

Young children, solitude, and singing: Self-directed singing and personal agency in three- and four-year-old children at home

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This article explores how young children use self-directed spontaneous singing at home as a tool of personal agency. Although researchers are increasingly interested in spontaneous singing that takes place outside formal education and care settings, there remains little research into young children's self-directed singing at home. With improvements in recording technology, it is now possible to continuously record children's singing. Listening to and analysing singing that takes place when children are alone - and which would otherwise go unnoticed by adults - is a new development in the field of music and children studies. Fifteen children aged from 3:0 to 4:10 years were recorded at home using a continuous recording device and self-directed spontaneous singing was analysed using an interpretive framework of musical agency. The children used self-directed singing as a tool of personal agency to structure their experiences and to manage the self.

Keywords: home, self-directed singing, solitary singing, young children

Introduction

It is early afternoon and three-year-old Oliver is taken to his bedroom for his afternoon nap. Shortly after his mother leaves the room, Oliver begins to sing. He pushes a toy vehicle across the floor and sings, 'Post-man Pat' very slowly on three descending notes. He then improvises a tune, loosely based on *Wheels on the Bus* to narrate his play. He sings about a cat and Fireman Sam. He sings, 'Here's Fireman Sam and they're going in...they can stay...was going...then he's going...he's going inside...because it's clo...the door closed.'

(Oliver, 3 years, one month, NZ)

This type of everyday scenario may be very familiar to parents and people who work with young children. Playing on his own in his bedroom, Oliver sings on and off to himself for over an hour as he is happily engrossed in his solitary play. Why does that play include singing? What is the role of singing in his play? Does he sing to himself at other times? What role does spontaneous self-directed singing play in his everyday life? These questions are important because the answers can provide insights into a young child's everyday life, both musical and extra-musical.

This article aims to explore these questions by drawing on data from a study of the spontaneous singing of 15 three- and four-year old children at home (Dean, 2020). The originating study set out to explore the nature and extent of spontaneous singing at home, the contexts in which singing occurred, and how musical agency is demonstrated in spontaneous singing. Although the larger study explored both social and self-directed singing, the focus of this article is on the ways in which the children used self-directed, or solitary, singing in their everyday lives. Self-directed singing often takes place outside adults hearing and, therefore, can go unnoticed. The data collection methods used in this study allowed singing to be recorded in the absence of adults and therefore gives insight into how young children use singing when they are alone. A framework of musical agency is used to examine ways in which the children use singing to act on the self. This approach emerges from a childhood studies perspective that positions children as competent (Sommer, 2012) and active in constructing their own experiences (Corsaro, 2005; Tisdall & Punch, 2012).

Young children's singing is multi-faceted and permeates many aspects of their daily lives. In the following review, literature from a range of disciplines, including music sociology, psychology, music psychology, psychotherapy, and music education, is drawn on

to arrive at a greater understanding of young children's self-directed singing. Research on young children and solitude, solitary play, and private speech is examined alongside the relatively small amount of literature on young children's self-directed singing and young children's singing at home. This honours a childhood studies approach that acknowledges the complexities of young children's lives.

Young children's spontaneous self-directed singing at home

Young children's spontaneous singing has been the subject of research for some time.

Although much of this research has taken place in early childhood education settings, there is now a growing body of literature that addresses young children's musical experiences in the home (e.g. Barrett, 2009, 2011; Brodsky et al., 2020; Cirelli et al., 2020; Costa-Giomi & Benetti, 2017). In Western cultures, the home is a primary location of everyday musical experience for many young children. In contrast to early childhood education and care settings, where peer interaction dominates, at home young children can spend considerable amounts of time with only adults for company. Children are also often expected to entertain themselves for short periods while their caregiver undertakes household chores. The home, therefore, provides an opportunity to observe young children engaged in solitary play and singing on their own.

Researchers investigating young children's music-making in early childhood settings have observed differences in the types of singing that takes place during social interaction, or when a child is playing alone (Bjørkvold, 1989; Moorhead & Pond, 1941-42/1978; Sundin, 1960/1998). In an early study of spontaneous singing, Moorhead and Pond (1941-2/1978) observed that children often improvise songs when playing on their own, noting that these songs are sung "to himself [sic] alone, quietly, of everyday things" (Moorhead & Pond, 1941-2/1978, I, p.4) and provide a running account of their "inner imaginative life" (II. p.7).

Moorhead and Pond propose that young children sing to themselves to express quiet happiness. Sundin (1960/1998) makes similar observations in his preschool-based study, noting that ‘introverted songs’ often take the form of commentary on the child’s activity.

In a study of 4- to 7-year-old children in Norway, Russia and the United States, Bjørkvold (1989) noticed that children’s singing is linked to their play and that introspective song reflects inner thoughts and emotions. He also observed children using singing to provide a soundtrack that accompanied or stimulated play. Observing 2- to 4-year olds in two childcare centres in London, Young (2006) proposes that children use spontaneous singing to enhance and engage more fully in their play experiences. Young also suggests that quiet humming or singing may help a child create and maintain a physically calm state that is conducive to quiet play.

As children are more likely to play on their own at home than in early childhood education and care settings, it might be expected that self-directed singing would dominate at home. However, although many researchers recognise that self-directed or solitary singing takes place at home; self-directed singing is rarely discussed in depth in at-home studies. This is, in part, because self-directed singing is more difficult to observe and capture than socially orientated singing (Dean, 2011). Although children sing in different ways when they are alone or interacting with others, it is unusual for at-home studies to make a distinction between social and self-directed singing.

Many studies of young children’s music-making at home are based on data collected through parental observation. Using data collected by parents, researchers conclude that children at home sing to accompany their play, to explore personal identity, to provide commentary on activity, as a means of co-ordinating physical activity (Barrett, 2009, 2011, 2016), to express emotion (Forrester, 2010), and to create and maintain certain emotional states (Knudsen, 2008; Stadler Elmer, 2011). Children may also sing to themselves to provide

comfort and companionship (Barrett, 2016). Parental observation methodologies typically result in rich qualitative data; however, the limitations of this approach are small sample sizes and the need for parents to notice and record the singing. Singing produced while children are alone can easily be overlooked (Dean, 2011).

One approach that has been used to collect audio data while children are alone is the crib study (Nelson, 2006). Through analysing data recorded during toddlers' pre-sleep periods, Sole (2017) infers that young children use singing when on their own as a means to self-soothe, reflect on musical bonds, make sense of relationships, and to process the transition between being with parents and being alone. Although crib studies are limited to a specific time and place within a child's everyday context, they give valuable insight into young children's self-directed singing.

To further understand the role of self-directed singing in the home lives of young children, it is useful to consider research that examines self-directed and solitary activity in related areas. Relevant literature explores young children's solitary play and private speech.

Young children and solitary activity

Within early childhood studies, researchers have privileged social interaction over solitary activity and the role of solitude in young children's lives. Psychology research into solitary play usually takes place in educational settings and frequently takes a deficit view of solitary play, discussing it in terms of immaturity or maladjustment (Luckey & Fabes, 2005; Veiga, 2017). However, different types of solitary play have been identified and researchers argue that some of these appear to be beneficial to children (Coplan & Armer, 2007; Luckey & Fabes, 2005). Solitary play allows children to control their play experiences, develop their own ideas, consolidate their understandings (Katz & Buchholz, 1999; Luckey & Fabes, 2005),

and self-regulate (Luckey & Fabes, 2005). In addition, it may positively affect the development of imagination, reflection, and analytical thinking (Strom, 1976).

As with play, research on children's experiences of solitude often focuses on the negative experiences of loneliness and isolation. A small body of psychotherapy literature, however, indicates that solitude, or voluntary aloneness, has positive benefits for young children. Buchholz (1997) challenges the dominance of Bowlby's (1969/2008) attachment theory, suggesting that a strong emphasis on attachment has led psychologists to assume that it is natural for children to crave company and fear solitude. Buchholz argues that the ability to be alone is as developmentally important for young children as having strong attachments (Buchholz, 1997; Buchholz & Chinlund, 1994). In his early work in psychoanalysis, Winnicott (1965) distinguished between the fear of being alone, the wish to be alone and the capacity to be alone, asserting that the capacity to be alone was a sign of emotional maturity. Winnicott argues that the process of learning to be alone begins during infancy, when the child is content to be alone in the presence of a caregiver. More recently, Detrixhe et al. (2014) suggest that positive experiences of solitude are based on experiences of strong relationships and the knowledge of a secure base.

The experience of solitude is closely linked to privacy. Van Manen and Levering (1996) consider privacy and secrecy in childhood to be important for the development of personal autonomy and independence. They note there is a fine balance between the need for supervision and the need for freedom to develop the self. Although young children are often unaware of adult supervision, they also lack the freedom to withdraw from scrutiny (van Manen & Levering, 1996). Skånfors et al. (2009) demonstrate how pre-schoolers in Sweden control their level of social interaction by developing a range of withdrawal strategies to separate themselves from the group. It is suggested that pre-schoolers can set up invisible

boundaries that allow them to experience solitude in the presence of others (Corson et al., 2014).

An area of solitary activity that is very well documented, is young children's private or self-directed speech. Chen-Hafteck (1997) and Bjørkvold (1989) both make links between young children's singing and language. Although the parallels they draw are between singing and social language, there are also similarities between the way private speech and self-directed singing are used. Psychology research shows that young children use private speech to regulate behaviour (Vygotsky, 1962/2012; Winsler, 2009) and emotion (Day & Smith, 2013); express inner thought, emotion or affective states (Vygotsky, 1962/2012); focus concentration (Smith, 2007); and, to motivate themselves (Winsler, 2009). Private speech is also used to practise and play with language (Ohta, 2001), and to construct narrative of self (Nelson, 2006).

Several researchers investigating private speech include self-directed singing in their typologies (e.g. Clark, 2005; Stern, 2006), although it is rarely given serious consideration. In a study of crib speech, Stern (2006) suggests that self-directed singing has a self-regulatory function or is used to accompany mental or affective states. Winsler et al. (2011), in a laboratory-based study, found that children who were enrolled in a music education class showed better self-regulation and were more likely to use humming or singing to facilitate self-regulation than those children who had not experienced the music programme. Examining the links between private speech, singing and executive function in four- to nine-year-olds, Thibodeaux et al. (2019) suggest that private speech and song may both be used for self-regulation, but in different ways. In a recently published study of one child's crib speech, Mead and Winsler (2019) found a significant amount of singing and humming. They suggest that singing is used to elaborate on thought, as sung utterances were typically longer than spoken utterances. There are some clear parallels in the literature between how children use

self-directed singing and private speech. Children appear to use both singing and private speech to self-regulate; express thought, emotion and affective states; and to provide commentary on their play.

Agency, musical agency and young children

A theoretical lens of musical agency is used to interpret the data in this study. Agency is a key concept in childhood studies and is central to the idea that children are competent social actors who actively construct their social lives. Contemporary thinking in childhood studies considers agency to be situated and relational (Prout, 2005). This means that different contexts and circumstances afford children different types of agency (Esser et al., 2016), and agency is networked between human and non-human entities, including cultural tools (Oswell, 2012). As a cultural tool, singing can be considered one of a network of elements that make up a child's agency at any time.

The concept of agency has been applied to music in a number of different ways. One definition, stemming from psychology, is that musical agency is the extent to which people believe they can achieve their musical aims, or carry out their musical intentions (Wiggins, 2015). This concept of musical agency is influenced by Bruner's (1996) idea of agency as the capacity to initiate and complete acts, and Bandura's theory of self-efficacy. According to Bandura (2006), an individual is able to act when they believe themselves capable of action. Wiggins (2015) considers children's musical agency to derive from their experience and knowledge of music, together with their beliefs as to whether their ideas will be accepted and valued.

DeNora (2000) offers a sociological perspective of musical agency. She draws on the concept of affordance to demonstrate how music can be used as an enabling device, making other action possible. She suggests that music can be used as a tool of agency through which

social and personal agency can be realised. DeNora's perspective links to relational theories of agency (e.g. Esser, 2016; Oswell, 2012) in that it positions music as a non-human entity in a networked construct of agency. This allows for the utilisation of music to achieve non-musical, or extra-musical, goals.

Although similar, Wiggins' and DeNora's concepts of musical agency are distinct approaches. Wiggins views musical agency as the ability to act musically, drawing on musical knowledge and experience. DeNora sees musical knowledge and experience being used to provide the capacity to act in general, rather than in musical ways. Expressed simply, Wiggins approach can be described as the ability to act *in* music and DeNora's as the ability to act *through* music.

Karlsen (2011) draws on the work of DeNora (2000), Batt Rowden and DeNora (2005) and Small (1998) to propose a theoretical lens of musical agency for the ethnographic study of music education. Inspired by Karlsen's lens of musical agency, in this article musical agency is interpreted as being the capacity to act *in* or *through* music. This definition recognises that the ability to use singing as a tool to achieve extra-musical goals is as much an element of musical agency as the ability to use musical skills and knowledge to achieve musical goals. The definition of musical agency used in this article could therefore, be described as agency in and through music.

This article examines the ways in which individual children use singing as a tool of agency to act on themselves within their home environment. Although there is a growing body of research that examines young children's musical home lives, studies of young children's singing and music-making at home typically rely on very small samples, often of just one or two children. There is a need to broaden the evidence base with additional data and perspectives. In addition, at-home studies rarely consider children singing when they are alone. This has been influenced by data collection methods and the difficulties of carrying out

research in home environments. This study used a new technology to collect data that had previously been inaccessible. Not only does this article uniquely focus specifically how young children use self-directed singing at home, it draws on a relatively large amount of data to confirm, extend and add breadth to prior research.

Research design

The data discussed in this article is taken from a larger study exploring the spontaneous singing of three- and four-year-old children at home. The research design was an ethnographically-inspired exploratory study using naturalistic data collected through non-participant observation.

Participants

Data was collected from a total of 15 children (seven boys and eight girls) aged between three years (36 months) and four years, ten months (58 months), with a mean age of three years, 8 months (44 months). Nine of the children were white, middle-class English-speaking expatriates living in the United Arab Emirates, and six were white, middle-class children living in Aotearoa New Zealand. The distribution of participants across two countries was due to researcher relocation.

Procedure

After gaining the necessary ethical permission (University of Exeter Graduate School of Education Ethics Committee, ref. D/13/14/1), children were recruited through word-of-mouth, a letter distributed at a preschool and a visit by the researcher to a parent-led playgroup. Parents volunteered their children to take part and gave their informed consent. Child consent was gained on an on-going basis (Flewitt, 2006) based on parental explanation

and the child's willingness to wear the research vest (Cuskelly, 2005). All names used in this article are pseudonyms.

Data was collected using the Language Environment Analysis (LENA) Digital Language Processor. This recording device allows children's vocalisations to be recorded for up to 16 hours at a time. The small recording device is placed in a research vest that the child wears, enabling the child to go about their normal everyday routines. Although the LENA system was developed for the study of child language development, the system has now been used with some success in the study of young children's singing (Costa-Giomi & Benetti, 2017). The device is operated by the parent, which means the researcher is not present and does not intrude upon normal family routines. Prior to the commencement of the data collection, the researcher met with a parent of each child to explain the data collection process and to discuss the ethics of gaining consent from the child. Parents were asked to record their child for continuous periods during times they were at home. The suggested time period was 4-6 hours over 2-4 days, however, families were given flexibility to record according to their own routines.

Data analysis

Data collection resulted in 183 hours and 30 minutes of suitable audio recording. Although the LENA system is designed to automatically analyse child speech, it does not distinguish singing from speech. Therefore, every episode of spontaneous singing was manually identified and labelled. A total of 1,475 episodes of spontaneous singing were identified, approximately half of which could be categorised as self-directed. Singing was categorised as self-directed when the child was physically alone; when the child made an explicit statement such as "I'm not singing for you" (indicating they were singing to themselves); or when the child appeared to be alone in the presence of others. The concept of being alone in the presence of others stems from Winnicott (1965), who describes a mother

and infant being in the same room, but not interacting. Singing was interpreted as self-directed if people could be heard in the background of the recording, but there was no interaction immediately before or after the sung utterance.

The findings discussed in this article are based on the researcher's interpretation of the data. Adopting a lens of musical agency both required and enabled a focus on the possible intentions behind musical action to examine how a child uses singing in agentive way. Data were analysed by focusing on the musical and extra-musical actions of the children, the contexts of these actions, and the researcher's reflexive interpretation of their intentions. An understanding of the data was reached only after repeated listening, not only of the singing, but also of the overall context in which the singing occurred. Data were coded and grouped into categories. Codes and categories were developed inductively but were influenced by sensitising concepts (Hammersley & Atkinson, 2007).

Although Karlsen's (2011) lens of musical agency was used as a guiding framework, the categories arising from the data analysis for this study did not correspond exactly to Karlsen's categories. Karlsen's 'lens' consists of two dimensions of agency – the individual dimension and the collective dimension. Each dimension contains a number of categories of 'musical action' (Karlsen, 2011, p.111). Within the individual dimension, Karlsen includes using music for self-regulation; the shaping of self-identity; self-protection; thinking; matters of being; and developing music-related skills. Karlsen based her framework on empirical studies of the musical agency of adults using recorded music (Batt-Rowden & DeNora, 2005; DeNora, 2000). The data in this study of young children's spontaneous singing, although showing similarities, was sufficiently different to require an adjusted framework. The analysis of self-directed singing resulted in three categories that relate to children using music to act on the self: managing experience, managing the self, and exploring self-identity. These

categories were grouped into a dimension of personal musical agency, similar to Karlsen's individual dimension.

A small amount of data were not able to be interpreted in terms of musical agency. While social singing is imbued with meaning that is intended to be understood (Dean, 2020), self-directed singing is intended for the singer alone and contains fewer reference points for the listener. This makes it more difficult for the listener to infer the meaning and purpose of self-directed singing than social singing. Episodes of spontaneous singing that could not be interpreted were not used in the analysis for this article.

Findings

The findings reported in this article relate to self-directed singing. Every one of the 15 children in this study was recorded singing when they were alone or playing alone in the presence of others. Most of the children also sang more often when they were alone than when they were with others. These patterns of singing behaviour imply that spontaneous self-directed singing is an important part of the experience of being and playing alone for young children.

Interpreting the data through a lens of musical agency, that is, exploring how the children used singing as a means of action, indicates that these young children used self-directed singing to structure their everyday experiences; to manage or regulate themselves; and to explore their self-identity. This article reports on the first two of these findings - how the children used singing to structure their experiences and to manage, or regulate, themselves.

Singing to structure everyday experience

The children in this study used singing to manage their everyday experiences. They did this in two quite distinct ways. Firstly, they used singing to transform uninteresting

situations into something more entertaining, and secondly, as a means by which to engage more fully with experiences.

Singing to transform experience

Oliver is sitting eating dinner with his parents, who are deep in conversation. He sings an ascending and descending passage on syllables, then hums a repeated descending pattern that becomes the tune of *Wheels on the Bus*. A short time later, he sings alternating notes like a siren on the syllables ‘bee-baa.’ He then repeats just one note, ‘bee’, slowly at first, then faster. He slows down and reintroduces ‘baa.’ Later in the same meal, Oliver hums the tune of London Bridge, followed by a phrase sung with his mouth full. His parents continue their conversation throughout.

(Oliver, 3 years, one month, NZ)

The children frequently sang to entertain themselves when they were in unstimulating situations, particularly where they had limited opportunity for physical play or a reduced material environment. This included times when they were waiting, during routine activities, such as hand-washing, during meal times, or in bed during nap times. In the vignette above, Oliver is expected to sit at the dinner table. Through his singing, he elevates a mundane experience to a playful one, entertaining himself by drawing on the voice as an ever-available tool.

Many of the children sang while they were ‘at a loose end’, not engaged in any meaningful activity, or transitioning between places or activities. In one recording, Alfie sang as he ran from the house into the garden, as he climbed the stairs, and as he went to wash his hands before a meal (Dean, 2019). Although these transitions all involved physical movement, in these cases the movement and the singing were not co-ordinated. At other times, Alfie did co-ordinate his voice and his movements (see vignette later in this article).

This indicates that this transition-singing fulfils a different purpose, reflecting the idea of transitioning, or moving, rather than imitating an actual movement. Singing during transitions often took the form of a brief outburst or vocal release, emulating the child's release of focus from an activity or the release of their bodies into physical action.

Singing to engage with experience

The second way the children used singing to structure experience was to engage more fully in an activity that was the focus of their attention. Self-directed singing appears to be used to enhance enjoyment of experiences, allowing children to reflect or make sense of experiences, and helping focus their attention.

Three-year-old Rachel is looking at the book, Mr Bump, from the Mr Men series. She says, 'This is Mr Bump,' then sings an improvised tune: 'Mister Bump, Mister Bump, Mister Bump, Mister Bump, Mis-ter Bump-Bump, Mister Bump-y, Mister Bump-y, Mister Bumpy, Mister Bumpa-Bumpy.' She stops singing but continues to talk to herself as she looks at the book.

(Rachel, 3 years, UAE)

In the vignette above, Rachel uses singing to explore the language in the book she is looking at, enhancing her experience of it and perhaps reflecting on her understanding of it. This type of singing-to-enhance-experience could also be seen when children were eating. All fifteen of the children in this study sang or hummed while they ate. At times it seemed that the children sang to entertain themselves, as Oliver did above, and at other times the children sang to express, and relish in, their enjoyment of eating.

The children appeared to use singing to focus their attention when they were quietly concentrating on a task, following parental instructions, or searching for something. Singing

to focus on a task was particularly apparent in examples like the vignette below, where Milly is carrying out a task for her father.

Milly's father, John, is a veterinarian and a local conservation volunteer. One afternoon, an injured shag (a sea bird) is brought to the house. John asks Milly to fetch a cup of water for the bird. Milly goes inside. She sings an improvised song, 'A cup of water for myself and the bird, a little cup of water for myself and the bird ... and the bird, oh lally o, oh laadee, oh lally laadee daadee, oh laalee oh laalee, o lally lally lally.' While she sings, she rummages in the cupboard for a cup. She has a drink herself, then fills the cup for the bird. As she does so, she whispers to herself, 'For the bird.'

(Milly, 4 years, 5 months, NZ)

When these children carried out instructions or were searching for something, they sang using clear, meaningful lyrics. This was unusual because most self-directed singing used humming or nonsense lyrics, with clear meaningful lyrics normally only occurring when singing was directed towards others. It may be that holding the wording of the parental instruction in the mind is an important part of carrying through with the action and singing the instruction may help the child retain the information. Similarly, when they were searching for something, they sang about the item they were looking for, holding themselves to their search using a mixture of language and music.

In contrast, when working on tasks that require quiet concentration, such as doing a puzzle, the children most often hummed quietly to themselves. They also appeared to use singing or humming to protect their space and avoid interruption. At these times they often ignored other people in their immediate environment, using their singing to enable them to continue their activity and focus their concentration in spite of what was going on around them.

Singing to manage the self

Self-directed singing is used as a means of self-management, or self-regulation. The children sing to regulate their emotions, to regulate their behaviour, and to co-ordinate their physical movement.

Singing to regulate emotion

It is widely acknowledged that music and emotion are closely linked, even if the exact nature of the relationship remains unclear (Juslin & Sloboda, 2011). Research shows that parents sing to both match and alter the emotional state of infants and toddlers (Saarikallio, 2009; Young & Gillen, 2010) and some literature suggests young children use singing to comfort themselves (Barrett, 2016; Custodero et al., 2016; Sole, 2017). The three- and four-year-old children in this study seemed to use singing to engage with their current emotional state, to express a state of contentment, for example. However, they did not appear to use singing to purposefully move from one emotional state to another. The children in this study frequently expressed excitement and joy through brief outbursts of song, but they did not sing when they were upset. There was one notable exception to this. In situations where they had been chastised by their parent, several of the children sang quietly in response. This singing sounded quietly defiant. It appeared to be an expression of their defiance and a means of protecting their self-esteem, rather than a means of comfort. This indicates that, although singing is more commonly used to express joyful emotions, it may also be used to engage with less pleasant emotions.

Whilst it is unclear whether the children could sing to alter their own emotional state, they did display an understanding that singing could be used to affect another's mood. For example, three-year-old Thomas was recorded singing to soothe his baby cousin. This understanding is likely to be gained through observing parents interacting musically with

younger siblings, or their own experiences of being parented musically. In another recording, Alfie plays in a pile of sheets while his mother changes the linen on the beds. He pretends to be a baby, and uses singing and humming to indicate a state of contentment. The fact that he uses singing this way in his play demonstrates his understanding that singing can be used to act on the self and express emotional states.

Singing to regulate bodily co-ordination

Alfie is scooting on a very hot day. He sings his own version of a pop song very rhythmically in time with the movement of his foot. Each syllable is emphasised as he puts his foot down.

(Alfie, 4 years, 1 month, UAE)

In this example, Alfie's singing is full of effort as he propels himself along on his scooter. The children were often heard co-ordinating singing with repetitive movement, such as jumping on a trampoline or bed, scooting, or dancing. When movement and singing are spontaneously synchronised, it is difficult to tell whether the child is using singing to coordinate the body, or whether the rhythmical movement of the body inspires singing. This is exacerbated by the lack visual data, however even using video data, Young (2006) found it difficult to know whether a child was singing to accompany movement or moving to accompany song.

Singing to regulate behaviour

Based on findings from a laboratory-based psychology study, Winsler et al. (2011) suggest that children use singing as a means of controlling their behaviour in terms of inhibiting their response. Observations from my data support this idea, as this example demonstrates:

Emma's mother leaves the room, and Emma decides to hide from her, then jump out at her to give her a fright. Emma talks to herself about her plan, 'I'm going to say "boo"

and she'll, she'll jump off her seat, like craziness.' She sings a brief phrase on syllables, then hums to herself.

(Emma, 4 years, 9 months, UAE)

Here, it appears that Emma sings to help her restrain herself from jumping out too early. In a similar way to how the children sing to remember instructions, Emma sings to keep herself focussed on the task at hand. Young children can perhaps, therefore, use singing to both coordinate and inhibit physical response. Singing to focus the attention on carrying out a task, as demonstrated by Millie, is another example of regulating behaviour through singing.

Discussion

Interpreted through a lens of musical agency, the data collected for this study demonstrates how young children make use of self-directed singing to act on themselves and the world around them. When they are alone, the children use their voices as a musical tool that allows them to shape their everyday experiences, engaging with themselves and their worlds, both internal and external. It is clear that singing is part of their experience of solitude.

The children in this study used singing as a way of transforming their experiences. In some situations, it appears that singing can become a substitute for physical movement. When a child's opportunities for movement are restricted, singing can be harnessed to enliven a static situation and temporarily raise mundane experience to the realm of play. Interestingly, several studies have involved observations of children in physically restrictive circumstances. Forrester (2010) observed his daughter's singing while she was confined to her high-chair at meal-times; Koops (2014) asked parents to record their children singing in their car seats; and Sole (2017) listened to toddlers singing in their cribs before falling asleep at night. In each of these studies, the children responded to the static situations they were in with spontaneous singing.

Another situation in which children used spontaneous singing to transform their experiences was transitions. Both Bjørkvold (1989) and Young (2006) describe children matching or following their movement with their voices. In relation to transitions, the children seemed to sing the idea of transitioning, using singing to accompany their movement through the house or between activities. Routine transitions were made more interesting with the addition of spontaneous singing.

Many studies have reported children singing or humming as they engage in solitary play. Evidence in the data supported ideas from the literature that children use singing during play to engage more fully in the play experience and maintain a state of physical calm that allows the child to concentrate on quiet play (Bjørkvold, 1989; Knudsen, 2008; Young, 2006). Knudsen (2008) suggests that self-directed singing during solitary play may also create an appropriate sonic space that suits the child's state of mind. As discussed earlier, research in early childhood settings has shown that young children actively use private spaces to control levels of social interaction (Colwell et al., 2016; Corson et al., 2014; Lynch, 2017). Hancock and Gillen (2007) observed two-year-olds finding their own space at home where they could feel "almost alone" (p.349), and Corson et al. (2014) describe how young children set up invisible boundaries that create pseudo-private spaces for play. This need for pseudo-private space can go unrecognised by adults. The findings of this study show that children use singing, and particularly humming, as a means to create invisible boundaries. This creates a private sonic space in which they can focus on uninterrupted play.

Considering self-directed singing in relation to the literature on young children and solitude, raises the question, does self-directed singing *express enjoyment* of solitude, or does it *facilitate* solitude through providing comfort? Certainly, there is an implicit understanding in some of the literature that children dislike being alone and singing provides comfort and a sense of connection with others (Barrett, 2016; Custodero et al., 2016). In this study, however,

self-directed singing appeared to arise from contentment in being alone. The data was collected in naturally occurring situations in the home. In a safe and loving home environment, children know someone is there if they need them. It is perhaps unsurprising that this would give children the security and freedom to play alone (Bowlby, 1969/2008). Some of the children in this study clearly enjoyed playing on their own, and children such as Alife and Oliver sang almost constantly as they played. Their singing expresses joy in their play and may also express enjoyment of being alone.

It is notable that self-directed singing appears to have much in common with private speech. The evidence suggests that, like private speech, self-directed singing is used to regulate behaviour, express emotion and affective states, to focus the attention, motivate and to make sense of the world. For these three- and four-year-old children, self-directed singing and private speech may sometimes be interchangeable. This is certainly the case in the example of Milly fetching a glass of water. Alternatively, as the findings of Thibodeaux et al. (2019) suggest, private speech and self-directed singing may be used in different ways for the same, or similar, means. This indicates that self-directed singing and private speech may be equally meaningful and useful for children.

It is likely that young children's use of self-directed singing stems from their experiences of being parented musically. Research suggests that early interactions between adults and infants form the basis for independent music-making as children grow older (Barrett, 2011; Stadler Elmer, 2011). Parents sing to their infants and toddlers to distract them (Barrett, 2009) and use recorded music to keep them entertained (Young & Gillen, 2010). Parents also report singing to smooth everyday routines with toddlers, such as dressing or brushing teeth (Barrett, 2009; Custodero, 2006), and to regulate their emotions (Saarikallio, 2009; Young & Gillen, 2010). This parental singing may act as a model that young children emulate once they start undertaking these activities on their own. In this way, young children

learn to use singing to structure their own experiences, entertaining and regulating themselves. An additional finding of this study was that the children who sang to themselves prolifically had parents who could be heard singing to themselves. So, not only do parents help infants and toddlers regulate themselves through music, they also model using singing to act on the self.

Limitations

A limitation of this study was the reliance on audio data without visual references. However, this proved to be less problematic than originally thought. Constant ‘observation’ over many hours allowed the researcher to become familiar with each child and their home environment. Careful listening to the singing in context enabled interpretations to be made based on sequences of events and environmental sound. A further limitation was the reliance on white, middle-class, western children who could all be described as thriving. There is a need for researchers to find ways to explore the musical lives of children in more diverse circumstances, including children experiencing hardship.

Conclusion

Self-directed singing allows young children to take control of their experience, constructing and manipulating it to meet their needs. Young children’s experiences using singing to act on the self, may influence how they use music in their adult lives. It is certainly clear that many of the ways in which adults use music to maintain and care for the self are evident in the ways young children use self-directed singing (DeNora, 2000). If children learn to act agentively in music in infant and toddlerhood, it is therefore important that children experience sensitive musical exchanges with adults at this time. In addition, if self-directed singing is important, meaningful and useful for young children, it is important that the adults

who care for young children allow space for self-directed singing, noticing it and respecting it.

When interpreting how singing is used, it is important to remember that singing is enjoyable. This is probably the most important reason why children sing, especially during their solitary play. Singing is aesthetically pleasing, and it enhances the enjoyment of play. For children in this study, singing was an important element of the enjoyable experience of being and playing alone.

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