Talking about people who are not there: Children's early references to absent caregivers and absent friends

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Abstract

Research on the development of children's decontextualized language has focused primarily on their references to events displaced in time. Here, we examine children's early emerging ability to talk about individuals who are elsewhere and therefore not participating in the conversation. We analyzed the references made by three Mandarin-speaking children aged 20–40 months to absent members of their social network. Even in the earliest period of the study (20–26 months), children produced a considerable number of such references, with the majority initiated either fully or partially by the children themselves. Thus, children were not simply echoing references made by their interlocutors. These early references often expressed attachment-related concerns with respect to absent family members. For example, children expressed a desire for the absent family member, called out their name, or asked about their location. Over time, however, they talked about absent individuals, including family members, in a more neutral or reflective fashion, commenting on their characteristics and activities. The findings highlight the early emergence of references that are displaced in space from the utterance context.

Keywords

Absent persons, decontextualized speech, social network, attachment, contact related

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Introduction

In the course of everyday conversation, people frequently refer to objects and events beyond the immediate context. This powerful capacity to talk in a displaced fashion emerges at approximately 24 months (Huttenlocher & Smiley, 1987; Veneziano & Sinclair, 1995), but it is assumed to be quite restricted until children turn 30 months (Demir et al., 2015; Rowe, 2012; Sachs, 1983). In the course of development, children increasingly talk about past and future events (Lucariello & Nelson, 1987), refer to internal states (Adamson & Bakeman, 2006; Lamb, 1991), and discuss make-believe events (Rowe, 2013).

In examining such decontextualized utterances, researchers have focused primarily on children's emerging ability to talk about temporally displaced topics, notably past and future events. The emergence of children's ability to talk about members of their social network who are currently elsewhere has rarely been studied. Such references imply a spatial displacement, need not involve a temporal displacement, and likely involve language couched in the present rather than in the past or future tense. Accordingly, they may have a distinctive developmental trajectory even though – like other aspects of decontextualized language – they call for the representation of non-visible phenomena. Initial support for this distinctive trajectory was reported by Yang et al. (2021) who investigated the references of four English-speaking children to absent individuals by examining recordings of naturalistic, parent–child interactions from 2 to 5 years, available in the Child Language Data Exchange System (CHILDES) database (MacWhinney & Snow, 1990). Documentation of which individuals were present during a given recording session made it possible to determine systematically, for any given utterance referring to another person, whether that person was or was not present during the conversation. Analysis revealed that references to absent persons were relatively frequent even during the initial period of study (24–35 months) and stayed fairly constant in frequency across the two later periods (36–47 months and 48–59 months). This stability in frequency diverges from past findings on decontextualized speech, which have typically indicated a developmental increase in its frequency (Miller et al., 1992). However, consistent with previous findings for decontextualized utterances (Morford & Goldin-Meadow, 1997), children's references to absent persons were mostly produced with little prompting from an interlocutor.

In this article, we take advantage of the availability of early, child–parent, language data from Mandarin-speaking families. More specifically, we examined references to absent persons by three Mandarin-speaking children whose language had been regularly recorded from 20 to 40 months. We had two primary goals. First, we wished to establish whether, like the English-speaking children studied by Yang et al. (2021), Mandarin-speaking children would also make frequent references to absent members of their social network, especially family members who were temporarily elsewhere. Second, we aimed to look more closely at the early emergence of such references. In their study, Yang et al. (2021) reported that the majority of children's references to absent persons were not contact-related. Thus, they were mainly neutral or reflective comments about the absent person (e.g. 'Grandma bought me this toy') rather than appeals for, or concern about, contact with the absent person. However, contact-related references might be more frequently found among younger children.

We entertained two different possibilities with respect to the earliest period examined in the present study (i.e. 20–26 months). From an attachment theory perspective, toddlers might be expected to produce frequent contact-related utterances. For example, in the absence of a primary caregiver, they might express a desire for that caregiver, call out their name, or ask for their whereabouts. By contrast, the language recordings that we examined were made when children were at home in the company of one of their family members. Thus, although one of their caregivers might be temporarily absent, the children were not alone or left with a stranger. Experimental studies indicate that toddlers rarely express attachment-related concerns about the temporary absence of one caregiver if they are left with another, familiar caregiver – even if those concerns can be frequent and pronounced if they are left with a stranger or left alone. For example, US as well as Guatemalan toddlers ranging from 9 to 24 months coped well – both at home and in the laboratory – with a separation from one parent provided they were left with the other parent. By contrast, they were prone to cry and stop playing when left with a stranger (Kotelchuck, 1972; Lester et al., 1974; Ross et al., 1975). Accordingly, we analyzed children's utterances for the early emergence and frequency of contact-related references to an absent caregiver relative to more neutral, contact-unrelated references. Based on attachment theory, frequent contact-related utterances to an absent caregiver might be expected, especially in the initial period of study (20–26 months). By contrast, such utterances might be relatively infrequent given that the three children were always recorded at home in the company of one or more familiar caregivers whose presence might mitigate attachment-related concerns about another, absent caregiver.

Below, we briefly review earlier findings on children's comprehension of other people's references to absent persons, their own production of such references, as well as cultural factors that might impact their production. We then describe our coding and mode of analysis.

Comprehension of references to absent persons

When children turn 9 months, they can understand a few basic words such as 'Mommy', 'Bye-bye,' and 'No' and parents start to use some decontextualized language (Grimminger et al., 2020). To display comprehension of a reference to an absent person, infants need to be able to retrieve a representation of the person named, and then maintain a representation of that person in working memory in order to initiate a relevant response (e.g. a search for the absent person or a verbal response; Ganea & Saylor, 2013a). Such processes are likely to be fostered by well-established representations. Indeed, compared with a reference to a new acquaintance, infants are more likely to respond to references to a well-known, absent person (e.g. a parent or a sibling). Thus, Ganea and Saylor (2013b) found that when 13- and 16-month-old infants heard an adult name a family member just after that family member had left the room, infants often looked toward, approached, or pointed toward their point of departure; indeed, some infants even did so when the absent family member was named 16 minutes after their departure rather than immediately. By contrast, fewer infants displayed such orienting behaviors when the absent person was someone they had just met and whose name they had just learned.

Production of references to absent persons

When do children produce references to absent persons? Yang et al. (2021) reported that English-speaking children mentioned absent persons eight times per hour on average in the initial period of their study (i.e. from 24 to 35 months) and as noted, most of those references were neutral or reflective utterances about the absent person rather than contact-related.

Other evidence indicates that children refer to absent members of their social network before the age of 24 months For example, in a longitudinal analysis of eight Cantonese-speaking children from 17 to 44 months, Lee et al. (1996) report that one child, Tsuntsun, referred to his absent father when he was 17 months, with most of these references being contact-related vocatives, for example, '爸爸,爸爸' ('Daddy, Daddy'). In their study of child–parent conversation in one family, Zhang and Zhou (2009) report that Xuexue referred to family members and also to her friend when she was 22 months. Thus, when her mother asked whether her father was coming home to have dinner with them, Xuexue appropriately replied to her mother's question by referring to her absent father in the future tense: '爸爸待会儿回来吃饭' ('Daddy will come back to have dinner'). Around the same age, she also referred to a friend from her social network: '我想跟孩名赛跑' meaning 'I want to race with Haiming'.

In sum, there is systematic evidence of references to absent persons by 2- to 4-year-olds and scattered evidence of such references at an earlier age – before 2 years. However, the extent to which young children produce such references to express contact-related concerns, especially in the absence of any prompting or cues from their interlocutors, remains unclear. Accordingly, we compared the frequency with which children spontaneously produced (a) contact-related utterances in which they expressed a desire for an absent family member, called their name, or asked where they were and (b) contact-unrelated utterances in which children produced more neutral or reflective comments regarding the activities or location of the absent family member.

Cultural factors and absent person references

Across disparate cultures, individuals often talk about family members and other people in their social network. Such talk likely reflects local cultural beliefs and may function as a socializing practice within the family context (Aukrust & Snow, 1998; Miller et al., 2012). Indeed, the focus of decontextualized speech in child–caregiver conversations appears to be affected by cultural priorities. Thus, Wei et al. (2020) report that, compared with US caregivers, Chinese caregivers are more likely to discuss future social interactions. Likewise, the characteristics and developmental course of Mandarin-speaking children's references to absent persons might be influenced by culture-specific social conventions and child-rearing practices. For example, in American families, it is typically one or both parents who take care of the child within the home. In China, however, children are often looked after by their grandparents as well as their parents (Yang, 2013) and this arrangement applied to the three children in the present study. Accordingly, we anticipated that the children might produce frequent references to both their parents and their grandparents when they were not there.

In the course of development, young children gradually form connections with peers or others outside the family circle (Hrdy, 2009; Reese & Brown, 2000). Consistent with this expansion of their social network, Yang et al. (2021) report that the four US children they studied occasionally referred to absent friends at 2 years, and went on to mention absent friends as often as absent caregivers when they were 3 years old. Indeed, American parents encourage their children's social-emotional competence via interaction with friends and others (Cheah & Rubin, 2003; Olson et al., 2001). Chinese parents may approach children's autonomy differently from Western parents (for discussion, see Chao & Tseng, 2002; Pomerantz & Wang, 2009); they may exert more influence on children's social life, such as what they should do after class and who their friends should be (Chao & Tseng, 2002; Ng et al., 2014; Pomerantz & Wang, 2009; Zhu, 2020). Accordingly, we anticipated that the three children in the present study might increasingly talk about friends and other non-family members but less frequently than American children.

The present study

To better understand the development of references to absent persons, we investigated the frequency, spontaneity, and content of such references by three Mandarin-speaking children from 20 to 40 months. Transcripts were retrieved from the CHILDES database (MacWhinney & Snow, 1990). Details of the transcripts are available at: https://osf.io/9sbv8/?view_only=3d0472e2fb064148b9335340d7630988.

We asked whether children's early references to absent persons reflect attachment-related concerns. More specifically, we speculated that initially children might often refer to an absent family member in a contact-related manner by expressing a desire for their presence, calling their name, and asking about their location. By contrast, because children were always in the presence of a familiar caregiver, their references to absent family members might be neutral and contact-unrelated, consistent with the findings of Yang et al. (2021) for older children. Indeed, consistent with the findings of Wei et al. (2020), they might refer to future interactions.

We also analyzed the spontaneity of children's absent person references. Morford and Goldin-Meadow (1997) found that it was usually the child who initiated conversations about non-visible phenomena entities (i.e. objects, actions, attributes, or locations). Yang et al. (2021) found a similar pattern for children's references to absent persons in American child–parent conversations. Thus, we expected that Mandarin-speaking children would often refer to absent persons spontaneously across development and not simply echo their interlocutor's references.

Finally, consistent with the broader pattern for the development of children's decontextualized speech, we anticipated a growing frequency of spontaneous references to absent persons in the past, future and pretense frames.

Method

Participants

The data came from two boys and one girl whose language was regularly recorded, transcribed, and accessed for the present research from the CHILDES repository; naturalistic

language data gathered by primary investigators are deposited in CHILDES to enable analysis by other researchers. We included Tong, a boy described by Xiangjun and Yip (2018) in their language acquisition research. Tong was raised in Shenzhen where both Mandarin and Cantonese are spoken. Members of Tong's family all spoke Mandarin to him. Audiotape and video-recordings were made from the time that Tong was 1;0 year to 4;5 years; in the period targeted for study here, that is, 1;8 to 3;4 years, 1-hour recordings with 1-month intervals were made. The language of Xuexue (called Xue'er in the corpus), a Mandarin-speaking girl growing up in Nanjing, was described by Zhang and Zhou (2009). Thirty 25-minute recordings were recorded every 2–3 months during the period under study. Finally, from the Hsu (1996) corpus, we included Pan (called Xuanxuan in the corpus), who lived in Taipei where Mandarin is the major language of the community. One-hour recordings were made every 1–2 months during the period under study.

All three children were firstborns being raised in a middle-class family. Tong and Xuexue were only children; Pan had a younger sister who was always absent when the recordings were made. All recordings were made in a familiar setting, notably the children's homes. Tong's mother was present during all recordings; his father and grandmother were also often present but not for all recordings. In the case of Xuexue, either her mother or her father was present during all recordings; in addition, her grandmother was often present and sometimes her grandfather. Pan's grandmother and an investigator were present during all recordings; his mother and father were present only occasionally.

Materials

A total of 71 transcripts, transcribed according to the CHAT conventions (MacWhinney, 2000), were available. Because there were transcripts for all three children from 20 to 40 months, we focused on children's speech during this particular period. Accordingly, for Tong, we included all available transcripts from the time he turned 20 months (21 transcripts), and all transcripts associated with Xuexue and Pan from 20 to 40 months (18 transcripts and 15 transcripts, respectively). Note that we took into account variation in the frequency and duration of recording within and across the three children by examining the number of utterances of a given type that were produced within a given length of recording time (i.e. number of utterances per hour).

To examine age-related changes in young children's references to absent persons, each corpus was subdivided into three age periods: 20–26 months (Period 1); 27–33 months (Period 2); and 34–40 months (Period 3). Each period was 7 months in duration.

Coding procedure

With some modifications, we used the same coding scheme as Yang et al. (2021) in their study of English-speaking children's references to absent persons. Like them, we coded children's utterances in two initial steps. First, we extracted all utterances that included a proper noun. This step resulted in 1324 utterances for Tong, 474 utterances for Xuexue,

and 305 utterances for Pan. In CHILDES, every morpheme in each corpus is tagged for its part of speech. Accordingly, we were able to use the KWAL (i.e. the 'Key word and line' search function) within CLAN to automatically identify and extract utterances containing proper nouns. Note that this search procedure was relatively conservative. In principle, children might refer to an absent person without naming them. However, we did not search for such references given the difficulty of confidently establishing whether the child was indeed referring to an absent person and to whom the child was referring.

The search output included the target utterance containing a proper noun, plus a line number, together with the five utterances immediately before and after, thereby providing a discourse context for subsequent interpretation of the target utterance. In previous analyses of children's naturalistic speech, investigators have relied on a smaller window, for example, the four preceding and the three succeeding utterances (Bartsch & Wellman, 1995) or the two preceding and the two succeeding utterances (Wellman et al., 1995). We opted for a slightly expanded window to minimize the likelihood of overestimating the spontaneity of the child's references to an absent person, as discussed in more detail below.

Because the KWAL function extracts the proper names of both human and nonhuman entities, we needed to filter out references to nonhuman entities (e.g. places such as Shanghai, toys such as dolls, and animals such as pets). Thus, the second step involved coding the above utterances for *Type of Reference* (human vs nonhuman). Following this step, we retained only the 1576 utterances that referred to a human (1117 for Tong, 248 for Xuexue, and 211 for Pan). Next, every reference to a human was coded for *Presence/Absence*. Because we wished to focus on children's ability to talk about absent persons, we filtered out all references to persons who were present during the conversation in question and retained references to absent persons. Having identified all such references to an absent person, each such reference was coded for *Spontaneity, Person Type, Contact-Relatedness*, and *Frame*. For each step in the coding, the coder could refer to the transcripts when making her decision. The rationale for each of these coding categories is described in more detail below:

Presence/absence. To provide a global assessment of the frequency with which children referred to present versus absent humans, we coded a reference to a person as *present* if the person in question was talking to the child or was physically present in the room during the conversation; we coded a reference to a person as *absent* if the person was not physically present. References to humans that could not be definitely coded as *present* or *absent* were coded as *unclear*.

Spontaneity. To assess how often references to absent persons were initiated by the children rather their interlocutor, we coded for spontaneity. If the child had initiated the reference to an absent person (i.e. there was no prior reference to the missing person in the five preceding lines), we coded such a reference as *fully spontaneous*; if the child produced the absent person reference with some scaffolding from their interlocutor who had produced a verbal prompt or reminder related to the absent person (but without a direct naming of the person), we coded such a reference as *partially spontaneous* (e.g. the parent said: 'Who will you show that to?', and the child answered with a reference to

someone absent: 'I will show that to grandma'). Finally, if the interlocutor had directly mentioned the missing person in the five preceding lines, we coded the child's references to the same person as *non-spontaneous*.

Person type. We anticipated that children would spontaneously refer to family members at first but modestly expand the circle of reference with age. Accordingly, we coded the relationship of the absent person to the child as *family*, *friend*, or *other*, and in a small minority of cases as *unclear*.

Contact-relatedness. Children's spontaneous references to absent persons, especially family members, might be driven by attachment-related concerns about temporary loss of contact. To assess this possibility, spontaneous references to absent family members were coded for contact-relatedness. We coded the reference as *contact-related* when children appeared to express a need for, or concern about, contact with the absent person; we coded references to an absent person as *contact-unrelated* when the utterance provided information about him or her rather than expressing concern about contact (e.g. '爸爸带妹妹出去了', 'My father took my sister out').

    Type of Contact-Relatedness. As a further check on whether children's contact-related comments expressed attachment concerns, they were coded into three types: *desires* (e.g. '我想妹妹了', 'I miss my sister' or '我要爸爸快回来', 'I want Daddy to come back!'); *vocatives* (e.g. '爸爸。爸爸。爸爸', 'Daddy. Daddy. Daddy'); and *locatives*, that is, questions about the location of the absent person (e.g. '爸爸在哪儿?' 2019, 'Where is Daddy?').

Frame. We anticipated that children's spontaneous references to absent persons would initially involve a spatial rather than a temporal displacement. Accordingly, we assessed whether each reference to an absent person was framed with respect to the *present*, the *past*, the *future*, or a *pretend* event.

Inter-rater agreement

In order to assess inter-rater agreement, a sample of utterances was coded by two independent judges. Any disagreements between the two raters were resolved by discussion.

    Steps 1 and 2. A sample of 387 utterances (30% of the total set of 1324 utterances produced by Tong) was coded by both judges. The percentage of agreement between them was 98.24% with respect to the Type of Reference (Human/Other) and Cohen's kappa of 0.94. Every reference to a 'Human' was coded for 'Presence/Absence'; the percentage of agreement between the two raters was 97.50% and Cohen's Kappa of 0.92.

    Next, 61 references to absent persons (i.e. all such references by Tong) were examined for inter-coder agreement on seven variables. For *Spontaneity*, agreement was 96.72%, Cohen's kappa of 0.95. For *Person type*, agreement was 100% and Cohen's kappa of 1.0. For *Contact-relatedness* and *Contact type* the agreement was 93.44% and 86.89%, respectively, Cohen's kappa of 0.86 and 0.83. For *Frame*, agreement was 95.08% and Cohen's kappa of 0.89.
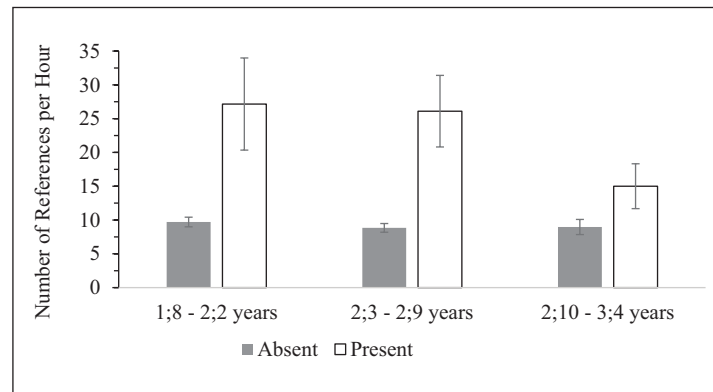
Figure 1. Number of Person References Utterances Per Hour (with Standard Error Bars) as a Function of Person Status (Present, Absent) and Period.

Results

For Tong, the total length of the recordings made during the three periods was equivalent, namely 7 hours. For Xuexue, however, the total length of the recordings during Period 1 was 4 hours, whereas the total length of the recordings during Periods 2 and 3 was 2.5 hours. Finally, for Pan, the total length of the recordings was 5, 4, and 6 hours in Periods 1–3, respectively. Accordingly, as noted earlier, to control for variation in the number and duration of recordings, we analyzed the actual rate (i.e. the number of utterances per hour of any given type) that children produced.

We present our findings in two stages. First, we present basic information regarding the developmental course of children's production of references to absent persons. Second, we examine the spontaneity, content, and frame for such references. Figures are used to display the mean frequency of a given category of utterance as a function of age period. Tables 1 to 6, corresponding to Figures 1 to 6, show the data for individual children; they are included in Appendix 1.

References to absent versus present persons

Across the three age periods, only 0.9% of references to a person were deemed unclear and dropped from subsequent analysis. The remaining references could be categorized as references to an absent or present person. Inspection of Figure 1 confirms that children often talked about absent persons, producing 9.7, 8.8, and 8.9 such utterances per hour in Periods 1–3, respectively.

Who initiates references to absent persons?

As noted in the description of the coding system, references to absent persons could be fully spontaneous, partially spontaneous, or non-spontaneous. Inspection of Figure 2 shows that children produced an average of 3 or 4 fully spontaneous references per hour
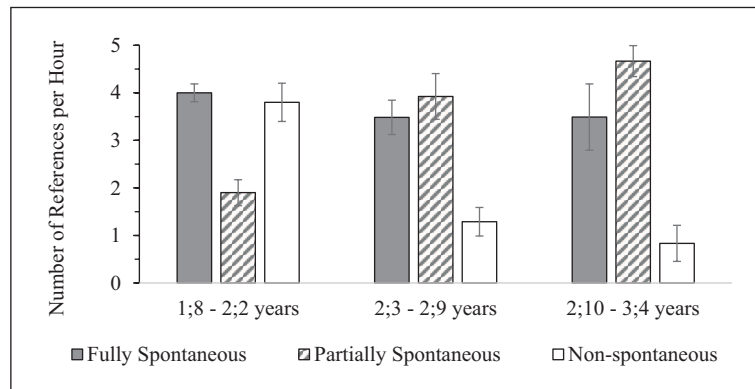
Figure 2. Number of Absent Person References Per Hour (with Standard Error Bars) as a Function of Spontaneity (Fully, Partially, Non-spontaneous) and Period.

in all three age periods. The frequency of non-spontaneous references declined, with 3.8, 1.3, and 0.8 references in Periods 1–3, respectively. By contrast, the frequency of partially spontaneous references increased with 1.9, 3.9, and 4.7 references in Periods 1–3, respectively.

References to different types of absent person

We coded *Person Type* into four different categories: *family, friend, other, and unclear*. We could clearly assign all references in Periods 1 and 3, and 99% of references in Period 2 (with the residue assigned to the *unclear* category and dropped from further analysis). To ensure that the initial scope and potential expansion of children's references to absent persons was not simply a reflection of the pattern of references produced by their interlocutors, we restricted analysis to children's fully spontaneous utterances. Inspection of Figure 3 reveals that in Period 1, almost all of children's fully spontaneous references were to family members. However, such references declined in frequency across the three periods (3.6, 2.6, and 2.3 references in Periods 1, 2, and 3, respectively). By contrast, although references to non-family members (i.e. friends + others) were rare in Period 1, they became somewhat more frequent thereafter, (0.25, 0.89, and 1.10 references in Periods 1, 2, and 3, respectively).

Contact-related versus contact-unrelated references

We coded references to absent persons as *contact-related* if children expressed contact-related concerns with respect to the absent person and as *contact-unrelated* if the utterance provided neutral information about the absent person. Again, to ensure that the pattern observed was not a reflection of input from interlocutors, we focused on children's fully spontaneous utterances. In addition, as might be expected, contact-related
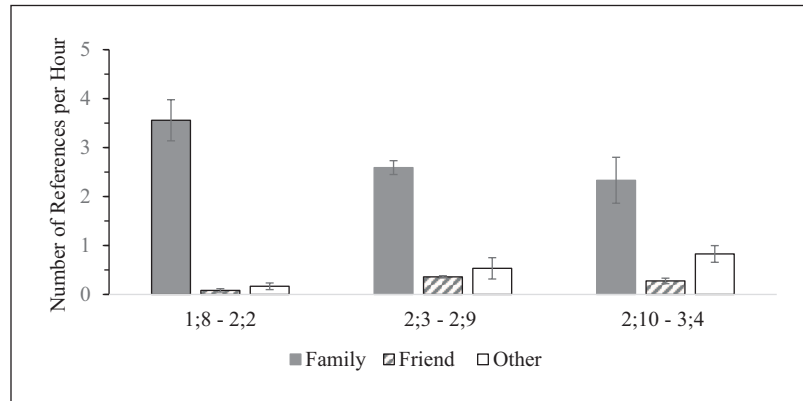
Figure 3. Number of Fully Spontaneous Absent Person References Per Hour (with Standard Error Bars) as a Function of Person Type (Family, Friend, Other) and Period.
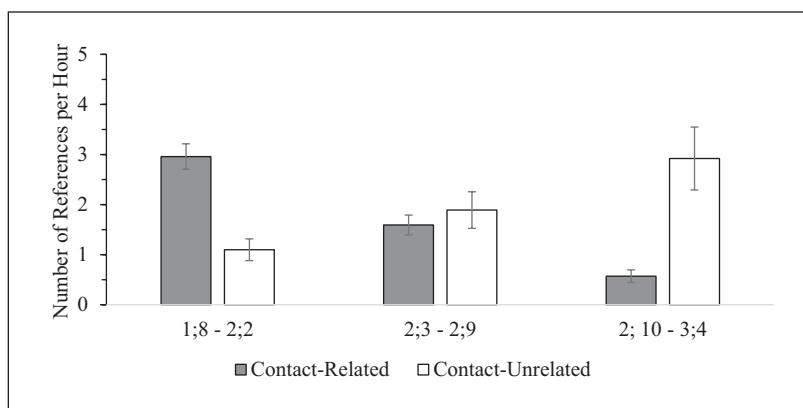

Figure 4. Number of Fully Spontaneous, References Per Hour (With Standard Error Bars) to Absent Family Members as a Function of Contact Status (Related vs Unrelated) and Period (with Standard Error Bars).

references to individuals who were *not* family members were very rare. Accordingly, in Figure 4, we show the relative distribution of fully spontaneous contact-related and contact-unrelated references to absent family members.

Inspection of Figure 4 confirms that contact-related references to absent family members predominated in Period 1, but declined in subsequent periods (3.0, 1.6, and 0.6 references in Periods 1, 2, and 3, respectively), whereas the frequency of contact-unrelated references increased (1.1, 1.9, and 2.9 in Periods 1, 2, and, 3, respectively). Thus, with age contact-unrelated references to absent family members came to predominate over contact-related references.
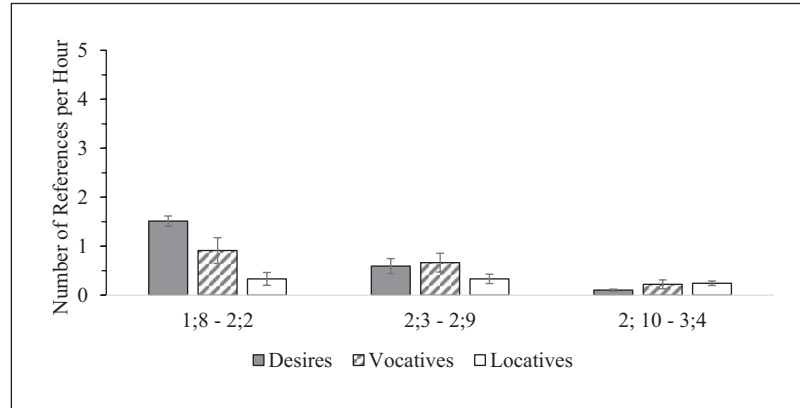
Figure 5. Number of Fully Spontaneous Contact-Related References Per Hour (with Standard Error Bars) to Absent Family Members as a Function of Type (Desire, Vocative, Locative) and Period.

Types of contact-related references to absent family members

To better understand children's fully spontaneous, contact-related utterances to family members, we divided them into three different categories: *desires*, *vocatives*, and *locatives*. Inspection of Figure 5 shows that the overall decline in the frequency of contact-related utterances was chiefly due to the decline for desires (1.5, 0.6, 0.1) and for vocatives (0.9, 0.7, 0.2) across Periods 1, 2, and 3, respectively. Locatives were infrequent across all three periods.

References to absent persons by frame

Finally, children's fully spontaneous references to absent persons (both family members and non-family members) were assigned to four frames: *present, past, future, and pretense*. Inspection of Figure 6 shows that such references were predominantly situated in the present frame, albeit less markedly so with age (3.1, 2.0 and 1.7 references in Periods 1, 2, and 3, respectively). Children rarely produced references in any of the other three frames in Period 1 but these were somewhat more frequent in subsequent periods.

Discussion

To study the ability of young Mandarin-speaking children to talk about absent members of their social network, we analyzed the spontaneous utterances of three children: Tong, Xuexue, and Pan from the time they were 1;8 to 3;4 years of age. Several findings emerged from the successive coding steps. First, all three children produced a considerable number of references to absent persons. Second, even in the initial period of study (1;8 to 2;2 years), children referred to absent persons in both a spontaneous and a non-spontaneous manner. These two findings confirm and extend the earlier findings of Yang
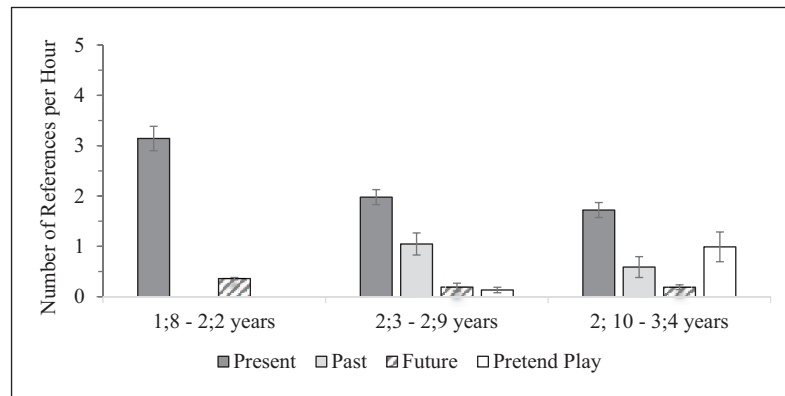
Figure 6. Number of Fully Spontaneous Absent Person References Per Hour (with Standard Error Bars) as a Function of Frame (Present, Past, Future, and Pretend) and Period.

et al. (2021) in showing that young Mandarin-speaking children, like English-speaking children, often talk about absent persons, and do so spontaneously. In the initial period, children mainly talked about absent family members. Indeed, this bias toward family members persisted throughout the period under study, consistent with the speculation advanced in the introduction that the expansion of children's social circle beyond the family might occur more slowly among Chinese families than American families. Based on these findings, we speculate that decontextualized speech in the form of references to absent persons – whether within or beyond the family – is likely to be a universal and early emerging feature of children's language.

Recall that the language recordings for all three children in the present study were available from the age of 20 months. Hence, the study provided a distinctive window into the very early onset of references to absent persons. We consider two aspects of such references. First, we situate our findings within the larger set of findings on children's decontextualized language. We then consider in more detail the developmental shift that was observed in the contact-relatedness of children's references to absent persons, especially absent family members.

Recent analyses of children's decontextualized language have focused on children aged 30 months, targeting their production of explanations, pretend talk, and narratives about the past and future (Demir et al., 2015). Individual differences in such decontextualized language are noteworthy because they predict children's later comprehension of academic language (Uccelli et al., 2019). Accordingly, we may ask about the relation children's early production of references to absent persons, as documented in the present study, and their later production of decontextualized language from 30 months onward. Two possibilities appear feasible. On one hand, children's early references to absent persons might mark the onset of the more wide-ranging capacity for decontextualized language that is displayed by older children. Given that most decontextualized language critically depends on the ability to represent events and entities that are not present at the time of the utterance, such continuity is feasible. On the other hand, an alternative

possibility, discussed in more detail below, is that children's early references to absent persons are primarily motivated by attachment-related concerns about contact with the absent person. In that case, there might be little continuity between individual differences among children in their early references to absent persons, especially those that are contact-related, and later individual differences in their narrative, explanatory, and pretend talk. In future research, it will be informative to analyze individual differences in a larger sample of children in order to assess the degree to which variation in children's early references to absent persons is or is not correlated with later variation in their decontextualized talk as measured more broadly.

Contact-relatedness and family members

With age, children talked in a predominantly contact-unrelated manner about absent individuals, family members included, consistent with the findings of Yang et al. (2021). In the initial period, however, children's spontaneous references to absent family members were predominantly contact-related. More specifically, although children were at home and also in the company of one or more familiar caregivers, they often produced contact-related utterances about other family members who were temporarily absent. Scrutiny of these contact-related utterances confirmed their links to attachment concerns. Thus, children voiced their desire for the absent person, called their name, and sometimes asked about their whereabouts. Finally, as might be expected at this early age, children's spontaneous references to absent persons were almost exclusively couched in the present frame.

In sum, the present findings suggest that when toddlers spontaneously talk about absent persons, attachment-related comments can predominate, even if such comments are expressed less often by older children. It remains to be seen if this focus emerges across different caregiving arrangements. For example, it might be especially characteristic of children growing up within a cross-generational family network where several different individuals provide intermittent care (Sear, 2016). Alternatively, it might also be found among toddlers in nuclear families where a single primary caregiver is typically present but occasionally absent.

The present results reinforce and extend the findings of Yang et al. (2021) by showing that spontaneous references to absent persons are quite frequent prior to other forms of decontextualized language – for example, narratives about the past and the future, explanatory talk, and pretend talk – that have been the major focus of research on decontextualized language. Two inter-related factors are likely to account for this early emergence of references to absent persons. First, the social network of young children will typically comprise individuals who are intermittently absent. It is plausible that children find it easier to represent and – using the present frame – talk about such temporary displacements in space as compared with either past or future encounters. Second, children's references to absent persons may emerge early because of the emotional significance of those individuals despite, or indeed because of, their absence. We consider this second possibility in more detail below.

Especially in Period 1, spontaneous references to absent family members accounted for the large majority of references to absent persons. However, the nature of such

references shifted in the course of development. In Period 1, children produced more contact-related rather than contact-unrelated utterances but across Periods 2 and 3, contact-related utterances declined in frequency whereas contact-unrelated utterances increased. This pattern of findings indicates that very young children are prone to use language to express attachment-related concerns about absent caregivers – contrary to the possibility discussed in the introduction, namely that the presence of a familiar caregiver might attenuate or even eliminate such attachment-related concerns. Recall that a familiar caregiver, notably a parent or grandparent, was always present during all recording sessions even if other family members were absent.

Three considerations support this emphasis on children's early attachment-related concerns. First, contact-related utterances were rarely produced with respect to non-family members. Such selective referencing of family-members would be expected from an attachment perspective although, admittedly, it might simply reflect young children's limited social circle. Second, the content of children's contact-related utterances expressed attachment-related concerns. Thus, via desire utterances, children affirmed their wish to connect with the absent family member; for example, at 1;11 years, Xuexue expressed a desire to call her sister. She asked her mother to pick up the phone and said: '我要妹妹, 我要孩名妹妹' ('I want my sister, I want my [name] sister'). Similarly, with vocatives, children resorted to a speech act that would ordinarily – were the family member actually present – be likely to secure his or her attention or proximity, for example: '妈妈, 妈妈, 妈妈' ('Mommy, Mommy, Mommy'); finally, with locatives, children sought information, and arguably reassurance, regarding the absent person's whereabouts, for example: '爸爸在哪?' ('Where is Daddy now?'). Third, consistent with the assumption that these utterances expressed attachment-related concerns, they declined in frequency across the three periods. By implication, the grouping of these utterances, especially desire and vocative utterances, into the over-arching category of 'contact-related' utterances is warranted.

Why did such contact-related reference to an absent family member decline in frequency, especially between Periods 1 and 2? Two related explanations are plausible. Toddlers may become increasingly habituated to the comings and goings of their family members. On this interpretation, the decline in contact-related references is primarily due to a reduction in concern about maintaining contact with the absent person. By implication, and in line with the discontinuity hypothesis considered above, there is a relatively clear distinction to be drawn between contact-related utterances and contact-unrelated utterances because only the former express attachment-related concerns.

However, to the extent that children become increasingly capable of mentally representing their relationships with family members via a working model (Bowlby, 1969; Bretherton & Munholland, 2008), children might retrieve the relevant working model in the absence of a given family member, derive reassurance from being able to think about their relationship with that absent person, and make spontaneous, contact-unrelated comments about him or her. On this second interpretation, the decline in contact-related and the increase in contact-unrelated references are not radically different forms of speech but are part of the same cognitive advance, notably a developing capacity to sustain and retrieve working models of particular relationships in the absence of the

attachment figure in question. Indirect support for this second interpretation comes from experimental research with adults. Symbolic reminders (whether via words or photographs) of attachment figures can provide emotional reassurance (Master et al., 2009; Mikulincer et al., 2005). Arguably, such symbolic reminders, notably discussion of absent attachment figures, even when they are not evidently contact-related, can serve the same emotional function even in early childhood.

In future explorations of the validity of these two hypotheses, it will be informative to track the relative frequency of contact-related and contact-unrelated references to absent caregivers among toddlers who have a known attachment status in relation to key caregivers, such as parents and grandparents. A secure attachment to a caregiver early in the second year might augur a relatively early decline in contact-related utterances together with a relatively early increase in contact-unrelated utterances. By contrast, an insecure attachment might augur either a prolongation or a paucity of contact-related utterances. In the meantime, we note that no information was available with respect to the attachment status of the three children included in the present study. In future longitudinal studies, however, the current findings suggest that a dual focus, notably on a child's attachment status to individual caregivers and on the developmental course of children references to absent caregivers, is likely to be a fruitful combination.

Limitations

It is appropriate to underline some limitations of the present study. As noted in the discussion of the coding procedure, references to absent persons were identified by searching through children's utterances for those that included a proper noun. Sometimes, however, an absent person was first named by the child's interlocutor and the child subsequently made a comment – ostensibly about that person but without naming him or her. In principle, such utterances could have been coded as examples of non-spontaneous references to an absent person. In practice, given the lack of a proper noun, it was not easy to determine whether or not the child was indeed referring to the person mentioned by their interlocutor. Accordingly, we adopted the more conservative stance of coding only those utterances in which children produced a relatively unequivocal reference to an absent person by name. As a result, however, our findings may underestimate the frequency of children's non-spontaneous references to absent persons.

The three corpora examined in this study were relatively large. Accordingly, the findings offer an initial portrait of young children's references to absent members of their social network. Nevertheless, future studies should analyze additional corpora from a larger number of children. Given the small sample size, we were unable to investigate the impact of the larger constellation of the family, or the role of the interlocutor's language. In future research, it would be informative to take some of these potentially influential factors into consideration. In addition, the linguistic environment beyond the home is likely to be important for the patterning of children's decontextualized speech. Conceivably, children talk about absent persons in a more elaborate fashion when engaged in conversation with peers or with teachers who are unfamiliar with the absent persons belonging to their particular social network.

Conclusion

Despite the above caveats, the present findings highlight the way that children's language can be used to index their early social network. Even at 20 months, children spontaneously produce references to absent members of that network with a moderate degree of linguistic precision. Initially, they talk about family members in a predominantly contact-related fashion but in the course of the third year, the frequency of such contact-related utterances begins to wane as children start to talk about absent persons in a reflective and contact-unrelated fashion. In addition, children increasingly refer to absent persons in the context of both their past experience and their ongoing pretend play. In sum, talk about other people – individuals who are not part of the conversation – is a notable feature of both early and developing decontextualized language. This study of Mandarin-speaking children paves the way for future, cross-cultural, comparative, and attachment-related studies of such language.

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Appendix 1

Table 1. Number of person references per hour as a function of person status (present, absent), period, and child.

	1;8–2;2 years		2;3–2;9 years		2;10–3;4 years	
	Absent	Present	Absent	Present	Absent	Present
Tong	9.6	59.3	5.7	49.7	4.5	30.7
Xuexue	6.5	19.0	10.8	23.6	14.0	10.8
Pan	13.8	3.2	10.0	5.0	8.3	3.5
Average	10.0	27.2	8.8	26.1	9.0	15.0
SE	1.7	13.6	1.29	10.6	2.2	6.4

The standard error for absent person references is relatively low. By contrast, the standard error for present person references is quite high, likely due to the exact recording conditions. On one hand, Tong often referred to his parents who were typically present while the recordings were being made; on the other hand, Pan's parents were usually absent from home when the recordings were being made.

Table 2. Number of absent person references per hour as a function of spontaneity (full, partial, non-spontaneity), period, and child.

	1;8–2;2 years			2;3–2;9 years			2;10–3;4 years		
	Full	Partial	Non	Full	Partial	Non	Full	Partial	Non
Tong	4.6	1.0	4.0	3.0	1.6	0.7	1.6	2.1	0.6
Xuexue	3.0	1.5	2.0	5.2	5.2	0.4	6.4	4.4	3.2
Pan	4.0	3.2	5.4	2.3	5.0	2.8	2.5	4.7	0.8
Average	3.9	1.9	3.8	3.5	3.9	1.3	3.5	3.7	1.5
SE	0.4	0.5	0.8	0.7	1.0	0.6	1.4	0.7	0.8

SE: standard error.

Table 3. Number of fully spontaneous absent person references per hour as a function of person type (family, friend, other), period, and child.

	1;8–2;2 years			2;3–2;9 years			2;10–3;4 years		
	Family	Friend	Other	Family	Friend	Other	Family	Friend	Other
Tong	4.6	0	0	2.6	0.4	0	0.4	0.4	0.7
Xuexue	1.5	0.3	0.5	3.2	0.4	1.6	4.4	0.4	1.6
Pan	4.6	0	0	2.0	0.3	0	2.2	0	0.2
Average	3.6	0.1	0.2	2.6	0.4	0.5	2.3	0.3	0.8
SE	0.8	0.1	0.1	0.3	0.04	0.4	0.9	0.1	0.3

SE: standard error.

Table 4. Number of fully spontaneous references per hour to absent family members as a function of contact status (contact-related, contact-unrelated), period, and child.

	1;8–2;2 years		2;3–2;9 years		2;10–3;4 years	
	Related	Unrelated	Related	Unrelated	Related	Unrelated
Tong	2.4	2.1	2.4	0.6	0.1	1.4
Xuexue	2.3	0.8	1.6	3.6	0.4	6.0
Pan	4.2	0.4	0.8	1.5	1.2	1.3
Average	3.0	1.1	1.6	1.9	0.6	2.9
SE	0.5	0.4	0.4	0.7	0.3	1.3

SE: standard error.

Table 5. Number of fully spontaneous contact-related references per hour to absent family members as a function of type (desire, vocative, locative), period, and child.

	1;8–2;2 years			2;3–2;9 years			2;10–3;4 years		
	Des.	Voc.	Loc.	Des.	Voc.	Loc.	Des.	Voc.	Loc.
Tong	1.1	0.3	1.0	1.3	0.1	1.0	0.1	0	0
Xuexue	2.0	0.3	0	0	1.6	0	0	0	0.4
Pan	1.4	2.2	0	0.5	0.3	0	0.2	0.7	0.3
Average	1.5	0.9	0.3	0.6	0.7	0.3	0.1	0.2	0.2
SE	0.2	0.5	0.3	0.3	0.4	0.3	0.04	0.2	0.1

Table 6. Number of fully spontaneous absent person references per hour as a function of frame (present, past, future, pretend), period, and child.

	1;8–2;2 years				2;3–2;9 years				2;10–3;4 years			
	Pres.	Past	Fut.	Pret.	Pres.	Past	Fut.	Pret.	Pres.	Past	Fut.	Pret.
Tong	3.4	0	0.4	0	2.3	0.1	0.6	0	1.0	0	0	0.6
Xuexue	2.0	0	0.3	0	2.4	2.0	0	0.4	2.0	1.6	0.4	2.4
Pan	4.0	0	0.4	0	1.3	1.0	0	0	2.2	0.2	0.2	0
Average	3.1	0	0.4	0	2.0	1.1	0.2	0.1	1.7	0.6	0.2	1.0
SE	0.5	0	0.04	0	0.3	0.4	0.2	0.1	0.3	0.4	0.1	0.6