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To cite this article: Karin Mössler, Jill Halstead, Maren Metell, Katja Gottschewski & Wolfgang Schmid (2023): “The room is a mess”: Exploring the co-creation of space for attunement dynamics between an autistic child and a non-autistic music therapist, *Nordic Journal of Music Therapy*, DOI: [10.1080/08098131.2022.2145346](https://doi.org/10.1080/08098131.2022.2145346)

To link to this article: <https://doi.org/10.1080/08098131.2022.2145346>



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“The room is a mess”: Exploring the co-creation of space for attunement dynamics between an autistic child and a non-autistic music therapist

Karin Mössler^a, Jill Halstead^b, Maren Metell^a, Katja Gottschewski^{a,c}
and Wolfgang Schmid^{a,b}

^aGAMUT – The Grieg Academy Music Therapy Research Centre, NORCE Norwegian Research Centre, Bergen, Norway; ^bThe Grieg Academy Music Therapy Research Centre, Department of Music, Faculty of Fine Art, Music and Design, University of Bergen, Bergen, Norway; ^cLunderød School and Resource Centre, Arendal, Norway

ABSTRACT

Introduction: Music therapy practice and research in the field of autism has often followed medical narratives that reinforce neurotypical normalcy by locating the difficulties of social interaction in the autistic person. By exploring the relational phenomenon of attunement, this paper focuses on the social and material ecology of interactions. The authors try to unpack circumstances that can support or hinder attunement dynamics between autistic and non-autistic people.

Method: A video-vignette from music therapy with an autistic boy, who explores the sound of building blocks formed the point of departure for this research. The vignette was self-identified by the music therapist as an apparently failed attunement experience. Based on this vignette, we conducted an interview with the therapist and focus groups with parents of autistic children and colleagues from different professions, one of whom is autistic. We used an interpretative hermeneutical methodology for crystallisation of perspectives.

Results: We uncovered four spaces that impacted on the mutuality and co-creation of attunement dynamics. The room (physical space), the school context (professional space), and the material (sensory space) afford the interaction (relational space) between the child and the therapist in enabling and disabling ways. Listening to the child's sound making with the building blocks was identified as the autistic child's way of knowing and sounding that needs to be listened to carefully, rather than being questioned or disregarded.


Discussion: Findings of this research might encourage therapists to foster an understanding of social interaction that is mutually co-constituted and enactive, and that contradicts the mainstream pathologisation of autism.

ARTICLE HISTORY Received 16 December 2021; Accepted 21 October 2022

KEYWORDS Attunement dynamics; ecology; equity; normalcy; music therapy space; affordances

CONTACT Karin Mössler  kams@norce-research.no  NORCE Norwegian Research Centre AS - Health and Social Sciences, P.O.B 22 Nygårdstangen, 5838 Bergen, Norway

This article has been republished with minor changes. These changes do not impact the academic content of the article.

 Supplemental data for this article can be accessed online at <https://doi.org/10.1080/08098131.2022.2145346>.

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Opening vignette

This scene depicts Aram and Iris in their fifth music therapy session (see [Figure 1](#)). We see Aram scooping out coloured building blocks¹ from the drawer and then throwing them as Iris watches him. This episode emerged towards the end of their session, which took place in a multi-functional room at Aram's primary school. Aram's interest in the big drawer of building blocks was triggered by an earlier incident where he had tried to get a box from the shelf next to the drawer. In doing so, he lost control of the box and its contents of building blocks fell out and got scattered all over the floor. He then purposely picked up a tiny building block and immediately moved towards the big drawer of building blocks. Iris told us in our interview:

Aram's favourite activity was spinning. My impression was that he was searching for a particular [building block] in the drawer that he could use to make the other piece he found on the floor spin. When searching the drawer, he started to throw [building blocks] out of it. It seemed he experienced something by doing so, something like: OK, this is quite fun, but also a bit naughty. Then it took off and became somewhat explosive because he started throwing more and more [building blocks]. I sensed that he was exploring, experiencing having fun. But should he be allowed to do so?

Iris tried several musical activities to engage with Aram, however not being sure about how to relate to Aram's engagement with the building blocks. She was "kind of half-hearted" in what she was doing, as she described. Additionally, Aram stopped her activities, for example taking away the drum she was playing. At one point she even joined him in throwing building blocks. Within a short sequence of time, Iris paused all her activities. She sat on her chair, watching, and listening to Aram scooping out the building blocks and throwing them. A feeling of not succeeding in making contact increased, she stated:

In a way, he didn't let me, and on the other hand I couldn't manage it. I don't feel that we were on common ground. That is, where we could, in a way, exchange things.

Attunement dynamics

The experience of not being on "common ground" can be seen in relation to what Milton (2012, 2017b) describes as "double empathy problem". Sensing and moving in the world in very different ways, affects the social encounter between autistic and non-autistic people (Boldsen, 2022; Donnellan et al., 2012). As autistic and non-autistic people can relate and attune to different sensory stimuli or threads of meaning, their interactions often lack reciprocity and mutuality (Hellendoorn,

¹Through the process of developing this research the coloured building block toys at the center of the case were called LEGO® (or LEGO's) by all participants and authors. Therefore the word LEGO® (written without the registered trademark sign or capital letters) was used throughout the text and in the original intended title: "Pathologising LEGO®: Exploring the co-creation of space for attunement dynamics between an autistic child and a non-autistic music therapist". At the point of publishing the article we were informed that the term LEGO® could only be used if followed by the registered trademark sign each time it was used. Further constraints over the use of the word LEGO® included that it be written in capital letters, that it is not used in the plural or as a noun, in line with LEGO® brand management of their commercial interests. The author group decided we did not want to use the word LEGO® under such constraints and instead chose to change the title of the paper and replace the word LEGO® with the trademark free term "building blocks".

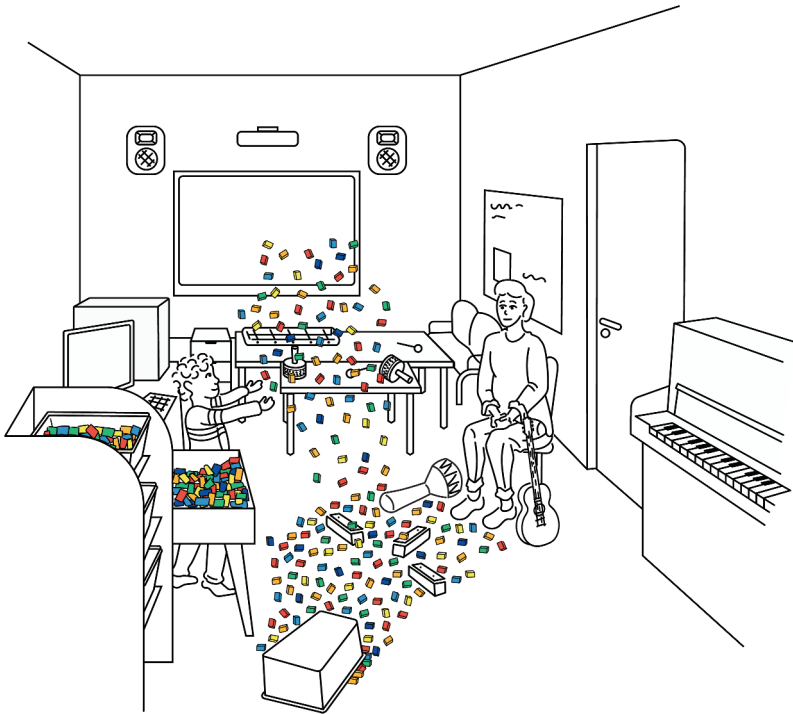


Figure 1. The opening scene.

2014). Research has shown that the sharing of information is more successful when autistic people and non-autistic people interact within their peer-group, whereas the information transfer degrades when interacting across peer-groups (Crompton et al., 2020). Intersubjective attunement was found to be lacking between autistic and non-autistic conversational partners (Williams et al., 2021). Similarly, music therapy research has shown that attunement appears more likely with autistic children who capture and respond to neurotypical social cues within musical activities (e.g. turn-taking, social referencing). (Non-autistic) music therapists seem to struggle to attune to autistic children who mainly communicate on a non-verbal level, show a high interest in stimulating activities or whose affective states are difficult to read (Mössler et al., 2019, 2020). Hence, we believe there is a need for a closer look at attunement dynamics in music therapy with autistic children.

Musical and emotional attunement was examined as mechanism of change (Mössler et al., 2020) and described as unique principle within the treatment guidelines (Geretsegger et al., 2015) of the clinical trial (TIME-A; Bieleninik et al., 2017) framing the working context of Aram and Iris' music therapy interaction. Within these guidelines, attunement was understood within an interpersonal and musical-based context. By referring to similar interaction modes between caregiver and child in early infancy (see e.g. Meltzoff, 1990; Stern, 2000), music therapists collaborating on the trial were encouraged to attune to the child's immediate display of behaviour, focus of attention and/or emotional expression (Geretsegger et al., 2015). Working within such a research framework, Iris' feeling of having failed – I couldn't manage it – might

reflect the theoretical background of her working context. By defining attunement as a principle a therapist can/should establish, such a research framework indicates that it is the therapist only who facilitates experiences of attunement.

With this research, we aim to adopt a rather critical stance to a perspective viewing attunement as a one-sided and therapist-induced phenomenon. Consisting of phases of attunement, mis-attunement and repair that involve all partners contributing to the interaction, we were interested in exploring the phenomenon of attunement as dynamic, situated, interdependent and co-constituted (Tronick, 1989). As such, attunement dynamics rely on an enacted and ecological process evolving within the materiality of a given situation (Manning, 2013). Such attunement dynamics are not only shaped by human interaction, but also by their context, situatedness and the environment surrounding the interacting partners. All these aspects can become agents in creating a “common ground” for interaction.

Focus of interest

Based on Iris’ experience of failure, our focus of interest was guided by two research questions. We were interested to explore and understand:

- which circumstances can support or disrupt attunement dynamics and subsequent interactions between autistic and non-autistic people in music therapy?

Based on Iris’ description that it was hard to attune to Aram, because he was often moving around and focused on spinning objects, we assumed that the vignette from Aram and Iris’ fifth music therapy session could help us to explore in more detail the mutuality of interactions and how attunement dynamics emerge. Furthermore, we were interested to explore:

- which resources and social skills did Aram, the autistic child, bring into therapy and how did he contribute to attunement dynamics?

Aram and Iris’ interaction with the building blocks became the focus of inquiry in a series of research interviews we conducted which included Iris, parents of autistic children, and colleagues mainly from professions outside the music therapy field, one of whom is autistic.

Methods

Critical approach

The choice of our methodology was guided by the aim to develop an expanded understanding of attunement dynamics and interactions in music therapy in relation to autism, by giving space to different perspectives and voices. Rather than questioning the child’s ways of being and doing, as often linked to a pathology paradigm of autism (Walker, 2021) – “should he be allowed to throw building blocks in a music therapy session?” – we were interested in questions regarding the (inter)action itself. First and foremost, the interviews were concerned with our informants’ descriptions of *how* the interaction evolved,

and of how it was facilitated or hindered. Consequently, our work seeks to understand how in any particular environment ecologies are co-constituted by interacting partners.

Selection of the video material

Iris was one of several music therapists collaborating on the TIME-A clinical trial who accepted the invitation to participate in a research interview focusing on the detailed exploration of attunement dynamics. Iris brought the vignette into this interview for discussion. With Iris' approval, we then strategically chose the vignette to be the starting point for two focus groups. We hoped that this interaction with its striking situatedness and use of materials would facilitate dialogues on how attunement dynamics occur, are created, ruptured, nurtured and maintained in music therapy with autistic children.

Interview formats

Semi-structured interview

Iris was invited to a semi-structured interview conducted by the first and last author. The aim of this interview was to explore Iris' appraisal of having failed in attuning to Aram and what might have contributed to this experience. We used a semi-structured interview guide (see Online Supplemental Material 1). The interview was conducted in Norwegian and lasted two hours. It was audio recorded and transcribed by a research assistant.

Focus groups

Next, we conducted two focus groups with parents of autistic children, and colleagues related to the field of autism. By conducting these focus groups (Wilkinson, 2008), we were interested in gathering multiple insights into how the emergence of attunement dynamics is perceived by others. Within the focus groups format, we aimed to facilitate a dialogic, joint meaning-making process (Hennink, 2007) between the parents of autistic children (parents-group) and with colleagues from music therapy and other professions, and as mentioned earlier one of whom is autistic (colleagues-group).

The parents focus group was conducted by the first, third and last author in Norwegian. One parent used both Norwegian and English when talking/writing. The colleagues-group was conducted by the first, second and third author. As this was an international group of colleagues, the focus group was held in English.

Both focus groups lasted three hours each. The reference point for all focus group discussions was the video record of the vignette, which was about three minutes long. Both groups watched the video at least twice and referenced back to parts of the film as needed. We used a semi-structured interview guide (see Supplementary Material 1) as an aid to keep our research focus (Kvale & Brinkmann, 2015). We conducted a test focus group with colleagues from our research centre in advance, to proof the clarity and applicability of the interview guide.

To preserve and gather the focus group participants' subjective experiences of what they observed, we asked them to first write down their immediate responses to each of the main question areas of the interview guide. Afterwards we invited them in a discussion based on their written feedback.

We audio recorded all focus groups and the third and last author transcribed them. All quotes in Norwegian were translated into English by the fourth author, checked by

the first and second author. Cases of uncertainty were verified by a bilingual, external advisor.

Research participants

Music therapist

Iris holds a master's degree in music therapy. She was 55 years old and had 18 years of work experience at the time when she was working with Aram.

Parents

Two mothers and two fathers of autistic children aged between four and 11 years old at the time of the interview participated in the parents focus group. The parents were between 30 and 40 years old. Since the interview format should allow for the expression of personal experiences, we felt it important to build on a foundation of trust and therefore only asked parents familiar with at least one of the interviewers. Therefore, parents that had previously taken part in the Norwegian arm of the TIME-A clinical trial as well as parents familiar to the interviewers through their work as practitioners were invited via email. Out of nine invited families, six parents agreed to come, with eventually four parents taking part.

Colleagues

Three female colleagues and one male, being between 42 and 56 years old, participated in the second focus group. These colleagues' professional expertise and research interests spanned infant mental health care, embodiment and social cognition in autism, the relations between movement, sound and the body, the philosophy of listening, as well as the autistic first-hand account, which informed our reasoning as to why we invited them. This group was recruited through the authors' national and international collaborations connected to preceding projects such as Shared Moments (Mössler, 2017) and Socially Engaged Arts (Halstead, 2017). In total, we invited seven colleagues; six agreed to come, with four attending the interview.

Ethical considerations

All participants signed an informed consent prior to participation. All participants received the manuscript prior to submission for providing feedback. The video material from Aram's music therapy session, originally stemming from the TIME-A clinical trial, was approved to be used for further research by the parents who signed an informed consent.

The regional committee for medical and health research ethics in Northern Norway (REK Nord, 2012/761) approved this research.

Research group

Our research group consists of people trained as musicians, music therapists, musicologists, special educators and researchers. The topic of autism has brought us together by sharing an interest in questioning normalising practices and expanding the knowledge on interactions with autistic children. During our open and dialogic research process we invited the autistic research participant from the colleagues focus group to

join our research group, as we felt it was important to include the autistic perspective not only in the focus groups, but in the further research and writing process. She then became a co-author of this paper.

Data analysis

Interpretive-hermeneutic approach

We applied an interpretative hermeneutical strategy, understanding hermeneutic processes as a constant and never-ending lively flow of knowledge (Loewy & Paulander, 2016). Hence, we chose a flexible, open-ended approach to data analysis and the formulation of findings that allowed for the possibilities of new interpretations and meanings as viewed and informed by our diverse informants and research team along the way. We moved between our research questions, emerging topics and a plurality of interpretations and understandings in a dialogic, reflexive process over time (Alvesson & Sköldbberg, 2017).

In our process of data analysis, we aimed to stay with the data by arranging and re-arranging them in several ways. We moved them around, made coloured sketches of the vignette, and invented fictive dialogues between the music therapist and the focus group members. We did not aim to identify and extract definite codes in a finalised process of qualitative analysis, but developed what Ellingson (2017, p. 151) calls an embodied “becoming analysis”, where we moved both the data and ourselves to form an understanding of the material in a hermeneutic spiral, moving back and forth between details and the whole of data collection. In this way, we engaged in a learning process regarding our own predispositions, how professional and cultural norms were inscribed or disrupted in relation to the emerging themes and narratives, from both the groups and individual interviews. The multiplicity of voices we draw on to comment on the video of the vignette was undertaken to create understanding grounded in an acknowledgement of the partiality and positionality of all knowing, including the situatedness of researcher and therapist expertise (Haraway, 1988).

Analysis process

Our analysis process consisted of several steps taken to ensure trustworthiness of our research by referring to the four quality criteria outlined by Guba and Lincoln (1989): credibility, transferability, dependability, and confirmability. Moving between analysis steps conducted by single authors and group actions throughout the analysis' process, the group discussions worked like a triangulation tool to increase the credibility of the findings. We used our different backgrounds and standpoints to make the group discussions a critical instance preventing us from following single authors' narratives. Each of us contributed to the sense- and decision-making process with his/her embodied knowledge. As a group, we strived for equity in our ways of acknowledging and dialoguing about our ideas and reflections on the data material.

The first author had the responsibility to provide the overall framework (i.e. inviting to meetings, managing the time, providing a written summary of the discussion). Addressing the quality criteria of dependability and transferability (Guba & Lincoln, 1989), we will continue to provide a comprehensive description of our consecutive analysis steps, the discussions conducted and the decisions made, to allow readers to assess to what extent they can transfer our approach and the consequent findings to their own work:

- *Reading and having a dialogue on emerging topics*: The research group started the joint analysis process by reading through the data material with an open mind, intuitively making notes and asking questions of the material. In this phase, we met to share our impressions of the material. Being in a dialogue about emerging topics, we listened carefully to all our thoughts and feelings, and brought them together in a written documentation of our discussion. After the first discussion, we decided to read once again, focusing on those topics each of us had defined as “striking” through the first reading and discussion. Meeting for a second time, we discovered that for all five of us the *therapy room*, the school environment framing the *therapy context*, and the *material* available in the room were relevant and reoccurring topics in relation to Aram and Iris’ *interaction and attunement dynamics*. At this point we experienced a saturation of the material, meaning that further reviews of the data would not have generated additional new information (Fusch & Ness, 2015).
- *Extraction and allocation of interview statements of interest*: We decided to systematically follow-up these topics by extracting and allocating all statements within the data where participants talked about the “room”, “context”, “material” as well as “interactional aspects” interwoven with those topics. This extraction was done by the first and third author, also using coloured sketches of the topics for illustration.
- *Creating fictive dialogues (addressing the quality criteria of credibility)*: With the aim to let the parents, the colleagues and Iris’ voices speak to each other, the first and third author created fictive dialogues for each of the four topics using original quotes from the therapist interview and focus groups. These fictive dialogues (see one fictive dialogue example, Online Supplemental Material 2), illuminate our participants’ responses and understandings concerning the room, the context, the material, as well as Aram and Iris’ interaction. By creating these dialogues we aimed to prolong the engagement with our participants, keeping the participants’ voices actively involved in a dialogic, sense-making process towards the findings (Ellingson, 2017). To keep the fictive dialogues concise, not all quotes on a certain topic were included. Rather, we chose to include single quotes meaningfully capturing the essential point of discussions which involved the whole focus group.

After composing the fictive dialogues, the research group jointly developed a common understanding of all dialogues, discussed their relevance to and potential impact on music therapy and eventually revised them.

- *Merging our reflexive summaries with the fictive dialogues (addressing the quality criteria of credibility and confirmability)*: Based on the jointly gained understanding of the dialogues, the first, second and third author created reflective summaries to each fictive dialogue. Eventually, the first author merged these summaries with the fictive dialogues in a way that should allow the reader to follow the groups’ sense-making process step by step.

Jointly, the group revised and finalised the presentation of findings, in which a set of participant quotes is introduced and/or commented on by our own description and understanding of it. We also used our comments to make transitions from one quote to the other, intending to reveal contrasts or agreement among the perspectives of our

participants, as well as to emphasise the interdependent character of the four topics structuring our findings.

Quotations from parents and colleagues are respectively marked with a P or C followed by their ID number. Quotations from Iris start with her name. All quotations are written in italics.

Findings

Stepping into the sense-making process of the vignette with Aram and Iris based on our interview partners' feedback, we want to start with highlighting Aram's contribution to the interaction and attunement dynamics. By doing so, we want to complement the visual impression provided by the illustration and observations of Aram and Iris' situatedness by adding the music material, that is: how this scene *sounded* (listen to the soundspace of the vignette Online Supplemental Material 3).

Listening to the soundspace in which Iris paused all her activities while Aram continued throwing building blocks from the drawer, we can hear Aram's hands going through the building blocks in the drawer and throwing them out. We can hear building blocks hitting the floor as he throws them, and how they sometimes hit chime bars which were on the floor. Short pauses appear. Aram seems to have a little break before he scoops and throws the building blocks again. The sonic imaginary allows us to hear the messiness of the situation, but it also adds new information on the resourcefulness of Aram.

We found this idea in the data material of the focus groups, where our interview partners described Aram as skilled in the way he communicated through action within the given space and materials. At the same time, many of their reflections emphasise how Aram and Iris' diverging attunement and situatedness challenged the interaction.

Our core findings outline how the room (physical space), the school context (professional space), and the material (sensory space) afforded Aram and Iris' interaction (relational space) in ways that were both enabling and disabling.

Physical space: The enabling and/or disabling impact of the room

The organisation and arrangements of the room where the music therapy session took place, the impact this had on Aram and the interaction between Aram and Iris, were the starting point of the discussions in both focus groups.

P1: I think, the situation was a little bit wrong, it's a lot of things in the same place.

P3: Yes. I was bothered a lot by thinking that this room is terribly messy.

C1: The room is a mess. I mean, without the [building blocks] on the floor, the room is a mess.

The igniting focus for the parents was the messiness of the room and the challenges this might bring for Aram. One dimension of this is that the parents emphasise that autistic children do not respond well to messy or chaotic environments.

P3: He definitely didn't get any help from the room, you could say. [The building blocks] need to be moved to a different room.

P2: Why is it so messy here when you are supposed to work with autism? That bothered me a lot.

These observations and concerns seemed to be grounded both in their own experiences, but also in more general presumptions about autism, where they classified chaos and messiness as particularly disturbing for autistic children.

P2: So, if there is an opportunity to create a lot of chaos, our daughter can very well create a lot of chaos, even if she will have problems with that chaos herself within a short time. I have not heard about many autistic people who respond well to mess and disorder around them.

The same parent pointed out that autistic children often have a different sensory perception that could lead to more stressful experiences with messiness.

P2: It's just that they often have a somewhat different sensory response, so that things can get too much quite quickly.

However, the parents' group also acknowledged that it would be good for any child if

P3: things are in place before starting.

For the colleagues, the room itself and its impact on the interaction between Iris and Aram is also of core interest but suggesting that the messiness of the room had a greater impact on Iris than on Aram. To this group the room also appeared as disruptive and messy. However, in contrast to the parent group, they viewed that

C1: the space is not conducive to dialogue,

on a general level, rather than not conducive to autism in particular. The negative view of the room seems closely linked to the perception of what and how the space facilitates interaction between Aram and Iris. The colleagues group discussed the spatial relationship between the child and the music therapist and how they never meet, whilst suggesting a different furnishing of the room that may have helped:

C1: get rid of that chair, move the tables, give him more space to run around a bit.

Within the colleagues group, suggesting a rearrangement of the room did not necessarily address autistic people's assumed needs for well-organised rooms to be able to interact or learn. The room was rather seen as an interactive component of their encounter. In this sense, a rearrangement could have assisted the therapist in attuning to the child's focus of interest and enabled the child in his expressing himself through movement. Colleagues also mentioned that disruption does not necessarily mean that one has to rearrange a room:

C1: But I think you can develop a strategy where it kind of minimises the disruption of whatever it is that you are trying to do.

Iris herself experienced the arrangement of the room as interfering with her interactions with Aram – *I am trying to be in contact, to interact.* For her, the messiness of the room seemed to be closely related to her perception of misattunement.

Iris: It's a room with a lot of things. Lots and lots. What can I say, things that maybe could be distracting in a way from what we were meant to do. So, I found it a bit difficult to create a framework. But I had no other option than to deal with that room.

Professional space: The enabling and/or disabling impact of the school context

Iris perceived that there were many things in the room that possibly had a negative impact on the session, but there were also practical organisational matters, such as having to set up the room before the session and leave it tidy afterwards. Iris described the school environment as a driving force in creating ambivalent feelings which demonstrated the impact of the contextual embeddedness of the music therapy session, and the possibilities and limitations for interaction arising from it.

Iris: Well, he doesn't do any damage [by throwing building blocks], but at the same time, he is in a school. There are many others outside [the room]. Also, it's a lot of work to tidy up again afterwards.

Based on their own experiences with school settings, parents too expressed scepticism about throwing building blocks within a school environment as the children expect to work and learn in particular ways in such rooms.

P3: Is this a room he is using for other things at school? If that is the case, I would be very skeptical about allowing this.

P2: So, if he has just music therapy here, we can do this, but we can't do this in his "work room", I'd say.

In a dedicated music therapy room, it would be more obvious to allow a child to act like Aram did, as music therapy is perceived by parents as offering a space for expressive/creative relational work.

P2: It might not be right to interact on something that is wrong, because it deviates from the normal response. But I am thinking that it is not the therapist's role to teach manners, right? The therapist's role is to work with communication.

Iris herself defined her role as being someone who should promote communication and interaction; however, it seemed to be hard to tie her intentions to Aram's actions.

Iris: I was trying to hook onto what he was doing in some way or another, but I felt it was half-hearted. I was very uncertain if this is what I should engage with, and if he should be allowed to do it.

Within both focus groups, people sensed that it was difficult for Iris to define her role as therapist in this moment, describing her as being disconnected from herself, the room, the activity, and the child.

C3: After some time, she stopped being a therapist, saying «We need to clean up». There she is doing another job, she is not the therapist anymore, because she is thinking about, "OK, how are we going to clear up this room".

P3: If you, as the music therapist, choose to go for it, and you follow the child, but at the same time you say that you have to help tidy up afterwards, well, does she really approve [the child's initiative]? That's somehow difficult, isn't it?

C1: In fact, she has removed herself from the room. Or at the very least she has removed herself from the activity.

We could also find this perception in Iris' description of how she felt in this situation. Like the parents, she classified throwing building blocks as something prohibited within the school context. The weight of expectations around what was

acceptable in the pedagogical environment meant Iris felt an external pressure that prevented her from being in the here and now.

Iris: All the time, I am seeing the situation a bit from the outside, and maybe that hindered me from being there for him, in a way. I somehow feel indecisive all the way. There is a reflection going on in my head all the time: What is the right thing to do now? What should I do? There are so many conflicting things in me and around the whole setting.

Iris called Aram's interaction with the building blocks into question, feeling a pressure to meet the expectations of others who might see a messy room, with lots of building blocks on the floor, as unprofessional and disruptive rather than creative and therapeutic. Somehow in attuning to those external voices, her professional dilemma also turned into a personal one as she did not experience herself as being authentically involved in Aram's activity.

Sensory space: The enabling and/or disabling impact of the material

Iris' ambivalence was further fueled by Aram's expressive use of the building blocks, as she interpreted the gestures of throwing as an expression close to frustration.

Iris: There is something in this throwing movement. He is throwing a bit like, he has a bit of, what shall I call it . . . not frustration in a way, but close to it, let's say one level before you get to frustration.

Iris is aware of her task in containing the affective momentum of the situation, staying one step ahead rather than getting too lost in the moment with Aram, so she might direct Aram back to the planned structure of session. The parents group expressed their concern that the stimulating pleasure of throwing could easily become uncontrolled and destructive.

P2: The child is looking for exploration, but at the same time, stress is building up. So, [the noise of the building blocks] is probably very exciting over time, but it creates a mess, which is fun, [but suddenly] it gets too much, and then it isn't fun at all anymore.

P3: Yes, [it seems] a bit like he has a high level of stress.

However, they also recognised Aram's interaction with the building blocks as the channeling of a desire to move, make sound and communicate. A desire that was also recognised in the colleagues group.

P3: He is throwing in a particular manner. He wants to get a [certain] type of sound.

P2: "SWISH!" - P3: The "SWISH" sound, YES!

C1: It's a desire to move, isn't it? It's not just about throwing these things in the air.

P2: I feel that there is something the child is trying to communicate. There is some wish there.

C2: I feel, he is showing it. He throws [in her direction].

Similar to Iris, ambivalent feelings occur in the parents' perception of Aram's activity, as its consequence might be overstimulation and dysregulation. This distressing potential was also discussed in the colleagues group, but it did not interfere with this group's overall perception that Aram's interaction with the building blocks was a creative sensory exploration which intermingled auditory, tactile kinaesthetic

qualities. In this sensory exploration of the space, Aram's actions were seen as opening up for possibilities by attuning to the space itself rather than disconnecting from it.

C2: Even the drawer, the shape of the drawer seems to invite to throwing the building blocks. It is wanting this, too! I had this bodily feeling very strong of also wanting to reach to the drawer, to throw the toys out actually.

Iris seemed to sense this too as she reflected on her desire to join Aram in his scooping and throwing activity.

Iris: If it had not been for the circumstances, I might have gone in for my own experience of wanting to throw to a larger degree. You know, let's just empty the drawer in a way, more or less.

But being caught in her ambivalences, Iris could not make up her mind whether to follow him or not. Instead of just emptying the drawer, the colleagues group suggested a rather creative approach towards music-making with building blocks, which could have become a focused joint venture.

C4: I wanted to put those drums on the floor so that ...

C1: ... the boy making some kind of soundscore. That would have been amazing. In fact, on three occasions, some of the bricks hit the sound bars on the floor, and there is this beautiful resonance. [The movement when throwing] is just getting bigger and bigger and bigger. [It is like] Ausdruckstanz. The Expressionist dance from the thirties. This beautiful thing. And there is no support for it.

And even in the parent group, who had articulated their concerns about the correctness and the consequences of throwing building blocks, Iris' willingness to allow him to do so was emphasised as something positive – a liberating venture.

P4: It was a bit of a new thought to throw the building blocks out onto the floor. Instead of a common reaction between adult and child. I thought it was quite fun to see that she joined in a bit, instead of resisting. I think it may be quite nice for the boy to have someone on his team.

Relational space: The enabling and/or disabling impact of the interaction

Much of the discussion in the focus groups revolved around Iris' challenges and ambivalences in the situation. Facing how Aram acts and invites to joint musicking, Iris' ambivalences, going back and forth in her intentions, were seen as creating confusion and disruptions for him.

C4: I think that the boy experiences some confusion and uncertainty when the therapist is unclear about her intentions. I think, he had a very clear project, he was engaged in, and he was happy with, but he wasn't met with that. [When] she finally joins him [in throwing building blocks] that actually just adds to the confusion. She isn't really with it. And I think he feels that.

Iris' ambiguous communication was seen as discouraging for Aram, stopping him from interacting. This perception was prominent and largely discussed in the colleagues' group, but it also occurred in the parent group.

P1: Maybe at this level he did not get much help. When she makes a noise, he does not want to hear that, he wants the one he is making.

C3: He tried to [make an] impact [on] her, and communicate with her, but she didn't meet him.

C4: And in a way that destroys his exploration because he isn't quite sure how he is met, and then he gets a bit uncertain about what to do and less engaged in his project.

Even though ambiguity and unease seem to shape the interaction between Aram and Iris, colleagues felt that Aram himself had a positive experience.

C4: I mostly thought it was fun because I felt the child was mostly having fun. Just that it wasn't fun they were having together.

And somehow paradoxically so did Iris. Despite all her ambivalences and worries, experiencing herself as mis-attuned and failing in meeting the child's initiatives, she felt that Aram was fine with what he was doing.

Discussion

The problems Iris and the focus groups identified with the space was not so much related to what it lacked, but rather that it was filled with anticipated norms and expectations – are we allowed to do this? – as well as being crammed with chairs, tables, or toys, which were viewed as constricting or distracting for a music therapy setting. Yet, Aram brought some of these extraneous objects into the session and found creative possibilities for action through the movement of small objects by spinning or throwing them. Most significantly, Aram explored the drawer filled with building blocks, which then became a channel through which action and interaction could occur. As illustrated in the beginning of this paper, we can see that the building blocks landed on the floor in between Iris and Aram, they were never thrown at her or into other areas in the room. It appears that Aram coordinated his movements precisely and with intention. When listening to the provided audio example, it sounds like Aram explored the sound of building blocks. By doing so, we believe that he revealed his ideas and readiness for musicking (Small, 1998), presenting a range of musical social skills and creativity. A musical form and a rhythm of activity providing anticipation and orientation became audible through Aram's interaction with the building blocks. What we can hear in the audio example is Aram, seemingly clearing up the space by creating coherence between all sensory stimuli. We can perceive the way Aram grasps the affordances of materials and the space, and we assume that his musicking reveals his attunement to the materiality of the space.

Iris' attunement to Aram's activity was much more shaped by how those outside the room might understand the action: Throwing building blocks might be seen as a sign of distress or as a potentially destructive activity which could undermine the educative work of the child that should be taking place in this pedagogical environment. Staying with these thoughts, Iris got detached from herself as well as Aram's activity in this situation.

In this way, our vignette exemplifies how the space for music therapy emerges as the materiality which shapes possibilities and limitations for attunement dynamics through co-constituting forms of action and interaction, whilst also directing how such actions/interactions are interpreted and given meaning based on their situatedness, context and presuppositions.

Our following implications reflect on rearrangements that could contribute to make the therapeutic space a more mutual and diverse one.

Rearranging the room?

What physical spaces and materials afford, what they offer us, are possibilities for action (Gibson, 2015), and these affordances are neither uniform nor predictable. It is through our engagement with the space and its materials that the possibilities or limitations for action unfold (DeNora, 2007).

Our vignette illustrates that the different ways of perceiving one's own situatedness in a particular space (school environment) can easily disrupt the interaction, as interacting partners can engage with different threads of meaning: the exciting sounding building blocks versus the chaos-inducing building blocks in a classroom. In contrast to Iris' experience of the room, to Aram the room and materials were not a hindrance, but rather he engaged with their affordances for creative action. As DeNora and Ansdell (2014) have described: He furnishes the musical space, and the space in turn affords him with ways to act.

Autistic and non-autistic people might to a greater or lesser extent attune differently to the same information (Milton, 2012). Consequently, arrangements for music therapy sessions always have to be negotiated *in situ* and through co-constitutive practices that are driven by the child and therapist. However, providing an environment that can support a feeling of safety and security for the autistic person (Thompson et al., 2020) and help the (non-autistic) therapist to stay present might be crucial when reflecting on the affordances a room and its materials have to offer with respect to a mutuality of interaction. Supportive environments might also address the human desire to explore, understand and participate in solution-making processes with others working towards meaningful goals (Krieger et al., 2018).

By embracing the physical space as an active participant in music therapy, ideas about agencies change. The room is no longer a passive condition but rather an active facilitator. Such perspectives change the agency of the interacting partners who can creatively experiment with the room, jointly furnishing it for their particular music therapy. For the room to become an interactional space, it needs to be prepared in the sense of an increased awareness regarding to its affordances.

Rearranging the approach?

Recognising the agency of the physical space also changes the ways attunement dynamics evolve. They are no longer merely located within and between the dyad of child and therapist but expand as they are also defined and shaped by the spatial conditions and materials: *even the drawer, the shape of the drawer seems to invite to throwing the building blocks*. In this sense, interactions can never be seen as the successful or unsuccessful application of people's social skills. Rather, they need to be seen in the light of participatory processes where people jointly create a shared reality and understanding of each other's actions and engagements within a specific space (De Jaegher & Di Paolo, 2007; De Jaegher, 2021). Such an approach calls for the need to acknowledge and engage with the sensory and affective world of autistic children (Bascom, 2012; De Jaegher, 2013). It prompts non-autistic therapists to rethink their stereotypes regarding autism and adapt their own behaviour and social needs to the individual child they encounter. The task of the music therapist is then, as Foubert et al. (2020, p. 80) describe it, "to allow the self to become entangled in the idiosyncratic way in which someone comes into contact with others", as well as with oneself and the materials within a given space, and to be confident

in that something meaningful will develop from there (Nordoff & Robbins, 1977; Schumacher, 1994). Encouraging the autistic child to engage with their own ways of knowing and musicking (Leza, 2020) should be the basic premise in music therapy, enabling child and therapist to jointly create social understanding, and facilitate their relational encounter with each other: *like Aram joyfully using building blocks for exploration and sound-making.*

By doing so, music therapy gives attention to a person's audible expression and contribution to interaction (Aigen, 2005) and refrains from instilling predefined social skills and enforcing normalising treatment agendas (Pickard et al., 2020; Shaw, 2019). Moreover, it carefully engages in relational and learning processes from a very different position. This is a place where one (the therapist) does not know beforehand but listens to another person's being and becoming (De Jaegher, 2021; Schmid, 2017). It is a place where the emergence of attunement dynamics is recognised as the interplay of people sharing the responsibility for their evolving interactions within a particular situation and environment. It is a place where one (the therapist) has to embrace the openness and mutuality of learning together.

In this way, playing with building blocks can be recognised as a multifaceted means of expression that opens up for a person's immense resources beyond a diagnosis. Throwing building blocks is then not an inevitable problem that has to be stopped, or a behaviour that has to be cured. To the contrary, it is a playful activity, a person's unique expression to which we should listen carefully.

Rearranging the system?

As our vignette illustrates, carefully listening to an autistic child's engagement can easily become interrupted if the activity is viewed as something "wrong". Even though acting on the sensory affordances of the drawer filled with building blocks and the explorative joy of throwing/sounding building blocks, both the therapist and some of the parents reacted to the child's response by asking whether he should be allowed to do the "SWISH!".

Many might share such ambivalences pointing to the ontological dilemma of the "dual nature of autism" (Lai et al., 2018) meaning that autism is defined as a medical condition versus being a way of living, culture and identity (Yergeau, 2017). Understanding autism as a set of disabilities and looking at autistic children's behaviour as dysfunctional manifests approaches within current medical and educational systems that aim to fix "wrong", "disruptive" or "meaningless" behaviour. Such approaches address a diagnosis, a set of symptoms rather than the mutual engagement of individual persons. We think that music therapy should take an active role in disturbing such normalising practices, and challenge medical and behaviouristic treatment for autistic children by counteracting the separation of social understanding from actual social interaction (De Jaegher, 2013; Fuchs & De Jaegher, 2009; Hellendoorn, 2014; Yergeau, 2017).

Based on our vignette, we believe that the justification and meaning-making of the "SWISH!" is proved by Aram's care and joyful enactment. In this sense, autistic children's creative ways of sensing, relating and knowing should be the recurring points of departure in music therapy – an approach that is also emphasised by autistic music therapists (Davies, 2022; Gottschewski, 2019). Working as a music therapist within health care or educational environments, attunement dynamics and their constituting actions and interactions might always be affected by expectations and norms demanded from medical and behaviouristic accounts: *well, he doesn't do any damage by throwing building blocks, but at the same time,*

he is in a school. There are many others outside the room. Unfortunately, such systems shape how music therapists interpret interactions which influence the ways they are encouraged, prohibited, or given meaning. Hence, we think that we as music therapists need to be aware of the enabling and/or disabling impact of the context which affects the nature of social interaction in the first place (Milton, 2017a). Furthermore, how we talk and write about music therapy with autistic children either confirms or disrupts the disabling agenda of medical and behaviouristic accounts of autism (Metell, 2019). To counteract epistemic injustice (Fricker, 2007; Klyve, 2019) should be an aim of music therapists to prevent themselves or others from questioning, wronging or disregarding autistic children in their capacity as givers of knowledge and agents of sound.

Conclusion

Exploring the co-creation of space for attunement dynamics in music therapy between Aram and Iris from various perspectives reveals the impossibility of separating human interaction from its situatedness. Space for attunement dynamics evolves within and in-between people and is continuously formed and informed by the materiality and context surrounding them. Accordingly, the music therapy space is never merely an open area for sensory exploration or a site in which music therapy interactions occur. It is rather that music therapy spaces are active participants in the formation of attunement and facilitation of interaction, providing a dynamic meeting point of sensing and making sense. Within this meeting point, both the child and therapist can equally contribute to and modify attunement dynamics. It provides a creative space for musicking and playing based on equity, where the diverse agency of people, spaces and materials are acknowledged and nurtured. In this sense, music therapy may contradict established medical and behaviouristic treatment and the oppressive ideal of a neurotypical normalcy. The findings of our research might help music therapists to more explicitly communicate how their own practices uniquely contribute to the way attunement dynamics and interaction are co-constituted with autistic children. As advocated by our informants, we encourage music therapists - including ourselves - to acknowledge the unique situatedness, mutuality and freedom of music therapy encounter, where social and creative skills can flourish and come into play.

In a micro-activist manner, scenes like the one we focus on in this paper need to be recognised, becoming a musical motif that is repeated, elevated and foregrounded. In this way children's resources and abilities may become visible and audible. By paying close attention to what the autistic child is offering, by attuning to, acknowledging and regulating our own bodily sensations and impulses – let's just empty the drawer – and by distancing ourselves from fears of not fitting into a system with our own ways of acting and interacting, we actively challenge the pathologising of autistic play and interaction.

Disclosure statement

Maren Metell is an assistant editor of the Nordic Journal of Music Therapy. To avoid conflict of interest, Maren Metell was fully masked to the editorial process including peer review and editorial decisions and had no access to records of this manuscript. No other potential conflict of interest was reported by the authors.

Funding

This article received funding from The Norwegian Research Council (Norges Forskningsråd 240433/F10).

Acknowledgments

The authors would like to thank all research participants playing and performing in and those watching the video example. We would like to thank Tora Söderström Gaden, Lars Tuastad and Kaja Elise Enge for their participation in a test focus group interview. We would like to thank Leon Westerheim Gundersen for designing the illustration for this paper and Kjetil Hjørnevik for helping with translations. We would like to thank Xueli Tan and Simon Gilbertson for their valuable feedback on a previous version of this paper.

Notes on contributors

Karin Mössler is a music therapist and researcher located in Bergen, Norway. She is associate professor at the University of Bergen and member of the Viennese Institute for Music Therapy.

Jill Halstead is a musician and writer. She currently leads the artistic research project Social Acoustics: Sound, Listening, Collaboration with Brandon LaBelle. Her publications center on feminist approaches to the body politics of musical creativity and participation. She is a professor at the Grieg Academy, University of Bergen and leader of the Grieg Research School in Interdisciplinary Music Studies, a regional consortium of five universities located on the west coast of Norway.

Maren Metell is a PhD student at Nordoff Robbins and works as music therapist in a school and as Assistant Editor of the *Nordic Journal of Music Therapy*. In her PhD, she explores together with neurodiverse families how, when and for whom musicking becomes accessible.

Katja Gottschewski is an autistic music therapist. She has been actively involved in the international autistic community since the late '90s and was officially diagnosed with Asperger's syndrome in 2010. As a music therapist, she works with children and adolescents, many of them autistic, at Lunderød School and Resource Centre in Arendal, Norway.

Wolfgang Schmid is a musician and music therapist, trained at the Hochschule for Music and Theatre in Munich and at the University of Witten-Herdecke in Germany. He is Professor of Music Therapy at the Grieg Academy, Faculty of Fine Art, Music and Design, University of Bergen in Norway. Wolfgang has 25 years of experience as music therapy practitioner-researcher in interdisciplinary palliative care, with autistic children and persons with dementia.

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