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# Recognising intra-actions of music and pupil

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## ABSTRACT

Music is deeply entangled with human activity and can play various roles in our lives, also in the lives of children. A large part of children's day-to-day life in Norway takes place within a school context. However, research on children's musical lives within a primary school context is scarce, and there is little knowledge of how pupils engage and interact with music throughout their school day. Building on classroom observations of 4th graders in a Norwegian primary school, this article addresses the intra-actions of pupil(s) and music(s) at school from a posthuman and new materialist perspective. Through a diffractive reading of data and a 'thinking with theory' approach, we investigate how pupils and music intra-act within material-discursive school practices. Our results show that the intra-actions of music(s) and pupil(s) are connected to the norms and rules regulating the classroom and that these understandings have material effects.

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## Introduction

Music matters in the life of humans and, as matter, music plays with and through humans and non-humans alike. Music *becomes* through materials such as musical instruments or technological devices as well as through social and cultural practices such as playing, dancing, listening, composing and consuming in everyday life (DeNora 2000; North, Hargreaves, and Hargreaves 2004; Rentfrow 2012). It seems like music and humans are not only intertwined, but rather entangled, which implies a lack of independence and existing together: 'To be entangled is not simply to be intertwined with another, as in the joining of separate entities, but to lack an independent, self-contained existence' (Barad 2007, ix).

The entanglement of music and children is at the core of this article and is explored through Karen Barad's concept of *intra-action* (2003, 2007). 'The notion of *intra-action* (in contrast to the usual 'interaction', which presumes the prior existence of independent entities or *relata*) represents a profound conceptual shift' (Barad 2007, 139). As part of the 'ontological turn' (Lather 2016) away from a representational paradigm, we see the world as always becoming through intra-actions. In short, become/becoming has to do with the dynamic, non-linear processes of intra-actions. Barad uses become/becoming to make a distinction between these processes and theories of emergence (Barad 2007, 180, 438Fn83). Studying the intra-actions of pupils and music allows a focus on how pupils and music *become* through practices and actions in our material, since '(...) entangled practices are productive, and who and what are excluded through these entangled practices matter: different intra-actions produce different phenomena' (Barad 2007, 58). The phenomena Barad speaks of, 'are neither individual entities nor mental impressions, but entangled material agencies' (Barad 2007, 56) and are, according to agential realism, the primary ontologically unit (Barad 2007, 333).

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Since no entities pre-exist but rather become through intra-actions, it would be misleading to say that we are studying *pupils'* musical intra-actions. In this study, therefore, the phenomenon of pupil(s) and music(s) intra-actions are called *pupilmusical* to stress the point that the phenomenon of investigation is neither a study of entities (such as pupil or music) nor are the intra-actions only a human affair.

Building on observations of a Norwegian 4th grade's ordinary school days, this article explores the pupilmusical intra-actions within a primary school setting. Undertaking a diffractive analysis (Barad 2007, 2014) means that our intention is not to re-present the data material, rather, we choose to zoom in on the intra-actions we call 'pupilmusical' and we ask what difference they make. The question guiding this article is therefore: *How can pupilmusical intra-actions provide insights into the becoming of music(s) and pupil(s) in a primary school setting?* This question aims to contribute to the exploration of material-discursive practices of music and pupils at school.

## Framing the study

Music in the lives of children is still an emerging research field. While there is a growing body of research into everyday early childhood musicking (e.g. Addressi 2009; DeVries 2009; Koops 2014; Young 2016), further research on children's perspectives on formal music education is needed. Music education studies in a primary school context tend to focus on the primary music teacher's perspectives, on their competence or confidence (e.g. Angel-Alvarado, Belletich, and Wilhelmi 2020; Dobrowen 2020; Fredriksen 2018; Russell-Bowie 2009), on issues related to music as a school subject and its curriculum, or on how to teach school music (e.g. Gruenhagen and Whitcomb 2014; Hillier 2011; Kelly-McHale 2019; Sætre, Ophus, and Neby 2016; Sætre 2018).

This study is particularly influenced by Patricia S. Campbell's (2010) seminal study of primary school children's musicking in diverse everyday settings, and Ingeborg L. Vestad's (2013) study of children's use of recorded music in kindergarten and at home. These studies ethnographically investigate young children's voices, musical engagement, and music-making in everyday settings unrelated to the learning of a particular curriculum or skill set, while perceiving children as cultural agents. Campbell's (2010) observations of children's day-to-day musical engagement indicated that adults, e.g. parents and teachers, did not pay much attention to children's engagement with music. The unacknowledged music-making in children's lives made Campbell (2010, 4) notice that she had 'seldom observed children in their own undirected play for evidence of their music – natural or acquired, songs or song segments, even rhythms without pitches – but their music nonetheless'. Both Campbell's and Vestad's studies draw on Christopher Small's concept of 'musicking' (1998), i.e. music as a relational process rather than an object, and both studies note the importance of music in children's lives as well as the inter-connectedness of children and music: 'It is almost as if children exude music', Campbell (2010, 4) writes. Vestad applies the concept of affordance (Gibson 1979) to denote the mutual entanglement of children and music: 'What children do with music depends on what music does to children' (Vestad 2013, 28).

While both studies provide important insights into children's music-making, the studies discuss *children's* use and meaning of their own music-making, which positions music as a result of human activity. The current study's focus on pupilmusical intra-actions offers a possibility to emphasise the material entanglements in the intra-actions and to avoid the objectifying of pupils and music. Rather, we investigate how music(s) and pupil(s) are entangled and become through intra-actions in an everyday school setting. This perspective resembles Richerme's (2016) study of measurement and assessment practices in music education. By using Barad's concept of intra-action, Richerme highlights the constitutive and relational effects of measurement apparatuses and shows how students and teachers become through such processes. Although posthumanist approaches are still emerging within music education, two other recent studies have employed these perspectives: Crickmay and Keene (2022) investigated the use of posthuman methodologies through a research project on participatory practices in music, while Kinsella, Fautley, and Whittaker (2022) focussed on the intra-actions of partnership work between music providers in- and out of school. Both studies emphasised that these emerging research approaches may very well challenge the binary

understandings and representational worldviews that have so far been pervasive within research (Crickmay and Keene 2022, 14; Kinsella, Fautley, and Whittaker 2022, 11). By extension, this calls for a clarification of how pupils/children are positioned in this article.

### Positioning ‘the child’

Terms like ‘pupils’ and ‘children’ can imply stable, fixed categories that include all pupils/children based on age or setting. We oppose the idea of the ‘universal child’ (Malone, Tesar, and Arndt 2020), i.e. that there are universal ways of being a child or of having a childhood no matter where you live or under which conditions. Instead of fixating ‘the child’ in stable categories, post-humanism expects a plurality of childhoods that are always becoming through their various intra-actions in the world (Murriss 2016, 2020).

Universal views of children and childhood are commonly connected to developmental perspectives where the child’s body and mind are weighed, measured, and checked in order to monitor their development (Malone, Tesar, and Arndt 2020, 32), and are still predominant in Western societies, particularly in educational settings. For instance, such perspectives have made it normal to divide pupils into school classes based on their age. The positioning of children as not fully-developed human beings who need guidance and nurture is a core argument for the school system and for the governance of children (Malone, Tesar, and Arndt 2020, 38) which, in turn, relates to an ageist perception of knowledge as something only human beings of a certain age or maturity can possess (Murriss 2016). Furthermore, such universal understandings are associated with dichotomous worldviews, where binaries such as nature–culture, body–mind, child–adult produce certain possibilities while excluding others (Murriss 2020, 37–39). These understandings could be considered as material-discursive practices (Barad 2003, 818–824) that have both social and material effects, such as schools with classrooms, desks and chairs, and teachers who are considered in certain ways (as opposed to the child):

The figuration of the “normal” knowing subject as the mature (Western) adult has informed institutionalized discriminatory child/adult relationships and materialises specific roles of the educator: guide, instructor, trainer, discipliner, facilitator, socializer, protector, diagnoser and medicator (Murriss 2020, 38).

The emphasis in this article being on relational and entangled ways of being and becoming in the world aims to keep ‘the binaries between child–adult, human–nature and nature–culture [...] blurred’ (Malone, Tesar, and Arndt 2020, 52). We are, however, aware that binary tensions impact our positioning of pupils in this study, for instance by ‘othering’ them from adults.

### Configuring the research ‘Apparatus’

When seeking knowledge about something, it matters how you investigate it, or, to use Barad’s (2007, 148) term, how the ‘apparatus’ is designed and configured. The apparatus includes everything that constitutes the phenomenon of investigation. Therefore everything, including researchers, methods, practices observed in school, pupils, music, teachers, school buildings, classrooms, desks, chairs, theories, dialogues, thoughts, writings and more, is entangled and becomes the apparatus we use to simultaneously investigate and constitute the phenomenon ‘pupilmusical intra-actions’. Consequently, distinctions between ‘theory’, ‘research methods’, ‘data’ and ‘analysis’ are blurred. The vantage point of this study is Barad’s ethico-onto-epistemology, *agential realism* (2007, 185), which rejects the possibility of objectivity, and at the same time starts from a relational assumption: ‘We are not outside observers of the world. Neither are we simply located at particular places *in* the world; rather, we are part *of* the world in its ongoing intra-activity’ (Barad 2007, 184).

While the notion ‘posthumanism’ is often used as the overarching term for perspectives decentring humans, ‘new materialism’ includes perspectives that focus on the materiality of the world.

Still, these perspectives have similarities. While Barad's agential realism bridges the gap between knowing and being, posthumanist perspectives encourage defamiliarising the already known, focusing on power locations, and adopting a non-linear thinking (Braidotti 2013, 163). Similarly, new materialism emphasises the materiality of all things and opposes a dualistic thinking that separates the material and the discursive (Dolphijn and van der Tuin 2012, 48). Music, for instance, is sound waves that can be made, listened to, felt and perceived *as* music. Music is also a cultural and social practice, often linked to notions of community, belonging and identity. Barad (2007, 146) emphasises how different dimensions of phenomena are entangled and inseparable and calls them 'material-discursive practices'. In short, material-discursive practices relate to how meaning is produced through iterative intra-actions that are both discursive and material (Barad 2003, 822–823). If a pupil strikes a ruler against her desk with a steady beat, it produces sound waves of a certain quality which may or may not be perceived as music. Ascribing the sound meaning as music is not only linked to discursive elements such as context or human activity, but is also entangled with the materiality of music; it matters how the sound waves sound.

In this article, seemingly irrelevant, and small happenings became 'glow moments' (MacLure 2013, 228) that stood out and made us wonder what music is or could be, and that challenged our views on pupil(s) and/or child(ren). Our analysis was therefore not made through coding and categorisation but was built on the grounds of diffraction (Barad 2007) and 'thinking with theory' (Jackson and Mazzei 2012).

Jackson and Mazzei (2017, 727) consider 'thinking with theory' as a '*process methodology or new analytic* for qualitative inquiry', and explains this through the image of a threshold as a place where:

(...) things enter and meet, flow (or pass) into one another, and break open (or exit) into something else. (...) theory is necessary in our work because it keeps knowing and being in the middle of things, in a state of in-between-ness, as always becoming. (2017, 721)

If acknowledging that researchers both constitute and are constituted by the research, one must also acknowledge that this entangled process counts when producing knowledge. Therefore, researchers, theories and data material encounter and 'speak' together in ways that produce certain insights and expressions. This resonates with Barad's use of the term 'diffraction', which was originally used to describe the phenomenon of 'the way waves combine when they overlap and the apparent bending and spreading of waves that occurs when waves encounter an obstruction' (Barad 2007, 74). Understood as 'obstruction', the research apparatus in this study (not only the theories used), makes diffractions by producing new questions, offering different understandings, and destabilising what is already known. Analysing diffractively means to acknowledge and take note of these interferences and differences, and their effects, by decentering and defamiliarising what is usually foregrounded 'in conventional qualitative research: the subject, interpretation, categorical similarity and so on' (Mazzei 2014, 743). Like Mazzei (2014), we are influenced by Barad's (2007) use of diffraction, as well as others who have used diffraction as an analytical strategy (e.g. Chappell, Natanel, and Wren 2021; Hultman and Lenz Taguchi 2010; Jackson and Mazzei 2017; Jusslin and Höglund 2020; Lenz Taguchi 2012; Murriss 2016, 2020).

A key element in our diffractive strategy is to focus on the *pupilmusical intra-actions*. By emphasising pupils' actions occurring in between ordinary learning activities in the classroom, we have muted the foreground which might normally have concerned the teaching, music activities or the general classroom setting and 'accepted' behaviour. Instead, we turn our attention to what is often either ignored or deemed 'unacceptable' behaviour in a classroom, such as an individual pupil's fidgeting, humming, sound making and play. These pupilmusical intra-actions occur in between general classroom activities and can disturb and destabilise not only the lessons, the quiet classroom or the norms and school rules, but also our understanding of music(s) and pupil(s). Consequently, these intra-actions are associated with meaning production and will be discussed in relation to material-discursive practices (Barad 2003, 2007).

## Observing in the classroom

The fieldwork<sup>1</sup> was done by the first author and consists of observations of a 4th grade class in a Norwegian medium-sized primary school. Observations were conducted one day per week throughout the autumn semester in 2020. Such ‘part-time-participating observation’ (Fangen 2010, 116) is a common method for studying a field within your own society since it allows the researcher to continue her normal life outside of fieldwork. Due to the long period of observation, the school was chosen based on its geographical location and research access. In keeping with the aforementioned ‘ontological turn’ (Lather 2016), no ‘representative’ criteria were applied when selecting the school.

The observations involved 40 pupils (8- and 9-year-olds), their four regular teachers, as well as seven assistants and two substitute teachers. The first author observed school lessons in several subjects, including music, as well as two field trips, rehearsals for a Christmas show, two Christmas show performances and several recesses. The observed class was normally divided into two groups, with lessons taking place in similar classrooms. Inside each of these classrooms there was a large whiteboard at the front of the room along with the teacher’s desk, chair, and computer. The rest of the classroom consisted of pupils’ desks and chairs (approximately 20) placed in rows facing the whiteboard and teacher, as well as a sink and a bookshelf at the back of the classroom. Each classroom also had a projector and two speakers, in addition to, other school equipment such as books, posters, stationery etc. All school subjects, except physical education, were taught in these classrooms.

Searching for music in a quiet classroom, the first author ended up writing down every single audible sound, exemplified in this excerpt from her first day field notes: ‘A boy whistles gently, another one hums and makes rhythms with his eraser’ (1); or later the same day, ‘Some boys are playing with yodelling sounds made by striking their throats, while a boy and two girls do some dance moves during recess’ (2). When reading the field notes, it was striking how pupils’ actions were always entangled with materials, and involved desks, chairs, rulers, pencils, sweaters, or parts of their own bodies, such as vocal cords, mouths, legs, or hands. A gradually evolving awareness of and attention towards these in-between-actions in the classroom, led to posthumanist (Braidotti 2013) and new materialist (Barad 2007) perspectives, and consequently to a focus on pupilmusical intra-actions.

## Diffraction readings of pupilmusical intra-actions at school

Pupilmusical intra-actions are entangled with material-discursive practices. When reading these phenomena diffractively, we have made ‘agential cuts’ (Barad 2007, 140), which give the phenomena a certain form. To make agential cuts means to separate what is entangled in a phenomenon (Barad 2007, 175), to momentarily freeze what is always becoming through iterative intra-actions. We have made agential cuts through identifying the pupilmusical intra-actions as something different from the rest of the observations (although they are entangled with everything else surrounding them), through choosing certain excerpts from the field notes (which cuts them loose from their original place within a larger context), and through separating music and pupil in the forthcoming presentation instead of treating them as one. We start by presenting a cut from our field notes which is followed by our diffractive reading and ‘thinking with theory’ approach.

### **Cut 1: music(s)**

It is 9 am and we are halfway through a Norwegian lesson. Today’s topic is newspaper advertisements. The pupils are cutting out ads from newspapers and are also drawing their own ads. A group of boys are gathering around one of the desks, some other boys are talking together about their leisure time activities and gaming. The teacher breaks up both groups. Another boy has managed to make his pencil hang down in the air from a tube of glue. The paper and pencils belonging to the boy next to me has fallen to the ground four times now. I

can hear buzzing in the room. Several pupils are humming. A boy sits on the floor, making rhythms with a pair of scissors. (Day 11, 1)

One might wonder where the music is in this excerpt. The entanglement of scissors, newspapers, boys, desks, glue, and teacher, amongst many other things, are suddenly accompanied by humming and rhythms. Or at least, the observing researcher suddenly becomes aware and *recognises* these sounds as possibly musical. The situation described above made us wonder; what counts as music? How do the ‘boundaries’ of music become? Must music be a tune with a clear start, middle and ending? Has music got something to do with melody, rhythms, or certain materials such as musical instruments? Does music imply certain actions such as singing, dancing, listening, or composing? Or could moments of humming or a short rhythmic pattern made by a boy and a pair of scissors, as described in the excerpt above, also be music?

As noted by Campbell (2010) and Marsh (2008), adults and teachers may not recognise all of children’s everyday musical engagements. This lack of recognition could imply that certain musical activities are viewed as more ‘musical’, or even more important, than others. Throughout the observation, the teachers initiated daily musical activities such as singing, dancing and listening. Like Vestad (2013, 247), we observed how music can have an organising function as well as affording certain moods or feelings. There were daily musical routines in the classroom, such as singing in the morning, at lunch time, and at the end of the day, which the pupils did standing behind their desks. The morning singing was followed by listening to a tune played on Spotify, while sitting quietly on their chairs. Dancing was often used as a reward for good behaviour and to let the pupils release some energy between learning activities, and they also actively rehearsed the Norwegian ‘Blime!²-dance. In music lessons, common activities were singing, listening, dancing, playing the recorder and learning about music history and music theory. When the Christmas show rehearsals started, singing with a backing track was the main musical activity. All these musical actions initiated by the teachers were noted in the field notes as musical happenings, which indicate that these are strong musical material-discursive practices. These practices never challenged common understandings of music(s), and they appeared ordinary, familiar, and safe within the educational context.

Attempting to transcend the familiar notions of music, the first author made notes of pupils’ *various* actions throughout the school day, and not just complete tunes, dances of a certain quality or similar. Consequently, and as shown in the example above, a large part of the field notes contained detailed descriptions of the pupils’ actions such as fidgeting, walking, talking, and humming. During the fieldwork period, small fragments of sounds and movement emerged for us as pupil-musical intra-actions:

A girl makes a clear rhythm on her desk with her hands, 4 eighths, 2 fourths, which she repeats until she notices me observing her. Two other girls are communicating about a dance or song. One of them is doing dance moves with her arms while singing quietly. A boy is striking his bottle hard with his pencil. (Day 1, 3)

Another boy seems uninterested in drawing, he is fidgeting with his things, dancing with his arms, humming a little. (Day 3, 2)

The teacher says, “Just stand still but with your mouths shut, like icicles” (she shows with her body how to stand straight with her arms hanging down). One boy says, “I’m melting” and slides down to the floor. A boy and a girl are lying over their desks. Three boys and two girls are dancing. One experiments with his voice making strange sounds. (Day 8, 1)

Three girls are singing the words “little princess” and making some dance steps, while playing dodgeball (during recess). (Day 13, 2)

The first excerpt above shows that it is neither a child’s hand nor a desk who produces a sound, the sound becomes through the intra-action of both. When the observing researcher writes this intra-action down as 4 eighths and 2 fourths, she transforms it to written music in a Western tradition. The

question here is not what music is, but rather how music becomes, how sounds are deemed musical or not, and further, what kind of music these sounds are perceived as. Classifying such pupilmusical intra-actions in terms of eights and fours could be seen as an act of eurocentrism and colonialism (Hess 2021), even as white supremacy (Dernikos 2020), thus producing ‘normative soundscapes’ (136) that conditions certain perceptions of music. Such normative soundscapes can have a profound impact on what is considered acceptable and possible sounds and silence within the classroom.

Despite numerous teacher-initiated musical intra-actions, the pupils’ own fragmented musical engagement and entanglement with the world were still visible and audible in the classroom. During otherwise quiet schoolwork, there would be humming or whistling, or a rhythmic pattern could be heard and located as an intra-action between a pupil and a ruler. Campbell (2010, 96–98) writes about the ‘musical parts of childlore’ as various musical utterances and ‘rhythmicking’, which often are short musical bits and fragments. Describing such actions as expressions of *children’s* culture (Campbell 2010), could obscure that the term ‘children’ denotes a heterogenous group with the potential of making multiple pupilmusical intra-actions. In the current study it varied how the 40 pupils engaged in these musical intra-actions; some pupils engaged much more frequently than others, and some did not visibly take part in any musical intra-actions. However, and in line with Small’s (1998) concept of ‘musicking’, these pupils may have engaged in other kinds of musical intra-action, such as for example listening or paying attention to other’s intra-actions.

Focussing on the differences rather than the similarities, we find the pupilmusical intra-actions interesting as they both stabilise and destabilise material-discursive practices (Barad 2007, 210) concerning music. The pupilmusical intra-actions shown in the excerpts above materialised as sounds and movements but were not necessarily considered as *musical* sounds or movements. The pupilmusical intra-actions that produced large movements and loud sounds inside the classroom were at greater risk of being disciplined than the calmer and quieter intra-actions. Not once did any of the pupilmusical intra-actions receive the teachers’ articulated approval or appreciation, rather, they were often either ignored or disciplined. This might implicate that pupilmusical intra-actions were not perceived as being musical actions, but rather as sounds and movements that could interfere with the classroom’s normative soundscape.

The materials in the classroom were also ignored or disciplined, so to speak, by being banished to either the bookshelf at the back of the classroom, or to their backpacks. No pupils were allowed to have anything on their desks without being told so, which usually only happened when they were about to do a learning activity or have their lunch. Such restrictions were made to manage the soundscape of the classroom since stationary, bottles, books, or papers could quickly be turned into sound-producing materials the pupils could intra-act with. Even without such ‘things’ available, some pupil’s intra-actions with desks and chairs took impressively creative twists and turns. The pupilmusical intra-actions not only provide an opportunity to discuss the becoming(s) of music, but also to understand them as performances that challenge the material-discursive boundary-producing distinctions between ‘pupil’ and ‘child’.

## Cut 2: pupil(s)

Lunch time ends with a short repetition of ‘The Fairytale Song’<sup>3</sup>, before the next class, maths, starts. One boy does not tidy up his lunch box and drinking bottle as requested, instead he responds to the teacher with words and phrases from the song. He says “stupid-stupid-poop” and similar refrains<sup>4</sup>, which quickly turn into “maths-maths-mathematics”. He says “tvee-tvee-tvee is 31”<sup>5</sup> when the teacher asks what 31 divided by 2 is. Another boy joins in the music and dances while he picks up his eraser from the floor. Two boys on the other side of the classroom are also creating their own fun with the song. One of them yells, “Your golden hen<sup>6</sup>!” The boy who picked up his eraser is told to leave the classroom and go into a group room, and the teacher warns the rest of the boys that there is room for them in there as well. Five boys fool around a lot, four other boys are completely calm and quiet. All are told to find their books and to work quietly. One boy sings “Ba Ba Black Sheep”<sup>7</sup>, but the teacher stops him immediately. “There is too much buzzing now!



It should be completely quiet, and everyone should work quietly”, the teacher says. The buzzing continues anyway. Some pupils hum, others make fart sounds with their mouths, and the fooling around continues despite the teacher’s many warnings. Many pupils sit with one hand up in the air waiting for help, but there is only one teacher in the room, and she cannot help everyone at once. Some girls assign themselves as ‘helpers’ and walk around asking if other pupils need help. (Day 5, 2)

This cut shows several pupilmusical intra-actions in between other activities in the classroom. What is even more visible here than in previous excerpts, is the level of conflict and complexity. If we zoom in on the pupils, we can see that some boys create their own fun with a familiar phrase from a song they are currently learning at school, and yet their pupilmusical intra-actions receive little or no appreciation from the teacher. Rather, she sends one boy out to a group room and warns the others that they could end up in there as well. While having fun with the song, the pupils seem to oppose behavioural norms in the classroom, which the teacher immediately disciplines in what seems to be an attempt to stop what she perceives as noise.

Conflicts regarding the control of sound and movement occurred every day during the observation period, although with varying frequency and intensity. Seen as pupilmusical intra-actions, these actions differed from the normal controlled behaviour that dominated the pupils’ actions, and they created tensions in the classroom’s social space. Understood as normative soundscapes, the school’s silencing or privileging some sounds are neither ‘natural’ nor ‘innocent’ (Dernikos 2020, 142), but material-discursive practices that (re)produce the boundaries of such practices. Thinking with educational theory and theory from the field of child and childhood research, these material-discursive practices can be related to the history of the Western school system, in which children often were seen as ‘wild, uncultured, untamed and animalistic’ (Malone, Tesar, and Arndt 2020, 30), and where education was seen as the solution to this predicament. Such universal views on children could also be related to the favouring of cognitive learning strategies, as opposed to more embodied and practical learning strategies, and could perpetuate binaries such as nature–culture, child–adult, and pupil–teacher, thereby possibly hinder a plurality of actions and subjectivities in a classroom.

If it is the teacher’s role to discipline and ‘tame’ children in order to create ‘good’ pupil behaviour so that learning content can be ‘delivered’, then silencing sounds and movement, as well as demanding attention from the pupils, could be considered reasonable reactions from a teacher. Still, are these silencing practices desirable and necessary to (re)produce? On the one hand, it seems logical that classroom sounds and movements should be limited to minimise disturbance for pupils and teachers. On the other hand, this begs the question why so many pupils are assembled in one room in the first place, and the rationale for being grouped together based on birthyear. The observations in this study show that pupils engage in sounds and movements differently. Some favour experimenting with oral sounds using vocal cords, lips, and tongue, some are more active making movements. Others hardly ever actively engage in musical intra-actions by producing sounds or movements themselves, but that is not to say nothing happens in their minds, bodies and emotions. Likewise, the teachers’ management of the rules and norms connected to sounds and movements vary. A posthuman perspective would expect behavioural diversity, i.e. that rules and norms are understood, reacted upon and managed differently.

If ‘pupils’ were not understood through a developmental perspective, or seen as young versions of becoming adults, or as future labourers, schooling might be done differently. Richerme (2016, 286) points out that intra-actions, seen as *existence*, are boundary-making practices that alter both pupils and teachers. We would add that intra-actions also alter school practices, such as which learning styles and teaching activities are dominating, and how materials are involved. Instead of basing schooling on sameness, Murriss (2016, 225) proposes that education should be about ‘listening out for what is different, and what makes us think and feel differently’. She urges that this includes the materiality of education, i.e. that we learn not only through language, but also through our entanglement and relationality with materials. When pupils are fidgeting, humming, or making sounds this could be considered ways of being *in touch* with the world,

moments where pupils follow the ‘call of things’ (Dernikos 2020, 152). By muting such intra-actions, we wonder; who and what are be(com)ing dominate(d) in school and what are the consequences?

## Conclusions

In this article, we have explored seemingly small and fragmented pupilmusical intra-actions within a primary school context and setting. These entanglements were commonly ignored or perceived as noise, and hence disciplined, by teachers. In some ways, our findings support conclusions from previous music education studies (Campbell 2010; Vestad 2013) that children’s day-to-day musical engagements are often not acknowledged, recognised or appreciated. However, posthumanist and new materialist perspectives in this study have provided insights into how material-discursive practices (re)produce the ways music(s) and pupil(s) can become in a primary school setting. The entanglements of pupils and materials produce sounds and movements which could be understood as musical, and which offer important learning opportunities about the materiality of the world and of being in the world. Still, these moments are not necessarily appreciated or recognised within the classroom. Material-discursive practices affect how sounds become musical or not based on the materiality of the sound, and by who, when and where the sound was produced. We question if the norms for being ‘pupil’ (too) often are built on universal and developmental perspectives on children, and if a favouring of cognitive learning styles might hamper a plurality of pupils and music(s) to become. From our perspective, the intra-actions of pupils and materials can be considered more than behaviour to discipline or praise. Instead, pupilmusical intra-actions can be understood as doings where pupils and materials are unmuted and make themselves intelligible to each other, to the surroundings and even to the world.

## Notes

1. The data handling in this study has been reported to the Norwegian Centre for Shared Services in Education and Research and has been found to be in accordance with national data protection regulation, as well as with institutional routines for research ethics. All subjects in this study have provided appropriate informed consent.
2. BlimE! (Join in!)-is a friendship/inclusion-campaign that started in 2010, where children are encouraged to learn the BlimE!-dance of the year. The dance is heavily promoted through the Norwegian national broadcasting company childrens’ channel *NRKSuper*. On its 10th anniversary in 2020, the dance became international for the first time, and 12 countries danced together on the BlimE-day 12th of November. For more information: <https://www.ebu.ch/events/2020/09/ebu-kids-european-friendship-campaign--say-hi>.
3. A Norwegian tune called ‘Eventyrvisa’, composed in 1956. The lyrics concerns characters from traditional Norwegian fairytales and they have a playful linguistic style.
4. The original song phrase is ‘Tomme-Tomme-Tommeliten’. Tommeliten is a tiny boy in a Norwegian folk tale called ‘Tom Thumb’ in English.
5. The original phrase in Norwegian is ‘tvi-tvi-tvi’, which means ‘good luck’.
6. ‘Gullhøna di’ are the correct original lyrics, which means ‘your golden hen’.
7. ‘Bæ, bæ lille lam’ in Norwegian.

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## Data availability statement

Due to the nature of this research, participants in this study did not agree for their data to be shared publicly, so supporting data is not available.

## Notes on Contributors

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## References

- Addressi, A. R. 2009. "The Musical Dimension of Daily Routines with Under-Four Children During Diaper Change, Bedtime and Free-Play." *Early Child Development and Care* 179 (6): 747–768. doi:10.1080/03004430902944122.
- Angel-Alvarado, R., O. Belletich, and M. R. Wilhelmi. 2020. "Exploring Motivation in Music Teachers: The Case of Three Primary Schools in Spain." *British Journal of Music Education* 37 (3): 196–206. doi:10.1017/S0265051720000145.
- 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. doi:10.1086/345321.
- Barad, K. 2007. *Meeting the Universe Halfway. Quantum Physics and the Entanglement of Matter and Meaning*. Durham/London: Duke University Press.
- Barad, K. 2014. "Diffracting Diffraction: Cutting Together-Apart." *Parallax* 20 (3): 168–187. doi:10.1080/13534645.2014.927623.
- Braidotti, R. 2013. *The Posthuman*. Cambridge: Polity Press.
- Campbell, P. S. 2010. *Songs in Their Heads: Music and its Meaning in Children's Lives*. New York: Oxford University Press.
- Chappell, K., K. Natanel, and H. Wren. 2021. "Letting the Ghosts in: Re-Designing HE Teaching and Learning Through Posthumanism." *Teaching in Higher Education*. doi:10.1080/13562517.2021.1952563.
- Crickmay, U., and H. R. Keene. 2022. "Together Apart: A Comparison of a Thematic and Diffractive Analysis of a Participatory Music Project." *Music Education Research*. doi:10.1080/14613808.2022.2054964.
- DeNora, T. 2000. *Music in Everyday Life*. Cambridge: Cambridge University Press.
- Dernikos, B. P. 2020. "Tuning Into 'Fleshy' Frequencies: A Posthuman Mapping of Affect, Sound and de/Colonized Literacies with/in a Primary Classroom." *Journal of Early Childhood Literacy* 20 (1): 134–157. Doi: 10.1177/1468798420914125.
- DeVries, P. 2009. "Music at Home with the Under Fives: What is Happening?" *Early Child Development and Care* 179 (4): 395–405. Doi: 10.1080/03004430802691914.
- Dobrowen, L. 2020. *Musikk på barnetrinnet. En studie av læreres forståelser av profesjonalitet i musikkundervisning* [Music in primary school. A study of teachers' perceptions of professionalism in music teaching]. PhD Diss. Norwegian Academy of Music.
- Dolphijn, R., and I. van der Tuijn. 2012. *New Materialism: Interviews & Cartographies*. Michigan: Open Humanities Press.
- Fangen, K. 2010. *Deltagende observasjon* [Participatory Observation]. Bergen: Fagbokforlaget.
- Fredriksen, B. 2018. "Leaving the Music Classroom. A Study Of Attrition From Music Teaching In Norwegian Compulsory School." PhD diss., Norwegian Academy of Music.
- Gibson, J. J. 1979. *The Ecological Approach to Perception*. Boston: Houghton Mifflin.

- Gruenhagen, L. M., and R. Whitcomb. 2014. "Improvisational Practices in Elementary General Music Classroom." *Journal of Research in Music Education* 61 (4): 379–395. Doi: [10.1177/0022429413508586](https://doi.org/10.1177/0022429413508586).
- Hess, J. 2021. "Music Education and the Colonial Project: Stumbling Toward Anti-Colonial Music Education." In *The Routledge Handbook to Sociology of Music Education*, edited by R. Wright, G. Johansen, P. A. Kannelopoulos, and P. Schmidt, 23–39. London/New York: Routledge.
- Hillier, E. 2011. "Demystifying Differentiation for the Elementary Music Classroom." *Music Educators Journal* 97 (4): 49–54. doi:[10.1177/0027432111405672](https://doi.org/10.1177/0027432111405672).
- Hultman, K., and H. Lenz Taguchi. 2010. "Challenging Anthropocentric Analysis of Visual Data: A Relational Materialist Methodological Approach to Educational Research." *International Journal of Qualitative Studies in Education* 23 (5): 525–542. doi:<https://doi.org/10.1080/09518398.2010.599628>.
- Jackson, A. Y., and L. Mazzei. 2012. *Thinking with Theory in Qualitative Research. Viewing Data Across Multiple Perspectives*. London/New York: Routledge.
- Jackson, A. Y., and L. Mazzei. 2017. "Thinking with Theory in Qualitative Research." In *The SAGE Handbook of Qualitative Research*, edited by N. K. Denzin, and Y. S. Lincoln, 717–737. Thousand Oaks: SAGE.
- Jusslin, S., and H. Höglund. 2020. "Entanglements of Dance/Poetry: Creative Dance in Students' Poetry Reading and Writing." *Research in Dance Education*, 1–19. doi:[10.1080/14647893.2020.1789088](https://doi.org/10.1080/14647893.2020.1789088).
- Kelly-McHale, J. 2019. "Research-to-Resource: Developing a Culturally Responsive Mind-Set in Elementary General Music." *Update: Applications of Research in Music Education* 37 (2): 11–14. doi:[10.1177/8755123318810111](https://doi.org/10.1177/8755123318810111).
- Kinsella, V., M. Fautley, and A. Whittaker. 2022. "Re-thinking Music Education Partnerships Through Intra-Actions." *Music Education Research*, doi:[10.1080/14613808.2022.2053510](https://doi.org/10.1080/14613808.2022.2053510).
- Koops, L. H. 2014. "Songs from the Car Seat: Exploring the Early Childhood Music-Making Place of the Family Vehicle." *Journal of Research in Music Education* 62 (1): 52–65. doi:[10.1177/0022429413520007](https://doi.org/10.1177/0022429413520007).
- Lather, P. 2016. "Top Ten+ List: (Re)Thinking Ontology in (Post)Qualitative Research." *Cultural Studies ↔ Critical Methodologies* 16 (2): 125–131. doi:[10.1177/1532708616634734](https://doi.org/10.1177/1532708616634734).
- Lenz Taguchi, H. 2012. "A Diffractive and Deleuzian Approach to Analyzing Interview Data." *Feminist Theory* 13 (3): 265–281. doi:[10.1177/1464700112456001](https://doi.org/10.1177/1464700112456001).
- MacLure, M. 2013. "The Wonder of Data." *Cultural Studies ↔ Critical Methodologies* 13 (4): 228–232. doi:[10.1177/1532708613487863](https://doi.org/10.1177/1532708613487863).
- Malone, K., M. Tesar, and S. Arndt. 2020. *Theorising Posthuman Childhood Studies*. Singapore: Springer.
- Marsh, K. 2008. *The Musical Playground: Global Tradition and Change in Children's Songs and Games*. New York: Oxford University Press.
- Mazzei, L. 2014. "Beyond an Easy Sense: A Diffractive Analysis." *Qualitative Inquiry* 20 (6): 742–746. doi:[10.1177/1077800414530257](https://doi.org/10.1177/1077800414530257).
- Murris, K. 2016. *The Posthuman Child: Educational Transformation Through Philosophy with Picture Books*. London/New York: Routledge.
- Murris, K. 2020. "Posthuman Child and the Diffractive Teacher: Decolonizing the Nature/Culture Binary." In *Research Handbook on Childhoodnature. Springer International Handbooks of Education*, edited by A. Cutter-Mackenzie, K. Malone, and E. Barratt Hacking, 31–55. Cham: Springer. doi:[10.1007/978-3-319-51949-4\\_7-1](https://doi.org/10.1007/978-3-319-51949-4_7-1)
- North, A., D. Hargreaves, and J. Hargreaves. 2004. "Uses of Music in Everyday Life." *Music Perception* 22 (1): 41–77. doi:[10.1525/mp.2004.22.1.41](https://doi.org/10.1525/mp.2004.22.1.41).
- Rentfrow, P. 2012. "The Role of Music in Everyday Life: Current Directions in the Social Psychology of Music." *Social and Personality Psychology Compass* 6 (5): 402–416. doi:[10.1111/j.1751-9004.2012.00434.x](https://doi.org/10.1111/j.1751-9004.2012.00434.x).
- Richerme, L. K. 2016. "Measuring Music Education: A Philosophical Investigation of the Model Cornerstone Assessments." *Journal of Research in Music Education* 64 (3): 274–293. Doi: [10.1177/0022429416659250](https://doi.org/10.1177/0022429416659250).
- Russell-Bowie, D. 2009. "What me? Teach Music to my Primary Class? Challenges to Teaching Music in Primary Schools in Five Countries." *Music Education Research* 11 (1): 23–36. doi:[10.1080/14613800802699549](https://doi.org/10.1080/14613800802699549).
- Small, C. 1998. *Musicking: The Meanings of Performing and Listing*. Middletown: Wesleyan University Press.
- Sætre, J. H. 2018. "Why School Music Teachers Teach the way They do: A Search for Statistical Regularities." *Music Education Research* 20 (5): 546–559. doi:[10.1080/14613808.2018.1433149](https://doi.org/10.1080/14613808.2018.1433149).
- Sætre, J. H., T. Ophus, and T. B. Neby. 2016. "Musikkfaget i norsk grunnskole: Læreres kompetanse og valg av undervisningsinnhold i musikk [Music in Norwegian Primary Schools: Teachers' Competence and Choice of Teaching Content in Music]." *Acta Didactica Norge* 10 (3). doi:<https://doi.org/10.5617/adno.2876>.
- Vestad, I. L. 2013. *Barns bruk av fonogrammer: Om konstituering av musikalsk mening i barnekulturelt perspektiv [Children's use of phonograms: On the constitution of musical meaning in a child-cultural perspective]*. PhD diss. University of Oslo.
- Young, S. 2016. "Early Childhood Music Education Research: An Overview." *Research Studies in Music Education* 38 (1): 9–21. doi:[10.1177/1321103X16640106](https://doi.org/10.1177/1321103X16640106).