Spontaneous singing in early childhood: An examination of young children's singing at home.

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Abstract

Spontaneous singing is widely acknowledged as an important part of young children's everyday musical experience. However, its fleeting and often private nature makes it difficult to study. Research into young children's singing at home frequently relies on data gathered through parental reporting, and studies are often limited to small sample sizes. In this article, I explore the nature, extent and contexts of spontaneous singing among 15 three- and four-year-old children at home. Continuous audio recording was used to collect naturalistic data during the children's normal everyday routines. This innovative method resulted in data that could be analysed quantitatively to provide a comprehensive overview of spontaneous singing in young children's everyday home lives that has so far been missing from the literature. Analysis showed that all the children sang spontaneously. The singing behaviours they displayed were similar to those described in the literature, but contrary to some of the literature, the most prevalent singing behaviours were improvisatory. Spontaneous singing occurred during many everyday activities, however the strongest influence on singing was found to be the social context in which it took place. The children used different ways of singing when interacting socially or when playing on their own, with most singing occurring when children were on their own, potentially unnoticed by adults.

Keywords: Early childhood music, spontaneous singing, young children singing, singing at home, preschool music, singing in everyday life.

Introduction

> Leo is playing on his own. He talks to himself, then starts humming and making shooting sounds. He starts singing loudly. Initially, the words are somewhat unclear but seem to be a narrative about playing. He then sings, "But I don't want that. But I like Santa Claus. That how…that how he gonna do that, that how he gonna do that, you can't do that, you can't do that." He hums, then sings very loudly, "Guys! These are good guys, not bad guys in there." He then hums again briefly.

Young children are often heard singing to themselves as they go about their everyday activities. This spontaneous singing can provide insights into young children's informal, everyday musical experience. Spontaneous singing has been of interest to researchers for many decades (Moorhead and Pond, 1941/1978; Sundin, 1963/1998), however much of this research has taken place in educational settings where researchers are able to observe relatively large numbers of children. Research in the home is much less common. While many young children in minority-world[1] countries spend significant amounts of time in early childhood education and care settings, the home is usually the site of children's earliest musical experiences and influences and is where musical interaction takes place between young children and their closest carers (Young, 2016, Ilari, 2016).

Studies of young children's singing and music-making at home are fairly rare. A key reason for this is that the home is difficult to access as a research space. Limited access to private homes results in small sample sizes and a reliance on parental reporting, either in the form of questionnaires, interviews and/or parental diaries (e.g., Barrett, 2011; Tafuri, 2008). While these methods can lead to rich qualitative data, the nature of the data gained in these ways makes it difficult to form an overall impression of the musical activity that takes place in the home. New mobile recording technologies can provide data that give a comprehensive view of the spontaneous singing which occurs naturally throughout a young child's day.

This article is based on data collected from 15 three- and four-year-old children at home using continuous recording technology. The data were collected for a qualitative study exploring ways in which young children used spontaneous singing in their everyday lives. However, the nature of the data and the tools used to analyse it also allowed for a quantitative analysis. This analysis provides a useful overview of the children's singing. Not only was I able to explore the types of singing that occurred, I could also measure the extent of the singing and examine all the contexts in which the singing occurred, including when no adults were present. The intention of this article is to complement other qualitative studies by accurately addressing the broader questions of how much singing takes place at home, how often it occurs and which contexts are most conducive to spontaneous singing. The findings extend the reach of research in this area, confirming and in some cases challenging, the conclusions of earlier research. A particular focus is the influence of social context on the children's singing.

Background

The home as a context for young children's singing

Among the studies of young children's spontaneous singing there are very few that specifically address spontaneous singing at home. Several major studies have used data collected in the home (e.g. Dowling, 1984; Moog, 1976; Tafuri, 2008) to examine the role of spontaneous singing in musical development. These studies are interested in how young children develop their singing ability rather than the context of the singing, and do not position the home and the child's everyday home life as important factors in the research. From a sociocultural perspective, the specific context of research is significant. The home is a primary site of everyday experience for young children and can be considered as both a physical space and the environment that is created when members of a family interact in that space (Plowman & Stevenson, 2013). The social culture and the physical environment of the home create contexts in which young children sing and make music. The home is a very different social context to early childhood education settings. In early childhood education settings, the child-adult ratio is high and same-age peers are readily available for social play. However, in minority-world cultures young children tend to spend time at home with one or both parents and perhaps one or two siblings. Therefore, at home young children are more likely to play on their own. In minority-world homes young children are often encouraged to entertain themselves for short periods of time and, because young children are considered to be safe at home, they often enjoy a certain level of autonomy and independence (Hancock & Gillen, 2007).

Observing young children's singing at home

One of the key reasons for the limited number of studies exploring children's musical home lives, is the difficulty of accessing private homes. While recent technological advances have improved access to the home environment (Costa-Giomi & Benetti, 2017; Mendoza, 2018; Sole, 2017), most earlier

research has collected data through parental reporting, either in the form of diaries or interviews. Parental reporting methods can provide rich qualitative data (e.g., Barrett 2011, 2016), however, there are potential difficulties with this approach when examining the extent of children's singing at home. Parental diaries are often kept intermittently, so it is difficult to get an overview of singing behaviours. When parents choose what to record and report in interviews, they may only report musical behaviours they think are important, or that they notice. Although young children are usually closely supervised, parents are not always in close proximity to their children and it is necessary for them to attend to other parental duties. This can lead to some behaviours being overlooked and the extent of behaviours being under- or overestimated (Costa-Giomi & Benetti, 2017).

The availability of mobile recording technology has meant that researchers are now able to directly record children at home for long periods of time without disrupting their normal everyday routines. Although these technologies present their own problems, such as creating unwieldy amounts of data, we are now able to gain an overview of the frequency and duration of occurrences of musical behaviours. This quantitative data can enable us to identify patterns that provide a useful background to qualitative analysis (Maxwell, 2010).

Characteristics and contexts of young children's singing

Research undertaken in homes where parents sing to and/or provide musical resources for their children suggests that all children sing at home (Barrett, 2009, 2011, 2016; Custodero, 2006; Young & Gillen, 2007, 2010). Singing at home can be part of solitary, parallel, or social play (Barrett, 2016). As well as singing songs they have learnt, young children improvise their own songs and adapt songs they know for their own purposes (Barrett, 2011; Custodero, 2006; Sole, 2017). At home, young children frequently sing (and move) along with recorded music (Young & Gillen, 2007). Singing and musical play are embedded within a child's flow of play activities, sometimes existing in the background and at other times becoming the focus of the child's play (Young & Gillen, 2007).

Outside the home context, studies of young children's spontaneous singing have identified differences in the types of singing produced when children are alone or in group contexts. Moorhead and Pond (1941/1978) identify two distinct types of singing, which they refer to as *chant* and *song*. They describe chant as typically being used in group situations, driven by rhythm, and with limited melodic interest. Song, on the other hand, was found to be a more individual pursuit. It was driven by melody with flexible rhythms and, if words were used, they often made no sense. Other researchers have made similar distinctions between social and more solitary forms of singing (Bjørkvold, 1989; Sundin, 1963/1998). Although there are indications in the literature that more singing occurs when children are playing alone (Moog, 1976; Young, 2003, 2006), it is noticeable that research within educational settings, has found social forms of singing, particularly chant, to be dominant. The location of research in educational settings where children have plenty of available playmates, means introspective self-directed singing is both less likely to occur and also less likely to be noticed.

Research approach

The data discussed in this paper were collected as part of an ethnographically-inspired qualitative study exploring the ways in which young children used spontaneous singing at home. Fifteen children aged between three years (36 months) and four years, ten months (58 months) were recruited for this study. Nine children were from white, middle-class English-speaking expatriate

families in the United Arab Emirates, and six children were from white, middle-class families in New Zealand. Data collection across two countries was a result of researcher relocation. As a comparison of children in two countries was not an intended part of the research, attempts were made to recruit children of a similar demographic in both countries. Children were recruited on a voluntary basis from families with a range of musical experience. The data were collected through non-participant observation, using the Language ENvironment Analysis (LENA) system. The LENA system is an automatic language collection and analysis tool developed by the LENA Foundation for the study of child language development. It features a small recording device (the Digital Language Processor, or DLP) which is fitted into an item of clothing that the child wears and can record for up to 16 hours at a time. The DLP is designed to be operated by a child's parent or carer and therefore does not require the researcher to be present.

Parents were asked to record their children for continuous periods during times the children were at home. Most families recorded over 2-4 days, although due to limited time spent at home, one family recorded for shorter periods over 7 days. While I did not collect any visual data, in most cases the audio information provided sufficient information to understand what the children were doing. The children often gave verbal clues as to their actions, either through conversation with their parent or siblings, or through self-talk. Other audio clues were the sounds associated with various activities, such as the turning of pages of a book, the click of game counters, vigorous scribbling, or splashing.

Data Analysis

The LENA system is designed for the collection and analysis of language data and does not differentiate singing from speech. Therefore, it was necessary to manually locate episodes of singing within the recordings. The analysis was undertaken using Transana software, which is designed for the analysis of audio and video data. Each relevant section of the audio recording was identified and marked as a 'clip'. These clips were the smallest unit of analysis and allowed each episode of singing to be counted and analysed without losing sight of the context of the singing within the larger recording. The analysis was performed directly from the audio data. Young children's singing is not easily transcribed into symbolic notation and much of the meaning would have been lost if the singing had been transcribed into, for example, Western stave notation.

The singing clips were assigned descriptive codes relating to type of singing behaviour, the context in which the singing took place, the communicative intent of the singing, and the purpose, or function of the singing. The analysis began with a small number of deductive codes and additional inductive codes were created during the analysis. Following coding, the data was inductively grouped into categories and finally arranged into conceptual themes. Because the focus of the study was on child-initiated spontaneous singing, all child-initiated vocal behaviours that were organised rhythmically and/or melodically were included in the analysis. This included singing, humming, chanting, and some instances of vocal play or vocal exploration. These singing behaviours are described below. Vocal play was included when it occurred alongside singing or humming but excluded when it occurred in isolation. Singing that was initiated by others was included if the target child voluntarily joined in but excluded when adults or other children explicitly asked the target child to sing.

Although the overall study was based on a qualitative thematic analysis (see Dean, 2017, 2019), this paper is largely concerned with a quantitative analysis of the data. The quantitative analysis was carried out to gauge the extent of the children's singing and to what extent different singing behaviours occurred. I coded the data according to the singing behaviour and the contexts of that behaviour, both in terms of what the child was doing and whether he or she was alone or engaging

with others. This allowed an analysis that examined the frequency and duration of each type of behaviour and the contexts in which it occurred.

Findings

The extent of spontaneous singing

The most striking initial finding, and one that confirms findings from other studies (Barrett, 2009, 2011, 2016; Custodero, 2006; Young & Gillen, 2007, 2010), was that all 15 children sang spontaneously to varying degrees. Table 1 displays the length of time each child was recorded and how much of that time they spent singing. The total time each child was recorded ranged between four hours to 24 hours, and the total duration of spontaneous singing per child ranged from 0.5% to 13% of time recorded. On average, the children spent 4.8% of their recorded time engaging in spontaneous singing.

Table 1

Extent of Spontaneous Singing

Name (pseudonym)	Age (y:mm)	Number of recordings	Total time recorded (hh:mm:ss)	Episodes of spontaneous singing	Duration of spontaneous singing (hh:mm:ss)	As % of time recorded
Alfie	4:1	4	24:22:48	321	2:16:35	9.3%
Emily	4:9	4	20:15:55	195	0:42:23	3.5%
Karl	4:0	2*	4:06:00	39	0:09:44	4.0%
Leo	3:6	4	18:45:41	189	0:56:27	5.0%
Xanthe	3:3	4	18:03:00	115	0:20:44	1.9%
Harriett	3:1	7**	16:48:00	57	0:16:41	1.7%
Rachel	3:0	3	11:25:23	28	0:06:24	0.9%
Maggie	4:2	3	6:54:48	44	0:08:58	2.2%
Caitlin	3:1	4	13:43:31	52	0:33:38	4.1%
Milly	4:5	2	8:31:21	76	0:28:03	5.5%
Esther	4:10	3	7:53:32	38	0:23:21	4.9%
Oliver	3:1	3	10:10:27	149	1:08:25	11.2%
Jacob	3:7	2	7:36:48	9	0:02:27	0.5%
Thomas	3:3	2	5:07:15	46	0:13:13	4.3%
James	3:8	3	9:46:24	117	1:16:28	13.0%
Total			**183:30:53**	**1475**	**09:03:31**	

Karl recorded 4 times but two of the recording were unsuitable.
***Harriett's family chose to make 7 shorter recordings*

It is immediately clear that some children sang a lot more than others. Although the sample is too small to make generalisations, the three most prolific singers had several factors in common. All three knew a large repertoire of songs; they all had plenty of time and space to play on their own

without direct adult supervision; and they all had parents who sang to themselves as they went about their everyday lives at home.

Singing behaviours

The singing behaviours displayed by the children were similar to types of singing described in the literature (e.g., Moog, 1976; Moorhead & Pond, 1941/1978; Young, 2006). Singing behaviours included humming, chanting, and some instances of vocal play. The children sang using syllables, nonsense words, and lyrics that they had learnt or invented. They sang songs they had learnt formally and informally, and they invented their own songs. They also hummed, chanted, sang as they played instruments, and engaged in vocal play. The children often moved quickly between different singing behaviours, particularly between humming, singing, and vocal play. Most of the singing took the form of brief snatches of song rather than sustained periods of singing.

The children's singing displayed a wide range of influences from within the home, outside the home, and wider cultural influences through the media. They sang nursery rhymes, children's songs, songs from children's movies (especially Disney movies) and musicals, songs from children's TV shows, and pop songs intended for adults.

In Table 2 the singing behaviours are categorised into four groups: improvisatory singing, singing based on learnt songs, humming, and chanting. The boundaries between these categories were not always clear. Improvisatory singing included singing on syllables and nonsense words and singing invented songs with words. The singing did not appear to be closely based on conventional songs. Singing based on learnt songs (usually children's songs and pop songs) was recognisable by features such as melodic contour and style. This category included variations on learnt songs and singing the tune of a learnt song using nonsense words or syllables. The humming and chanting categories only include humming and chanting that occurred independently of singing. Humming ranged from humming tunes that the children had learnt and improvised melodies to rather limited monotonous humming. Chanting was rhythmic and used a sing-song voice on one or two notes. As Moorhead and Pond (1941/1978) observed, the most important element of chant is the rhythm, with the words being made to fit. The children sometimes—but not always—used the descending third ur-chant as discussed by Moorhead and Pond (1941/1978). Chant used words, invented words or nonsense syllables.

Table 2
Type, Frequency and Duration of Singing Behaviours

Singing behaviour	Number of episodes	Total duration (h:mm:ss)	Average duration (mm:ss)
Improvisatory singing	706	4:18:04	00:22
Singing based on learnt songs	445	3:55:34	00:32
Humming (exclusive)	306	1:07:28	00:13
Chant (exclusive)	31	0:05:58	00:12
Total	**1488**		

(13 instances of overlap)

Table 2 shows the total frequency and duration of the two types of singing behaviour, together with instances of humming and chant that occurred independently of singing. The children often moved between humming and singing within one episode of singing. Singing episodes that include humming are indicated on the graph in Figure 1. Thirteen episodes of singing contained both improvisatory singing and singing based on learnt songs and have therefore been included in both categories. Figures 1 and 2 display the frequency and duration of the singing behaviours.
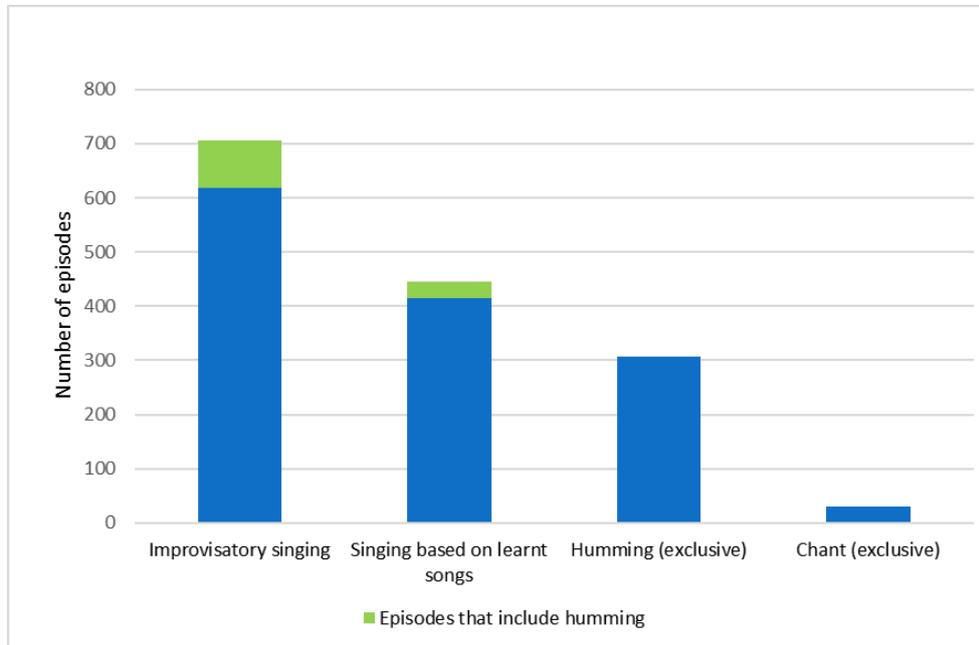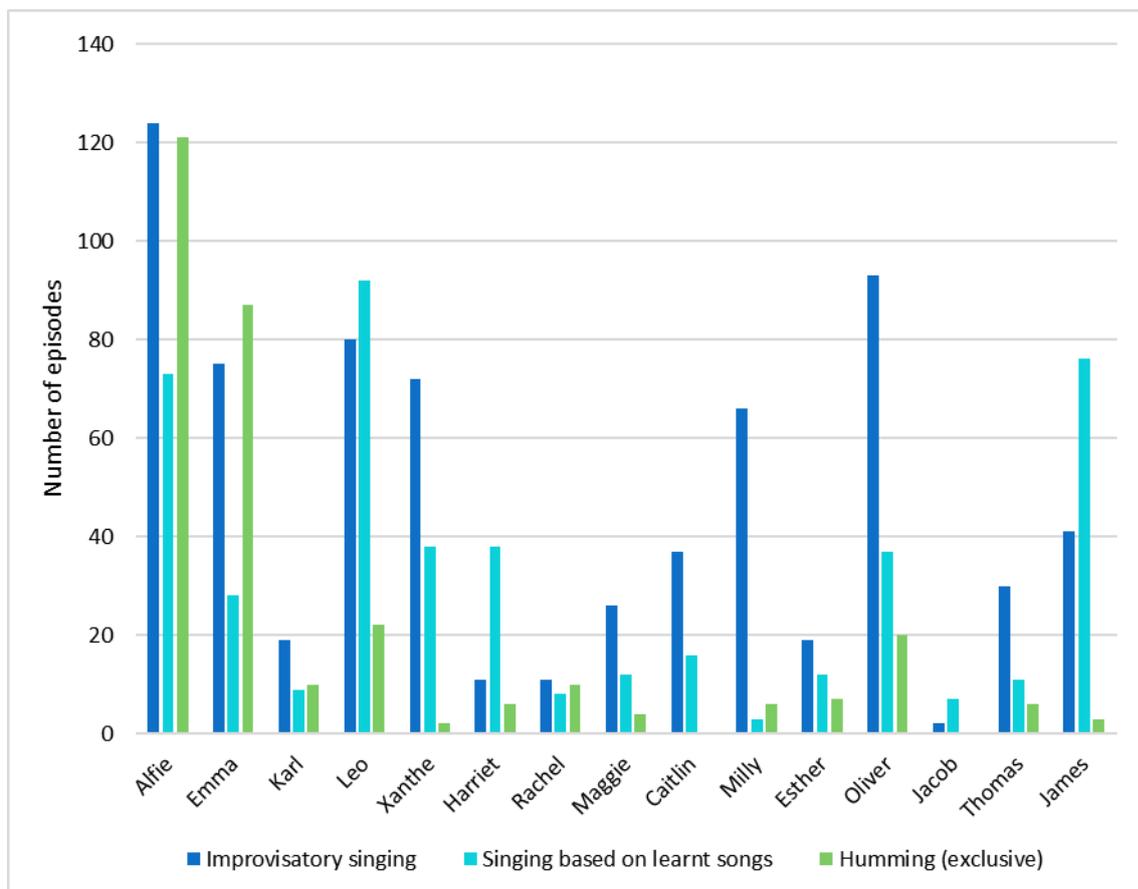

Figure 1. Frequency of singing behaviours.
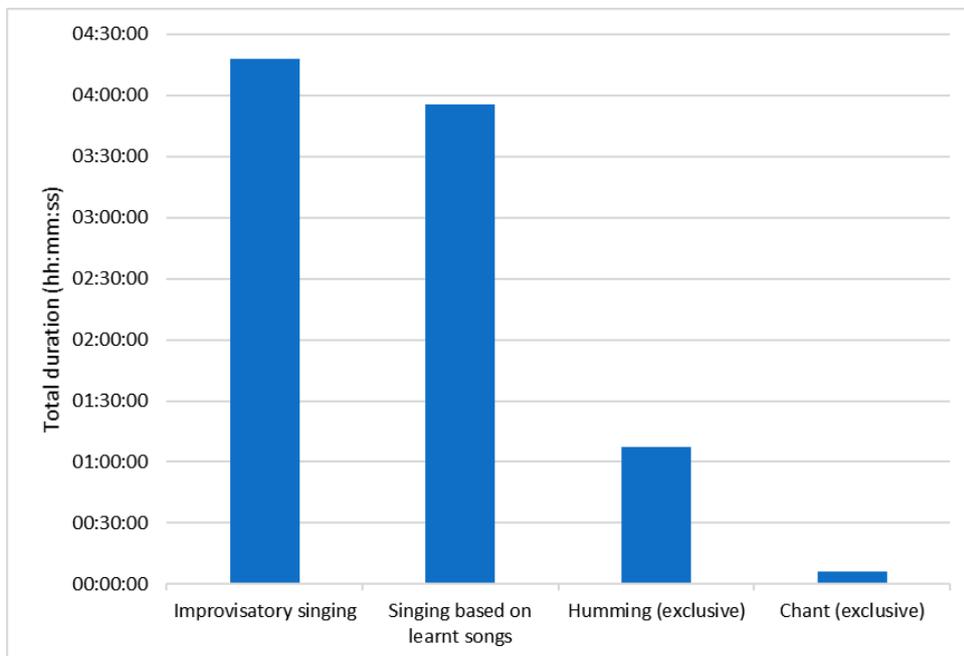
Figure 2. Duration of singing behaviours.

The extent of singing behaviours

The most frequently occurring type of singing was improvisatory singing (see Figure 1), which was also dominant in terms of total duration (shown in Figure 2). However, on average, episodes of improvisatory singing were of shorter duration than singing based on learnt songs. This is because the children tended to sing for longer when they sang with someone else and at these times, they usually sang learnt songs.

Averages can only tell us so much. When the singing of the children is examined individually, a more complex picture arises. Figure 3 shows the number of occurrences of improvisatory singing, singing based on learnt songs, and humming for each child. Figure 4 shows the duration of each of these singing behaviours for each child.

Figure 3. Frequency of singing behaviours by child.

Improvisatory singing was the most frequently occurring singing behaviour in ten of the fifteen children and was dominant in terms of duration in seven of the children. For five children improvisatory singing was dominant in terms of both duration and number of occurrences.

In terms of duration, singing based on learnt songs was the dominant singing behaviour for six of the children, including two of the most prolific singers, Alfie and James (pseudonyms). Based on number of occurrences, only four children—Leo, Harriet, Jacob and James—sang learnt songs more often than improvised songs. Three of these children—Leo, Jacob and James—sang learnt songs more often and for longer than improvised songs. The difference between improvisatory singing and singing based on learnt songs in the data collected from Leo is small, and Jacob sang very little overall. This leaves James as the only child who sang significantly more learnt songs and for longer

periods. It may be no coincidence that James spent much of his time around adults who also sang spontaneously and he had a large repertoire of songs to draw on. Figures 3 and 4 demonstrate that the patterns of spontaneous singing are unique to each child.
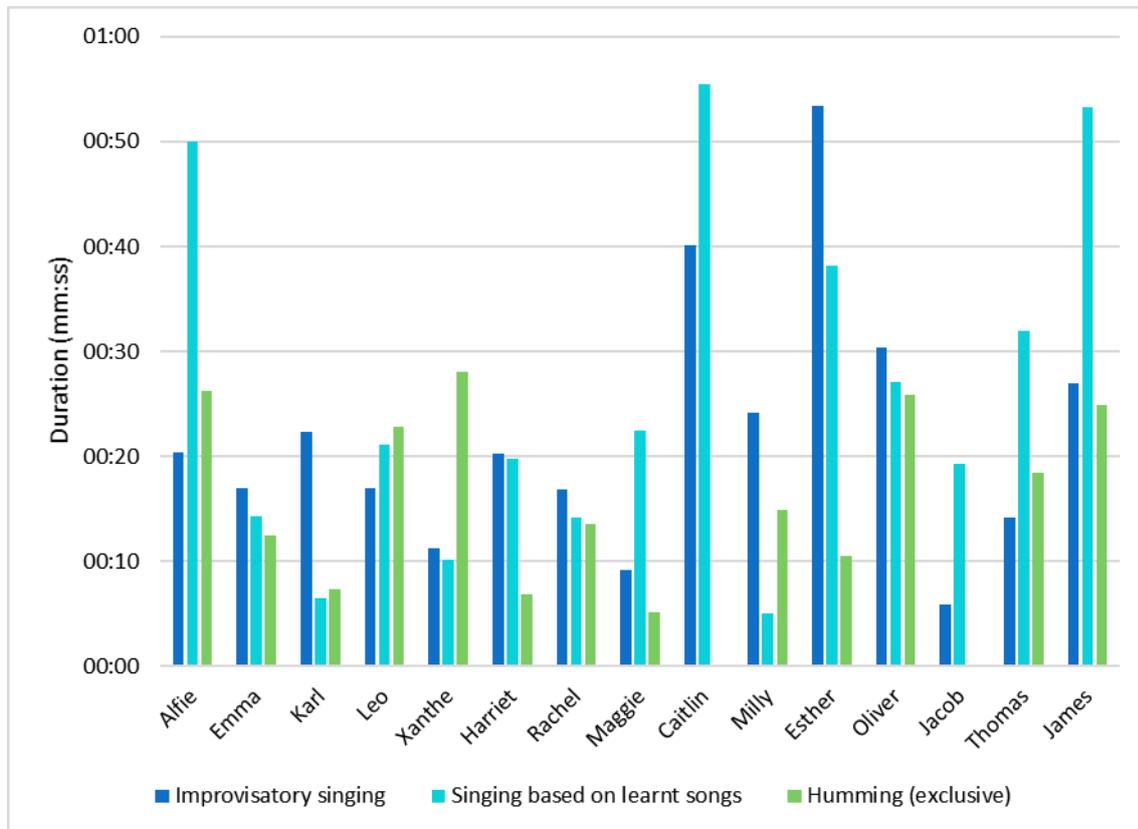

Figure 4. Average duration of singing behaviours by child.

Contexts of spontaneous singing at home

Context was a key component of this study. The home is a unique location, both physically and socially. At home, children often have freedom to make choices regarding both their activity and their level of social interaction - choices that are not always available in an educational setting. It was a benefit of the data collection method I used that I was able to collect singing across all contexts within the recording period. Diary methods, both written and video, make it difficult to judge which contexts are most conducive to singing because parents can only capture singing when they notice it. With these methods, singing that takes place outside the notice of the parents remains invisible.

The circumstances in which spontaneous singing took place were many and varied. As prior research has suggested, singing occurred throughout the children's daily lives (Barrett, 2009; Custodero, 2006; Young & Gillen, 2007). Approximately one third of the singing took place while the children were playing. Other contexts where singing was frequently used included: stationary activities, such as looking at books, doing puzzles, and painting or drawing; during mealtimes; while children were waiting for something or transitioning between activities or spaces; during routine activities, such as hand washing; and when children were carrying out instructions. In many cases, contexts overlap such as, for example, a child engaged in solitary play while in the bath. Many of the circumstances I

describe are what I call *active* contexts. These are activities the children engage in rather than physical contexts. Examples from some of these contexts are discussed below.

Play

Spontaneous singing occurred most frequently while the children were playing, either alone or with others. Thirty percent of all self-directed singing took place during play. The most frequent occurrence of spontaneous singing was during solitary play. Outside play seemed to be a particular catalyst for spontaneous singing; however, spontaneous singing also frequently occurred during inside play. The following example is fairly typical in that Emma (4 years) hums and improvises using both words and syllables. When the children were playing alone, it was not unusual to hear them sing on and off over extended periods of time.

> *Emma wants to plant something in the garden. Her mother suggests she plant some grapes and gives Emma four grapes. Emma counts the grapes, then goes outside, talking to herself, planning what she's going to do. She intermittently hums and sings an improvised tune on syllables as she digs a hole and plants the grapes. Emma's singing is interspersed with self-talk, narrating her activity. Her mother brings her something to eat, and Emma hums as she eats. She goes inside to get some water for the grapes. As she waters them, she sings, "It's a grape tree, not a pineapple tree."*

While the majority of spontaneous singing took place during solitary play, there were also many examples of spontaneous singing during social play with family members or friends. Below is an example of Leo (3) and Nathan (5) playing with their train set. Leo and Nathan often sang as they played together. Their singing was loosely based on songs they both knew. They took turns making up words and occasionally sang together. The singing seemed to facilitate their joint play.

> *Leo and his older brother, Nathan, are playing with their train set. Leo starts singing to the tune of the popular children's song,* Wheels on the Bus*. He sings, "I want to go on the track track track, track track track, … him go on the track track track, … he goes the track track track." Nathan picks up the end of the song, singing, "all in the early morning." Leo sings, "Him go go early-o morning, early-o morning, early-o morning." He repeats this quietly several times. After a while, Nathan sings, "Morning baby is chugging all around," and Leo joins in to sing, "chugging all around, chugging all around."*

The children also engaged in play that was overtly musical. In these cases, the purpose of the play was to produce music, or the characters within a game sing or produce music. Many of the children had real or toy musical instruments at home, and these seemed to encourage focused musical play.

Stationary activities

It is notable that after play, spontaneous singing most frequently occurred during activities when the child's body was fairly stationary. This was true both for activities that the child had freely chosen, such as doing a puzzle or playing with toys, and activities that the child was obliged to do, such as having a bath or an afternoon nap.

A large amount of singing took place during meal and snack times. In fact, all the children either hummed or sang as they ate. During meals, the children often moved between social interaction and singing to themselves.

Emma is having dinner with her siblings. Her mother is busy trying to get the baby to feed himself. Emma taps a beat and sings, "May we have some ketchup, may we?", adapting the tune of Down at the Station*.*

Two contexts that inspired similar types of singing were bath time and bed time. Like meal times, children are physically restricted during bath time (in the bath) and nap time (in their bed or bedroom) and, like meal times, the children use these times to sing. However, during meal times, a parent who may not always approve of singing at the table is usually present, and the child's mouth is often full, both of which can make singing difficult. While restricted to the physical space of the bath or bed during bath and nap times, the child has more freedom to engage in imaginative play. This results in long periods of singing. Harriet and Esther both had baths during their recordings. During bath time, the research vest containing the DLP was placed nearby. Both girls were in the bath on their own, with their parents within earshot. Oliver, Maggie, and Xanthe had afternoon naps, and all three were recorded singing during these times. These examples of solitary singing collected during bath and nap times are valuable because they cover an extended period of time and demonstrate how the children enjoy playing alone.

The fact that a considerable amount of singing took place during stationary activities raises some interesting points. Several studies have involved children in physically restrictive circumstances. Forrester's (2010) research took place when his daughter was confined to her high-chair at meal-times; Koops (2014) considered children singing in their car seats; Sole (2017) explored toddlers' crib singing before they went to sleep at night; and Custodero, Cali, and Diaz-Donoso (2016) observed children riding in the subway (where they were presumably required to remain in their seats). It seems that these situations, where movement is restricted, are particularly conducive to spontaneous singing. This indicates that singing may act as a substitute for physical activity, reflecting an active state of mind even when the body is relatively still.

The children often sang when they were engaged in routine activities that held little interest, such as hand-washing, waiting, and transitions between activities or places. It is documented that parents use singing as a way of overcoming the mundane nature of childcare routines (Barrett, 2009; Custodero, 2006). It may be that by the age of three or four, the children have learnt to use singing in a similar way to enhance their experience of mundane and routine activities.

Social contexts of spontaneous singing

The contexts outlined above relate to singing in physical and active contexts. However, closer examination revealed that the strongest influence on spontaneous singing was the social context in which it took place. Although this study was based in the home, the children were recorded in a number of different social configurations – at home with just one caregiver (mother, nanny, grandmother), both parents, grandparents, one parent and siblings, or the whole family. Throughout the recordings, the children moved between interacting with others and playing alone. The children usually controlled these patterns of interaction themselves, choosing when they wanted to interact with others and when they preferred to play alone. For some children, this included the choice of whether to play with siblings while, for others, there were no playmates available.

For each episode of singing, the child's social context was categorised as alone, in the presence of others (with no interaction), interacting with others, or singing with others. Nearly three quarters of the singing episodes occurred when the children were alone or playing alone in the company of others. That is, there was a parent present, but no interaction was taking place. However, as shown

in Figure 5, the patterns vary between the individual children. Most of the children sang more often when they were alone or playing alone, but a few sang more often when they were interacting with others. In terms of duration (not shown on this graph), the children sang for longer when they sang with others than when they sang alone.
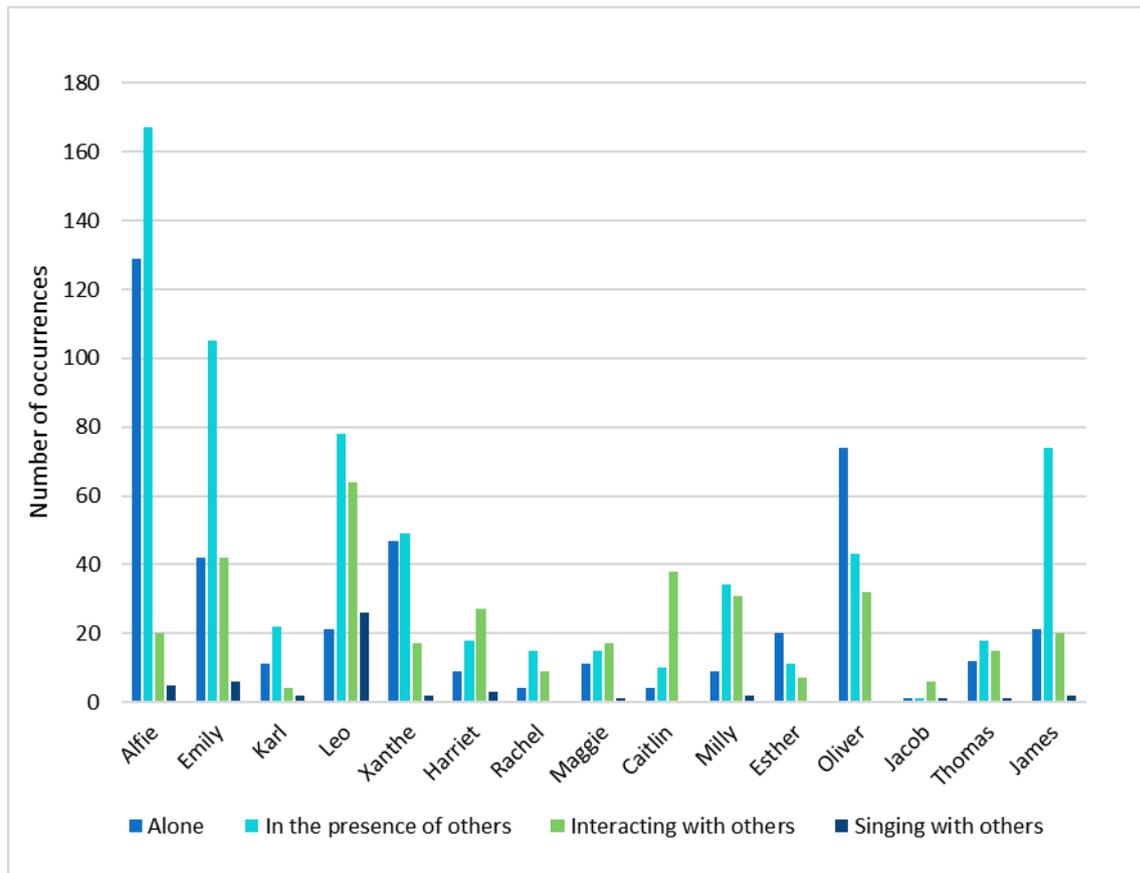

Figure 5. Social contexts of spontaneous singing.

Figure 5 implies that some of the children did not sing with others at all. This data only covers child-initiated singing, so while several of the children engaged in singing that was initiated by an adult, this was excluded from the analysis. It is noticeable that Leo (3) sang with others significantly more often than the other children. This was largely because Leo's nanny and older brother happily joined in with his self-initiated singing on many occasions.

The children's singing was also interpreted in terms of whether the singing was social or self-directed. Singing was categorised as *social* when it took place as part of a social interaction or when the child sang with others; said "listen to this" or "look at me"; or addressed or called to someone in the song. *Self-directed* singing included all singing when a child was physically alone (except when using song to call to someone); when the child explicitly said something along the lines of "I'm not singing for you" (indicating they were singing for themselves); and singing when the child appears to be alone in the presence of others. That is, when there were other people around, but there was no interaction with the child immediately before or after the sung utterance.

Some episodes of singing could not be categorised as distinctly social or self-directed because the children appeared to be singing to an imagined or non-human other. This included singing to pets, toys, imaginary playmates, singing with media, and singing for the researcher by way of the recording device—in effect, an imagined listener. Singing to an imagined other usually took place when the children were alone but it had the characteristics of social singing. The singing was marked by the child addressing the intended audience, as in the following example:

> Emma is supposed to be getting into bed, but she runs downstairs to say
> goodnight to her pet rabbit, Run. She sings, "Go to sleep little rabbit, called Run,
> don't shake, you're okay. Don't be sick, don't be sick, ... [lyric unclear]."

Figure 6 gives an idea of the relative amount of social and self-directed singing that took place. Half of the singing could be considered self-directed, and nearly one third social. Communicative intent was unclear in fifteen per cent of the singing episodes, and five per cent of singing was directed at an imagined or non-human other.
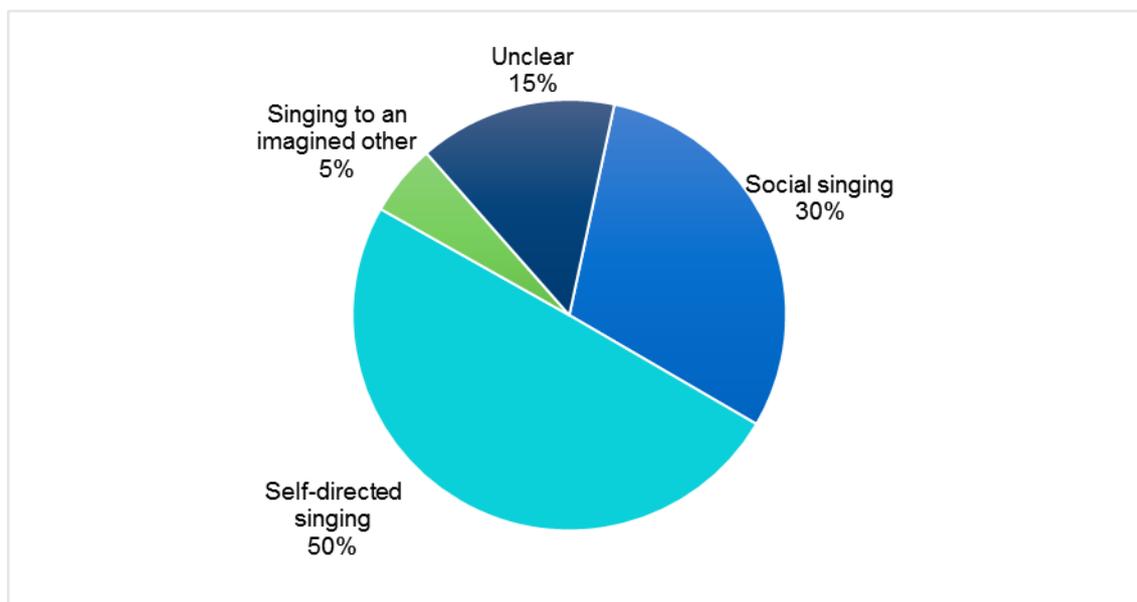

Figure 6. Communicative intent of singing.

Analysis of the data indicated that young children employ different singing styles according to social context. The difference in singing styles was largely based on language content. When singing to interact with others, the children sang learnt songs or they improvised songs with words that conveyed meaning. There was a tendency for the socially improvised songs to be more clearly structured than those that were self-directed. In these interactions, the children seemed to be motivated by the need to be understood and to share songs that other family members knew. When the children were alone, their singing was typically less overtly meaningful than social singing. Known songs were often hummed or sung using nonsense words. Self-directed improvised songs used nonsense words or were sung on syllables more often than using clear lyrics. The children's self-directed improvisations were either very exploratory, containing interesting vocal experimentation; of a narrative nature, based on freely meandering melodic lines; or very limited and repetitive. In these situations, there was no need to sing with meaningful words or to sing songs

that their family members were familiar with. When singing to themselves, the children seemed to be more interested in experimenting with nonsense words and adapting learnt songs for their own needs. Musically, social singing more closely reflected learnt songs, and self-directed singing tended to be less structured. It appeared that this singing was not intended to be understood by anyone other than the singer.

Figures 7 and 8 show the distribution of singing behaviours within social and self-directed singing based on frequency of occurrence. Because of the importance of language in social singing, the category *improvisatory singing* has been subdivided into two groups: improvising with real words and improvising with nonsense words and syllables. While a similar amount of improvisatory singing occurs in social and self-directed singing, self-directed improvisatory singing tends to use more nonsense words and syllables than social singing.
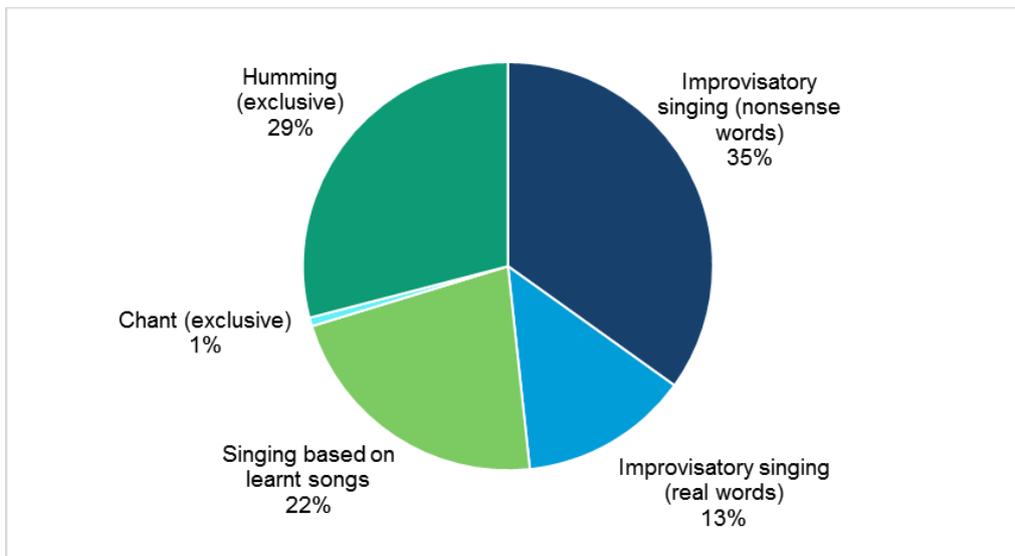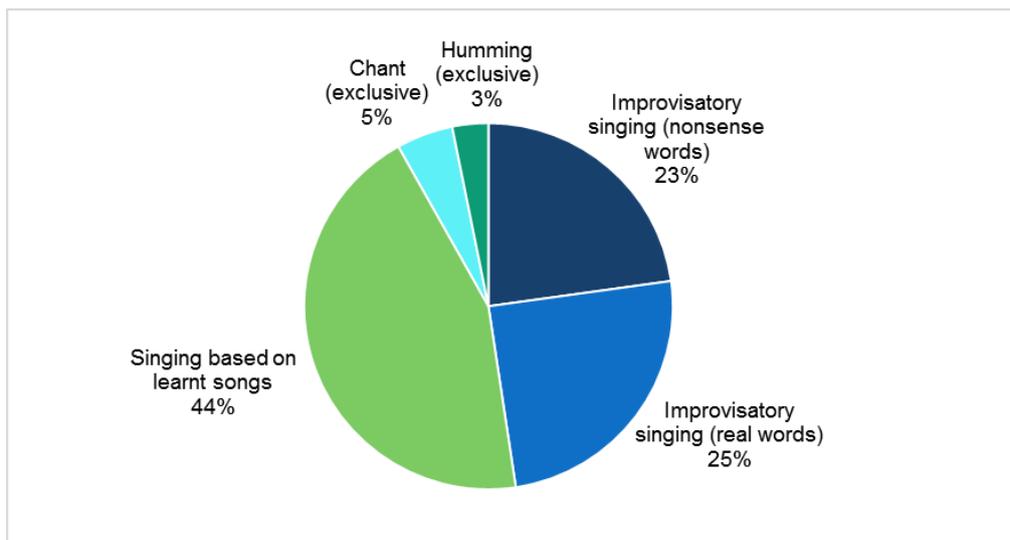

Figure 7. Composition of self-directed singing.

Figure 8. Composition of social singing.

Conclusion

An important finding of this study is that improvisatory singing was the most prevalent form of singing in terms of both frequency and duration. Although several major studies (Bjørkvold, 1989; Moorhead & Pond, 1941/1978; Sundin, 1963/1998) refer to chant as the dominant type of singing among young children, this does not appear to be true among three- and four-year-olds in a home environment. In addition to improvising their own snatches of song, children rarely sang unaltered versions of learnt songs. The evidence suggests that although children are capable of singing complete songs, they usually only do this when performing for or singing with someone else. The prevalence of improvisation demonstrates that the children were able to make use of musical material in ways that were meaningful and interesting for them and which suited their own needs.

This clearly has implications for educational practice. It suggests that early childhood educators can encourage the development of young children's musicality by creating an environment in which improvisational and playful singing can take place as part of everyday practice and in which young children's improvised songs are recognised and valued. Integrating opportunities for playful singing into general early childhood practice supports the ways young children make music themselves and can create an environment where child and educator explore music and singing together, therefore reducing the onus on the educator to have specialist music skills. It was evident that the most prolific singers had a wide range of influences to draw on in their sung improvisations. This suggests that it is beneficial for children to have the opportunity to learn a large repertoire of songs.

In terms of contexts, most spontaneous singing occurred when the children were engaged in free play. This supports Moorhead and Pond's (1942/1978) assertion that musical play (including spontaneous singing) occurs when children have the freedom to pursue their own interests. In this study, singing occurred during many different activities, ranging from very exciting, engaging activities, such as bouncing on the trampoline, through to less interesting activities, such as waiting for a turn during a board game. Depending on the child, singing could be part of any and all activity. It is likely that one of the reasons singing and musical vocalising is so useful for children is that it is freely available as a means of expression and exploration at all times (DeNora, 2013).

More importantly, the child's social context appears to have a greater influence on his or her spontaneous singing than the activity in which he or she is engaged. The children in this study appeared to understand social expectations around singing. Their behaviour implied that they knew that certain types of singing behaviour were recognised and accepted by adults, and the children adopted these behaviours when interacting with others. The fact that the children used distinct singing styles for social and self-directed singing indicates that they exercise control and choice over what and how they sing. The children took a cultural form (singing) and used it in ways that were useful or meaningful to them in a given situation. Although not referring specifically to social and self-directed styles of singing, Barrett (2003) observes "the way a child shapes a musical work such as a song reflects membership of particular cultural communities and awareness of the values and behaviours appropriate to the contexts of these communities" (p. 201). It is clear that this not only happens on a macro level where children's singing reflect membership of a community, but also on a micro level where children adjust their singing according to their immediate social context. The children's use of different styles of singing according to their social context demonstrates not only that they can act within the cultural norms of their immediate community, but also that they can choose when to conform to these norms and when to explore their own ways of singing.

New recording technologies, such as the one used in this study, enable the collection of comprehensive data that allows for a more thorough examination of singing in both social and

solitary contexts. The overview that a quantitative analysis such as this one provides, paves the way for a more in-depth analysis of spontaneous singing in these contexts.

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Notes

[1] I use the term 'minority-world' to refer to the wealthier countries in the world, such as Europe, North American and Australasia, where the minority of the world's population live. These countries are often referred to as 'the West' or 'developed countries'.

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