles around in the air and does a front handspring. I exclaim "hoy!" and laugh a little, being surprised and impressed by how fast it all happened. Back up on the ottoman, legs jump straight up towards the roof: 1-2-3-4-5-6 times and on the 7th jump the body spins around in the air before feet land on the mattress. "I do these two tricks; front handspring and somersault, quite often," the child says.

In this story, the entangled movements of a trampoline, bushes, grass, and a human body create rhythms on a sunny summer day. Leaving the musical instruments in the living room behind, the childmusicking at the loft is centered. This gymnastics session disrupts what's usually foregrounded as musical activities in music education and research, not submitting to certain instruments' dominance in the material-discursive practices of music education. The tumbling, jumping, controlled, and playful human body swirls through the air, with the help from an ottoman giving height and suitable resistance to the jumping legs, while the mat and mattress receive the feet softly. Accompanying soundwaves are flowing through the phone, which is something 93% of all children aged 9-11 years old in Norway have (Medietilsynet, 2023, p. 13).

The *materials* of childmusicking are of course part of the phenomenon's ethico-ontoepistemology (Barad, 2007). The phone with its' speakers and connection to the internet is such a material "thing" that makes music be/come at that moment, in a certain way. Still, the phone is not *one* thing, but composed of metals, plastic, ceramic, glass, and other materials. It is also shaped by humans, sometimes through the exploitative labor of children. Metals needed for phones are entangled with highly ethical matters, and one of the metals that intra-acts with the music playing through it is tantalum which is "used as acoustic wave filters in mobile phones to achieve high audio quality" (Targets, 2018, para. 3). In the Democratic Republic of the Congo the extraction of tantalum is "mined under conditions of non-existent human or environmental rights" (Dixon et al., 2024).

In terms of natureculture, a smartphone is nature dressed up as culture. Through its connection to the internet, it becomes a device for playing music, among many other functions. The program Spotify is a musical online library that makes music be/ come tracks and part of a collection of over "100 million tracks" (Spotify, 2023). As Sigrid's voice flows through the phone's speakers, music be/comes a blast from the past. Technological devices and the internet let this child hit the play button almost whenever and wherever. Sigrid is there even though she is not there. Similarly, the room, the furniture, the light, the soundwaves, me, the researcher filming, and the child's embodied knowledge and experience from doing such movements are all intra-actively making this child's body become a jumping one. The human body is "never one unitary entity. For new-materialist feminism, the body is not merely a biological given, or a social construction, but rather an ontological site of becoming" (Braidotti, 2022, pp. 112-113). The time spent with materials such as the trampoline, through the spaces of gymnastics classes, of playing around with friends, of becoming acquainted with the forces of gravity, of height and speed's effects on the body's momentum, on the bounce from the ottoman, and the thickness of the mattress is all entangled in the performance storied above through words and visualization (Figure 3). Spacetimematter matter for childmusicking.

Spacetimematterings of Childmusicking

Three diffractive stories and visual artworks have in each their way explored how spacetimematter intra-acts with the be/comings of childmusicking. Although the stories are specific, linguistic, and visual artworks, they are also entangled with/in global issues and trouble binaries such as adultschild, nature and culture, humans and non-humans, matter and meaning.

Songwriting can be an act of making space in a troubled time and of being *of* a specific time in the earth's history. In 2019, when *The Earth is Sick* won MGPjr, Greta Thunberg, a Swedish girl at the age of 16, gave her famous speech to the UN's

climate action summit and made school strikes a popular method for protest.¹² 1,6 million children in 120 countries went on strike in 2019 to raise awareness and protest the human actions leading to the climate crisis, all following Gretha Thunberg's example (Garvik et al., 2023). Although Thunberg did not protest through a song, she did it as a child, as one of those who will live with the consequences of human actions in the world. The climate crisis and the song lyric troubles the child-adult binary, the nature-culture divide, and bring both past and future into the present.

The child dancing with sound waves and pixels is not an individual bounded by the skin, but rather a relational be/coming with the spacetimematterings of Fortnite, of YouTube, of musical short clips flowing through speakers and a TV-screen. Being situated in a certain neighborhood in Norway, with access to Wi-Fi and smart-TV, and my researcher presence in this home gets entangled with/in the dance, just like the child's embodied experiences with Fortnite dance videos and their use of short sequences of tunes/dances. Using short sequences is also the trick of social media (SoMe) such as TikTok, Snapchat and Instagram. Short videos can suddenly go viral, meaning they become extremely popular and reach a huge audience. Marshal (2019, p. 3) writes that we're in a new dance craze, like the ones happening in the 1920's and 1960's, and that Fortnite and its' connection to SoMe-platforms are the driving forces behind it. Being a networked video game, Fortnite has become a global phenomenon, connecting players from all over the world. The force of intra-acting agencies (Barad, 2007) making this dance session become are momentous.

Being positioned at a part of the globe where time, space, and materials are available for making songs, playing with friends, jumping at the trampoline, watching MGPjr, dancing to Fortnite dance-along videos, going to school, and letting a researcher visit your home on a bright summer day, matter. These three children are 9 or 10 years old, white, able-bodied, middle class, living together with both a father and a mother, as well as siblings. Although not copying the rooms, materials, or humans, the visual artworks articulate how spacious the children live and what materials their lives are entangled with. The specificity of bodies matters, also in Norway, where, for example, issues of racism and the economy would leave very different marks on other child(ren) in Norway. The specific entanglements matter since "subjects and objects are not

already there, but becoming through intra-actions and relations" (Fjeldstad et al., 2024, p. 10).

As spacetimematterings are continuous be/comings, there will not be a conclusion. Rather, I finish this article with one last story. Here, I turn my attention to my son, now 2,5 years old, and what he is bringing to the phenomenon of childmusicking. Is the story about how this research has made me listen to sounds and child(ren) differently or about bringing in knowledge from "the missing people" of our knowledge making practices? Yes.

A Bird and a Boy Teaching Me a Lesson about the Moon

As I walk together with my son to his kindergarten, the sound of cars is fading as we enter the park where the kindergarten is located. It is a dark winter morning, but this morning I am suddenly noticing how the mornings are slowly getting brighter now as spring is approaching. A bird is chirping loudly behind us, and my son asks: "what sound is that?". I answer that it is a bird but that I do not know which type of bird it is. We turn around to look for the bird, but since it's dark we can't see much. "But look, there's the moon", I say, before we continue walking down the pathway again. After a short while, my son says: "The sound is also the moon's". I am a bit baffled; does he think the bird's sound came from the moon? Or that the moon also makes sounds? Or that the moon and the bird made the sound together? So, I ask: "does the moon make sounds?". "Yes!", he replies while raising his arms over his head and wiggling his upper body to the sides while singing cheerfully: "night and day, night and day!". I laugh a little and he rushes into his kindergarten.

Going back up after saying goodbye to him, I hear the same bird again. This time, it is standing quite close to the pathway I am walking on, and I recognize that it is a male blackbird. As I am approaching, I expect him to fly away, but he doesn't seem to mind me and continues his singing. I pass him and begin to hum on The Beatles' tune "Blackbird" as *I continue my way to work. Still baffled about my* son's statement about the moon making sounds, I think about how night and day, sun going up, moon going down and vice versa, is a continuous rhythm of the world, just like the ebb and flow of the sea. These rhythms make sounds. After all, the night and the day have different, but well-known sounds, just like the ones the blackbird so eagerly showed us this morning. Of course, the moon makes sounds.

Endnotes

1 The forward slash "/" in "be/coming" is there to both adhere to Barad's (2014) "cutting-together-apart" ontology and to trouble the temporalities often implied by concepts. In "be/coming", the forward slash signals that existence not only becomes in the future but is also present, and that temporalities are related. "The forward slash expresses a posthumanist commitment to diffracting through all (adult) Western binaries without ever claiming this can ever be achieved" (Murris & Bozalek, 2023, p. 2).

2 Casey Myers (2019) writes about contradictory questions she's received about her work: "Is your work about children or things? Is your research child-centered or about decentering the human? Is this one book or two books?" (p. 9). As an answer, she uses these questions as headlines throughout her introduction but adds the answer "Yes" to it, like this: "Is this work about children or things? Yes". In this way, she explains, "I'll address each one of these questions with an *affirmative re-fusal* - a (non)answer that rejects the binary premise of the question (I refuse it) and works to dissolve the supposed boundaries between always already entangled phenomena (I re-fuse it)" (p. 9).

3 Although something might have originated in the Western part of the world, it can play out everywhere and is not restricted to certain locations, societies, people, or contexts.

4 Universal claims about *all* children are not possible to make through agential realism, and the brackets in "child(ren)" troubles such universal assumptions.

5 In their chapter "Night sky", Murris and Bozalek discuss how "new and old co-exist within each other", meaning that "we do not throw away the old and start with the new as they are always already implicated" (Murris & Bozalek, 2023, p. 34). I find their discussion accurate for how grappling with spacetimematter as a "new" concept to me is entangled with my "old" notions of space, time, and matter.

6 This research is approved by the Norwegian Centre for Shared Services in Education and Research and found to be in accordance with national data protection regulation. Before conducting the intra-views, ethical considerations were done in the selection of informants and in providing suited information to both parents and children to foster an informed consent. For more information: https://sikt.no/en/home 7 The artworks were made on demand and the copyrights belongs to me. You can see more of Vegar Vallestad's artworks here: <u>www.instagram.com/</u> <u>studio.fonn</u>

8 The translation of the lyrics stayed close to the words and phrasing used in Norwegian. The original lyrics goes like this: Verden gjør meg så sjukt irritert, kan ikkje leve i denne verden. Plast flyter rundt som småfisk som har dødd. Jorda vår blir delt i to og eg kan ikkje seie noko på det, bortsett frå plast, plast, ingen bryr seg ein plass, plass, eg blir så frustrert. Framtida blir øydelagt. Tenk om det er me som har gjort det? Tenk om dei barna som lever om 1000 år får plast, plast, ingen bryr seg ein plass, plass, eg blir så frustrert og irritert. Me kan fiksa da! Dela oss og plukka søppel i laaaand og strand. Kanskje du syns da er kjedeleg, men det var faktisk du som kasta søppel. Ikkje kom her og syt meg. Me må vere litt strenge med deg fordi dåke sitter og skåle sjølv om dåke burde kasta plast, plast, ingen bryr seg ein plass, plass, ta litt ansvar no fordi eg må på do.

9 Melodi Grand Prix Junior (MGPjr) is a national singer-songwriter contest for children aged 8-15 years old. The song "Kloden er syk" (The Earth is Sick) was performed by Anna Vestrheim & Emma Ylvisåker in 2019, 11 years old at the time: <u>https://www.youtube.com/</u> watch?v=Mrg7DAbpYPU. **10** Adult and child are entangled and "cutting-together-apart" (Barad, 2014) bodies. A child becomes a child through the measurement of an adult body, and vice versa.

11 Fortnite is an online video game developed and released by Epic Games in 2017. For more information: <u>https://www.fortnite.com/.</u> The specific YouTube video playing in the video I recorded is not on the digital platform anymore, but similar videos can be found by searching "Fortnite dance emotes."

12 The speech can be watched here: <u>https://www.youtube.com/watch?v=-</u> <u>KAJsdgTPJpU</u>

References

- Barad, K. (2003). Posthumanist performativity: Towards an understanding of how matter comes to matter. *Signs: Journal* of Women in Culture and Society, 28(3), 801–831. <u>https://doi.</u> org/10.1086/345321
- Barad, K. (2007). Meeting the universe halfway: Quantum physics and the entanglement of matter and meaning. Duke University Press. <u>https://doi.</u> org/10.1515/9780822388128
- Barad, K. (2014). Diffracting diffraction: Cutting together-apart. *Parallax, 20*(3), 168–187. <u>https://</u> <u>doi.org/10.1080/13534645.2014.92</u> 7623
- Barad, K. (2017). Troubling time/s and ecologies of nothingness: Re-turning, re-membering, and facing the incalculable. *New Formations*, *92*(92), 56–86. <u>https://</u> doi.org/10.3898/NEWF:92.05.2017
- Barad, K., & Gandorfer, D. (2021). Political desirings: Yearnings for mattering (.) differently. *Theory* & *Event*, 24(1), 14–66. <u>https://doi.org/10.1353/tae.2021.0002</u>
- Braidotti, R. (2013). *The posthuman*. Polity Press.
- Braidotti, R. (2019). *Posthuman knowledge*. Polity Press.
- Braidotti, R. (2022). *Posthuman feminism*. Polity Press.
- Burnard, P., & Osgood, J. (2019). How music matters to young children in museum spaces: Adopting feminist new materialism as a means to reconfigure. *Apollo - University of Cambridge Repository*. <u>https://doi.org/10.17863/CAM.39055</u>

- Dixon, K., Murris, K., Peers, J., Giorza, T., & Lawrence, C. (2024). *Postdigital play and* global education: Reconfiguring research. Routledge.
- Fjeldstad, M. Y. (2023). Knots of knowing-in-playing. Stories from violin lessons read diffractively through agential realism [Doctoral thesis, Norges musikkhøgskole]. <u>https://nmh.brage.unit.no/</u> nmh-xmlui/handle/11250/3066050
- Fjeldstad, M. Y. (2024). Evaluating the quality of posthuman music education research: diffracting quality criteria through responseability. *Music Education Research*, 1–13. <u>https://doi.org/10.1080/14613</u> 808.2024.2331462
- Fjeldstad, M. Y., Kvile, S., & Jenssen, R. H. (2024). Stretching and cracking: Becoming feminist posthumanist scholars in music education. *Music Education Research*, 1–13. <u>https://doi.org/10.1</u> 080/14613808.2024.2341241
- Garvik, O., Lahn, B., & Tjernshaugen, A. (2023). *Greta Thunberg*. In Store norske leksikon. <u>https://snl.</u> no/Greta_Thunberg
- Haas, T. (2023). Women reclaiming the city: International research on urbanism, architecture, and planning. Rowman & Littlefield.
- Haraway, D. (2016a). *Manifestly Haraway*. University of Minnesota Press.
- Haraway, D. (2016b). *Staying with the trouble: Making kin in the Chthulucene.* Duke University Press.
- Jackson, A. Y., & Mazzei, L. A. (2012). *Thinking with theory in qualitative research: Viewing data across multiple perspectives* (1. ed.). Routledge.

- Jenssen, R. H. (2023). Voicing dialogues: Exploring kaleidoscopic notions of voice through performative autoethnography [Doctoral thesis, Norwegian University of Science and Technology]. <u>https://ntnuopen. ntnu.no/ntnu-xmlui/bitstream/ handle/11250/3073333/Runa%20 Hestad%20Jenssen_PhD.</u> pdf?sequence=1%26isAllowed=y
- Juelskjaer, M. (2013). Gendered subjectivities of spacetimematter. *Gender and Education, 25*(6), 754–768. <u>https://doi.org/10.1080/09</u> 540253.2013.831812
- Kuntz, A. M., & Presnall, M. M. (2012). Wandering the tactical: From interview to intraview. *Qualitative Inquiry*, *18*(9), 732–744. <u>https://doi.</u> org/10.1177/1077800412453016
- Kvile, S., & Christophersen, C. (2023). Recognising intra-actions of music and pupil. *Music Education Research*, 25(2), 205–215. <u>https://</u> doi.org/10.1080/14613808.2023.21 <u>93204</u>
- Lambert, L. (2021). Diffraction as an otherwise practice of exploring new teachers' entanglements in time and space. *Professional Development in Education*, 47(2–3), 421–435. <u>https://doi.org/10.</u> 1080/19415257.2021.1884587
- Malone, K., Tesar, M., & Arndt, S. (2020). *Theorising posthuman childhood studies*. Springer. <u>https://</u> doi.org/10.1007/987-981-15-8175-5
- Marshall, W. (2019). Social dance in the age of (anti-)social media: Fortnite, online video, and the Jook at a virtual crossroads. *Journal* of *Popular Music Studies*, *31*(4), 3–15. <u>https://doi.org/10.1525/</u> jpms.2019.31.4.3

Medietilsynet. (2023, February 7). Digitale dilemmaer – en undersøkelse om barns debut på mobil og sosiale medier. <u>https://www.</u> medietilsynet.no/globalassets/ publikasjoner/barn-og-medierundersokelser/2022/230206 digitale-dilemmaer.pdf

- Morgan, R. P. (1980). Musical time/ Musical space. *Critical Inquiry*. *Spring*, 6(3), 527–538. <u>https://www.</u> jstor.org/stable/1343107
- Murris, K. (2016). The posthuman child: Educational transformation through philosophy with picturebooks. Routledge.
- Murris, K., & Bozalek, V. (Eds.). (2023). In conversation with Karen Barad: Doings of agential realism. Routledge.

Myers, C. Y. (2019). Children and materialities: The force of the more-than-human in children's classroom lives. Springer Singapore. <u>https://doi.</u> org/10.1007/978-981-13-8168-3

- Spotify. (2023, September 14). *Spotify—About Spotify*. Spotify. <u>https://newsroom.spotify.com/</u> <u>company-info/</u>
- Targets, A. S. S. (2018, September 11). How is tantalum used in phones? SAM Sputter Targets. http:// www.sputtering-targets.net/blog/ how-is-tantalum-used-in-phones/
- Warfield, K. (2017). "I set the camera on the handle of my dresser": Re-matter-ializing social media visual methods through a case study of selfies. *Media and Communication, 5*(4), 65–74. <u>https://doi.org/10.17645/mac.</u> <u>v5i4.1057</u>

Werner, A. (2015). Moving forward: A feminist analysis of mobile music streaming. *Culture unbound: Journal of current cultural research, 7*(2), 197–213. <u>https://doi.</u> org/10.25595/1421.