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Pragmatic reframing from distress to playfulness: !Xun caregiver responses to infant crying

Akira Takada*

Graduate School of Asian and African Area Studies, Kyoto University, 46 Yoshida-Shimoadachi, Sakyo, Kyoto, 6068501, Japan



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ABSTRACT

Using the method and theoretical perspective of language socialization, this paper examines the pragmatic reframing of infant behavior from distress to playfulness among the !Xun San of north–central Namibia. Reframing mobilizes a constellation of multiple semiotic resources. For the !Xun, central among these resources is “gymnastic behavior,” namely, holding infants upright or moving them up and down (bouncing). The analysis shows that !Xun caregivers frequently engage infants in gymnastic behavior in response to infant crying and other displays of distress. They thereby collaboratively create rhythms with infants and encourage them to display joyful reactions. Consequently, infants grow accustomed to pragmatic reframing and rekeying long before they can do so using language. Along with that, caregivers often involve other people in the changing participation framework of family interactions. These findings suggest that pragmatic reframing and rekeying assist infants and caregivers in establishing an intimate intercorporeality. Moreover, by reframing infant behavior in a particular manner, the caregivers display their alignment with !Xun knowledge and value system. Involvement of people around infants in caregiving behavior also enhances the (re)socialization of each interactant into the family and other social identities. It is argued that these features forge the development of !Xun distinct intersubjectivity.

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1. Introduction

In everyday interactions, participants continuously display understanding of what preceding actions are doing. Sometimes this leads to a change of “frame” or “definitions of a social situation” (Bateson, 1972[1955]; Goffman, 1974; M. H. Goodwin, 1996; Tannen, 1996, 2006) in which the action was embedded. Bateson (1972[1955]: 183–198) argued that in an evolving system of interaction, an action can stand for or denote something, which he called “frame” (also see Goffman, 1974); moreover, frame can operate at many contrasting levels of abstraction. A shift of frame may occur on different levels within an utterance, changing the phonology of words, the utterance’s interpretation, or one’s affective stance towards talk (M. H. Goodwin, 1996: 72). According to Tannen (2006: 601), “reframing” refers to “a change in what the action is about.” It often accompanies “rekeying,” which refers to “a change in the tone or tenor of an interaction” (also see Hymes, 1986). So far, most studies on interaction have primarily considered the issue of “pragmatic reframing” as a matter of talk. However, pragmatic reframing often involves multiple senses, particularly in caregiver–child interactions (Gordon, 2002; Kidwell, 2005; Brown,

* Fax: +81 75 753 9191.

E-mail address: takada@jambo.africa.kyoto-u.ac.jp.

2012; Takada, 2012, 2013; Gratier et al., 2015), where the semiotic resources (C. Goodwin, 2000) available to interactants are structurally imbalanced (Ochs, 1979). By stimulating various senses, caregivers deploy their affective stance toward children. In this vein, academic interest is growing as to how visual, aural, olfactory, and haptic senses, which have been frequently analyzed separately, are co-implicated in the forms of “intersensoriality” (M. H. Goodwin and Cekaite, 2018). However, there are still few reports, other than from post-industrial societies, regarding this issue, with some exceptions (Demuth et al., 2011; Brown, 2012; De León, 2012, 2017). This paper pays special attention to pragmatic reframing achieved through “gymnastic behavior,” which involves multiple senses and is frequently used among the San of southern Africa as a response to infant crying and other behaviors indicating distress.

It is known that San caregivers frequently hold infants upright or move them up and down (bouncing) from very early on. Elsewhere I have called this “gymnastic behavior” (e.g., Takada, 2005, 2020). Gymnastic behavior is representative of physical exercises that caregivers perform for infants among the San and in various other traditional societies (e.g., Super, 1976; Demuth et al., 2011). It enhances the infant stepping reflex, one of the primitive reflexes, and prevents its disappearance post two months of age, when most of infants’ primitive reflexes disappear in Western societies (Takada, 2005). Moreover, the frequent practice of gymnastic behavior results in earlier unaided walking (Konner, 1976; Zelazo, 1983). San caregivers insist that a child who is not taught to sit, crawl, stand, and walk will never perform these behaviors (Konner, 1976). Konner (1976) suggested that early walking is adaptive for the San because it reduces the burden on caregivers, particularly mothers, who are obliged to carry infants and young children in an arid environment.¹

In daily contexts, it is important that gymnastic behavior works to soothe or amuse fretful infants. San infants have often made a fuss just before gymnastic behavior has occurred. When caregivers engaged in gymnastic behavior, the infants tended to calm down and display joyful reactions (Takada, 2020). Evidently, San infants cry much less than their Western counterparts, and baby colic, which has been considered a syndrome inherent to infants, has rarely been observed among the San (Barr, 1990; Barr et al., 1991). Frequent practice of gymnastic behavior is one possible reason why San infants cry less. Additionally, analyses of gymnastic behavior have facilitated reconsideration of how strong haptic and physical stimulus for infants, which medical practitioners in Western societies often discourage, can be used for soothing or amusing them (Takada, 2020).

This paper sheds light on the interactional and sociocultural aspects of children’s crying and other signs of distress (e.g., Holm Kvist, 2018), which have been investigated primarily from psychological and physiological perspectives. I will show how !Xun caregivers involve infants in coordinated rhythmic “communicative musicality” (Malloch, 1999) through engaging in gymnastic behavior. Hence, I will argue that gymnastic behavior provides an opportunity for reframing infants’ crying and other fretful behaviors as playful activity (Takada, 2020) and rekeying (Tannen, 2006) infant and caregiver distress to amusement. Moreover, gymnastic behavior often involves close relatives besides the mother. I argue that this involvement facilitates the transition from maternal to non-maternal caregiving and works as a stepping stone of infant socialization into the community’s playful activities. Before delving into this argument, a brief description of the ethnographic background of the focal group, the !Xun San of north-central Namibia, is necessary.

2. Ethnographic background of the !Xun San

The San have been known as an indigenous people of southern Africa and as one of a few groups of contemporary hunter-gatherers. They are actually comprised of various language and areal groups. Early researchers believed that contemporary hunter-gatherers could provide vital clues for understanding the species-specific nature of human sociality. Subsequently, those researchers investigated San groups that have presumably been little affected by outside society. The Ju|’hoan are representative of such groups (e.g., Lee and DeVore, 1976; Lee, 1993).

The !Xun of north-central Namibia exhibit several similarities to the Ju|’hoan. For example, their languages are closely related. Due to this background, in some studies of the San, the !Xun and Ju|’hoan were not clearly differentiated (e.g., Wilmsen, 1989). In recent years, however, the !Xun have been recognized as having significant differences from the Ju|’hoan in several respects, such as in kinship and naming terminology (e.g., Boden and Takada, 2014; Takada, 2014), language (e.g., König and Heine, 2001), and their history of negotiation with neighboring peoples (e.g., Takada, 2015).²

Despite these sociohistorical differences, both Ju|’hoan and !Xun caregivers frequently engage their infants in gymnastic behavior (Konner, 1976, 2016; Takada, 2005, 2010, 2020). Close examination of the daily context in which gymnastic behavior occurs enables us to reconsider how their habitus (Bourdieu, 1977) is shaped and how children and caregivers gradually co-

¹ Those early researchers considered caregiving behavior and child socialization among the Ju|’hoan, one of the nomadic San groups, as one of the key domains of research to better understand human sociality. Their findings can be summarized as follows. First, extremely close mother–child bonding was found among the Ju|’hoan (Konner, 1976). The Ju|’hoan people believed that a child needed breastmilk until he or she was at least three or four years old (Marshall, 1976: 38, 166). Secondly, caregivers, not only mothers but also fathers and other adults, actively engaged infants in physical exercises (Draper, 1976; Konner, 1976). Caregivers often help infants to stand or to take their first steps between the caregivers’ outstretched arms (i.e., gymnastic behavior) and play games with them (Marshall, 1976: 318). Thirdly, after the long nursing period, children began to develop a strong attachment to a multi-aged child group, which had little responsibility for subsistence (Konner, 1976). These features were regarded as characteristic of hunter-gatherer societies in general (Konner, 2016).

² Researchers have extensively documented the lifestyle of the Ju|’hoan living in the Kalahari Desert (Lee and DeVore, 1976; Lee, 1993), assuming that they have been relatively isolated from other peoples until recently, though the actual extent of their interactions has been the subject of much debate (Wilmsen, 1989; Lee and Guenther, 1991). In contrast, the !Xun of north-central Namibia have ostensibly had close associations with neighboring Ova-wambo agropastoral people for centuries (Takada, 2015).

construct their microhabitat (Ochs et al., 2005), where their habitus dwells. Thus, using the method and theoretical perspective of language socialization (Ochs and Schieffelin, 1984, 1995), I will disentangle the “locally relevant arrays of semiotic fields” (M. H. Goodwin and Cekaite, 2018) employed by !Xun caregivers while engaging infants in gymnastic behavior. More particularly, I will examine the complex and distinct means of regulating and comforting infants in distress through the use of multiple modalities.

I have conducted intensive field research among the San of southern Africa for 48 months in total since the late 1990s. Having obtained consent from the local authorities and each family, during my field research I audio and visually recorded naturally occurring interaction, totaling approximately 169 h. Extracts presented in this paper are taken from data collected in 1998 and 2002 among the !Xun living in Ekoka village, situated approximately 25 km southeast of Okongo, the center of the Okongo Constituency in north-central Namibia. Extracts were selected on the basis of child distress and other fretful behavior, and the diversity in the infants' month age. Although there was no intention of creating a balanced sampling, extracts nevertheless reflect the everyday life of ordinary !Xun families with young children, and they are sorted in order of the infants' month age.

3. Pragmatic reframing from distress to playfulness through gymnastic behaviors

3.1. Combining haptic and acoustic modes of communication to reframe infant distress

Upon observing an infant's indication of distress through crying or other means, which is a potential sign of interaction “trouble” (Schegloff, 2007), the caregiver frequently engages the infant in gymnastic behavior. Extract 1 (divided into three parts) focuses on a 14-week-old girl, B1. B1's mother, M1, sits on the ground nearby. They are visiting a traditional bar or pub, which is commonly called a *cucashop*. While there are at least eight other !Xun participants around them (see Fig. 1–1), our focus will be on M1 and B1 in Extracts 1a and 1b, and on M1 and B1 along with Na, Nd, and Hd in Extract 1c. In the transcripts, arrows and line number [→ (to line number)] indicate up to which line the body movement or gaze direction continues.

Extract 1a (B1 is a 14-week-old girl. M1 is B1's mother. Hd is an adult woman. Na and Nl are B1's elder sisters. Nd is B1's classificatory elder brother)³

1 M1^{body}: * picks up B1 using both her hands

M1^{gaze}: * looks at B1 → (to line 3)

2 B1: * ((cry)) *n gee*

3 M1: + *aa ge ge aa gu ge ge aa daba daba*

you be be you take be be you baby baby

you're, you take ((you))'re, you're baby baby

M1^{body}: + pats B1's body repeatedly while holding B1
in a standing posture

(2.0)

4 M1: \$ *daba daba*

baby baby

baby baby

M1^{body}: \$ lightly bounces B1 up and down while holding B1 in a standing posture → (to line 6)

5 M1: *daba daba*

baby baby

baby baby



Fig 1–1 M1 picks up the infant B1, as soon as B1 whimpers (lines 1 and 2)

³ See appendix for the transcription conventions.

As soon as infant B1 whimpers, “*n gee*,” M1 picks up B1 while looking at her (lines 1 and 2; Fig. 1–1). M1 immediately responds to the infant by engaging in *!ain* (a series of behaviors in which a caregiver repeatedly makes the baby jump while patting the baby's body) in a face-to-face formation (Cekaite and Holm Kvist, 2017), while producing *!ain !ua* (*!ua* means “name”) utterances “*aa ge ge*,

aa gu ge ge, aa daba daba (you're, you take ((you))'re, you're baby baby)" (line 3). !Xun people say that *!ain* is done to "make infants happy" (Takada, 2005, 2020). This folk concept considerably overlaps with the analytic concept of gymnastic behavior.

Notably, the phonation of M1's *!ain !ua* utterances (above) shows significant similarity to B1's whimper. That is, M1 produced utterances in which "n gee" was rephrased. This "textualizes" (Silverstein and Urban, 1996; Gordon, 2002) the infant's whimper in a playful manner and reframes the caregiver–infant interaction as more communicative. Then, M1 duplicates the address term "daba" meaning "baby, baby" (line 4) and repeats it (line 5), while lightly bouncing B1 up and down (indicated by the arrow, until line 6). As observed in this extract, M1 changed the frame of interaction through responding to the infant's whimpers by mobilizing haptic (*!ain*) and vocal (*!ain !ua*) stimuli.

Over the course of a single interaction, the caregiver's initial attempts to soothe the infant in distress often do not lead to the expected state. In response, they expend a great deal of energy in reframing through gymnastic behavior when children continue to display distress. After five lines, during which M1 engages in *!ain*, Excerpt 1b follows.

Extract 1b (six lines after Extract 1a ended)

11 B1: + ((cry)) *aa*

B1^{body}: + makes stepping movements

12 M1: % *ahawe daba gllhom* * *aa daba gllhom daba gllhom daba gllhom*

no baby quiet you baby quiet baby quiet baby quiet

no, baby, be quiet, you, baby, be quiet, baby, be quiet, baby, be quiet

M1^{body}: % lightly bounces B1 up and down while holding B1 in a standing posture

13 B1^{gaze}: * looks to her left side → (to line 21)

14 M1: + *daba gllhom*

baby quiet

baby, be quiet.

M1^{body}: + holds B1 in a standing posture → (to line 18)

(2.0)

15 M1: *daba gllhom*

baby quiet

baby, be quiet.

16 B1: % *ee*

17 M1^{gaze}: % looks to her right side → (to line 20)

18 M1: *mhum*

INT

mhum

19 M1: * *daba gllhom*

baby quiet

baby, be quiet.

M1^{body}: * lightly bounces B1 up and down while holding B1 in a standing posture

20 B1: + *n:ge*

B1^{body}: + loses balance and slightly sways forward

21 M1: % *aha we*

no

NO

M1^{body}: % holds B1 in a standing posture

M1^{gaze}: % looks at B1 → (to line 25)

B1 produces a short cry, "aa," while making stepping movements (line 11). These actions may return their interaction to a mood of distress. However, M1 immediately responds, saying "ahawe (no)" and quickly repeats the phrase "daba gllhom (baby,

be quiet),” which the !Xun commonly use to soothe a baby in distress, while lightly bouncing B1 up and down (line 11). M1's responses attempt to reclaim the playful mood. Then B1 starts looking to her left (M1's right) (line 13 until line 21).

Looking at B1, M1 again produces the same phrase twice (lines 14 and 15) while holding B1 in a standing posture (lines 14–18). Then B1 makes a vocalization, “*ee*” (line 16), which sounds like a response to M1's prior utterance. Simultaneously, M1 looks to her right (the same direction as does B1) (lines 17–20) and acknowledges B1's vocalization (line 18). M1 then repeats the utterance “*daba gllhom* (baby, be quiet)” while bouncing B1 slightly (line 19). This time, B1 produces a whimper, “*n:ge*,” indicating distress while losing her body balance and slightly swaying forward (line 20). In response, M1 produces an utterance, “*aha we* (NO),” in a louder voice (line 21) while holding B1 in a standing posture (line 21) and looking at her (lines 21–25).

In order to reframe infant distress to playfulness, the caregiver sometimes involves co-present people in their interactions, as illustrated in Excerpt 1c, which immediately follows 1b. As shown in Fig. 1–1, in front of M1, there is a wooden bench on which four people, including B1's elder sister Na, are sitting. Next to Na, there is B1's classificatory elder brother, Nd. To M1's left, an adult woman, Hd, who is weaving a palm-leaf basket, sit on the ground.

Extract 1c (right after Extract 1b ended)

22 B1^{body}: slightly sways backward

23 M1: *ndema*
y.brother

little brother

24 B1^{body}: sways backward and looks in the direction of Nd and Na

25 M1: *karowe*
y.sister

little sister

26 Hd^{gaze}: looks at B1

27 M1: * *hhh*

M1^{body}: * lightly bounces B1 up and down while holding B1 in a standing posture and patting B1's body → (to line 32)

28 Hd: * *hhh* (*kae wa:*)

29 M1: + *ndema kahewa ka wena kahewa*
y.brother y.sister my y.sister

little brother, little sister, my little sister

30 Hd^{gaze}: + looks at B1 → (to line 32)

31 B1: % ((cry))

B1^{body}: % makes stepping movements → (to line 32)

32 M1: *obe tchaka obe tchaka*
you INT you INT

you're stepping, you're stepping

33 M1^{body}: * makes B1 sit down → (beyond this excerpt)

M1^{gaze}: * looks at Hd

34 Hd: *hhh* [(*hohon jone*) +

Hd^{gaze}: + looks at the basket → (beyond this excerpt)

B1 sways slightly backward (line 22) because, at 14 weeks old, she cannot sustain the weight of her head. This could be another signifier of interaction trouble. Then M1 says to B1 “*ndema*,” which means “((here is)) your bother” (line 23). Subsequently, B1 sways farther backward and looks in the direction of Nd and Na (line 24). M1 then says to B1 “*karowe*” (line 25), which means “your sister.” These utterances activate their familial relationships. Hd, who is still weaving the palm-leaf basket, glances at B1 (line 26). Then M1's (line 27) and Hd's (line 28) laughter follow. Simultaneously, M1 engages B1 in *!ain* again. M1 lightly bounces B1 up and down while holding B1 in a standing posture and patting B1's body in lines 27–32 (as indicated by the arrows in the transcript). Moreover, M1 modifies the above utterances and produces *!ain lua* utterance (line 29). Hd looks at B1 in lines 30–32.

However, B1 again produces a short cry and makes stepping movements (lines 31 and 32). While keeping B1 jumping, M1 further produces a modified *!ain !ua* utterance: “*obe tchaka obe tchaka* (you’re stepping, you’re stepping)” (line 32), derived from a customary phrase used while dancing.⁴ The playful mood is restored. M1 then looks at Hd (line 33) while making B1 sit down on her lap (lines 33 and beyond). The playful mood elicits smiles from those present (line 34).

In Extract 1(a–c), the mother pragmatically reframed the infant’s distressful behaviors as playful actions by way of *!ain*, namely, coordinating gymnastic behavior, gazing, smiling, and producing *!ain !ua* and other utterances for the child. Indications of distress, such as the infant’s movement of extremities and whimpering invited the mother to engage in *!ain*. In other words, the mother made use of infant distressful behaviors for providing a “cultural gloss” (Ochs and Schieffelin, 1995; Burdelski, 2015) shared among the !Xun. Accordingly, the affective frame was repeatedly changed from distress to amusement. Moreover, possibly troublesome infant postural change (e.g., swaying backward) was reframed as having communicative and cultural meaning (e.g., looking at siblings) by referring to a third party (e.g., the baby’s siblings). This embodied restructuring resulted in a change of their participation framework and facilitated the involvement of nearby people in the playful activity of gymnastic behavior. Hence, the (re)framing of infant behaviors embodies the !Xun’s culturally distinct uses of linguistic and other semiotic resources.

3.2. Mutual coordination of the frame and key of interaction between caregiver and infant

As the infant grows, the mutual coordination between caregiver and infant becomes more and more complex (e.g., Gratier et al., 2015; Gratier, 2020). Reframing and rekeying their interactions by using various semiotic resources is further evident in the next extract. In excerpt 2 (divided into three parts), B2 is a male baby aged 17 weeks. M2 is B2’s mother. Py is the wife of M2’s son, namely, B2’s adult sister-in-law. B2 is lying down on Py’s lap while holding his hands in front of his body.

Extract 2a (B2 is a 17-week-old boy. M2 is B2’s mother. Py is B2’s adult sister-in-law)

1 M2^{gaze}: looks at B2 → (to line 6)

2 B2: *aa*

3 M2: + *tca okx’ ui*

two speak

((we)) two are speaking

M2^{body}: + moves her face close to B2 while scratching the left side of her neck with her right hand

4 B2: *aa*

5 M2: % *tca okx’ ui*

two speak

((we)) two are speaking

M2^{body}: % moves her face closer to B2 while scratching the left side of her neck with her right hand

6 B2: *ee*

7 M2: * [*tca okx’ ui*

two speak

((we)) two are speaking

M2^{body}: * moves her right hand to the right side of her face and then

tickles B2 with the right hand while moving her face even closer to B2

8 B2: [*aa*

B2^{body}: moves both of his hands → (to line 9)

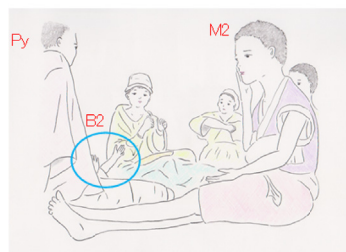


Fig 2-1 B2 starts moving his hands actively (line 8)

⁴ As already mentioned, Jul’hoan caregivers believe teaching is necessary for infants to learn to sit, crawl, stand, and walk. On the other hand, not many !Xun caregivers say they engage in “training” to accelerate infant motor development on a daily basis, compared with the fact that they often eagerly share knowledge about “soothing” or “amusing” (Takada, 2020).

9 M2^{body}: wipes her face with her right hand and then rubs her hands together in front of her body, then she smears lotion on her head with both hands → (to line 11)

10 Py^{body}: pats B2's body repeatedly → (to line 11)

11 B2: *n aaa*

12 M2: *+ aa nŋ okx' ui [tce:*

you(PL) speak what

what are you sayng?

M2^{body}: + moves her face close to B2 while smearing lotion on her head with both of her hands → (to line 14)

13 B2: *[aa aa oa koe*

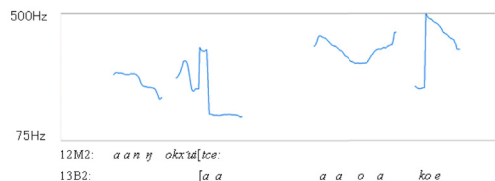
(0.4)

14 B2: *aa oa koe a[a o*

15 M2: **[aa ma |oa n!ai okx' ui*

you TOP NEG know speak

you don't know how to speak Fig 2-2 Pitch contour of lines 12 and 13



M2^{body}: ** tickles B2 with her right hand while moving her face even closer to B2*

16 B2: *nn nen*

B2 and M2 are exchanging utterances repeatedly in a face-to-face formation. That is, as an immediate response to B2's repetitive cooing, which displays B2's pleasant state (lines 2, 4, 6, and 8), M2 says to B2 "tca okx'ui (((we)) two are speaking)" three times (lines 3, 5, and 7) while looking at B2's face (lines 1–6). These utterances reframe infant cooing into more culturally meaningful conversation (Wilce, 1998). Although the formulation of these utterances is almost the same, the ways of addressing B2 are modified in each utterance. While producing the first utterance, M2 looks at B2's face and moves her face close to B2 (line 3). In the second utterance, M2's face gets closer to B2 (line 5). In the third utterance, she tickles B2 with her right hand while moving her face even closer to B2 (line 7), overlapping with B2's cooing (line 8). That is, involving multimodal semiosis, such as utterance, gaze, posture, gesture, and touch (also see De León, 2012), M2 gradually upgraded the movements of her performative pseudo conversation (Ochs and Schieffelin, 1984) to attract B2's attention and established protoconversation (Trevarthen, 2001; Gratier et al., 2015; Gratier, 2020) with B2. Accordingly, their interaction is keyed to a playful affective stance.

B2 then starts moving his hands actively as a sign of distress (lines 8 and 9; Fig. 2–1). In response, Py pats B2's body repeatedly to soothe him (lines 10 and 11). After a while, B2 softly vocalizes "n aaa" (line 11), which displays that he has regained a pleasant state. M2 then says to B2, "aa nŋ okx'ui tce (what are you saying?)," which again reframes infant cooing into conversation (line 12), while moving her face close to B2 (lines 12–14). B2 continues his vocalization, "aa aa oa koe" (line 13) and "aa oa koe aa o" (line 14) while moving his hands. As shown in the pitch contour track (Fig. 2–2), B2 is mimicking or echoing the phonation ("aa nŋ okx'ui tce" → "aa aa oa koe") and pitch contour (slightly falling intonation for M2's "aa nŋ" in line 12 and B2's "aa aa" in line 13, and then slightly rising intonation, voiceless part, and falling intonation for M2's "okx'ui tce" in line 12 and B2's "oa koe" in line 13) of M2's utterance and thereby affiliates with M2's reframing. Slightly overlapping with B2's vocalization, M2 teases (Schieffelin, 1986) B2, "aa ma |oa n!ai okx'ui (you don't know how to speak)" while tickling B2 (line 15). Immediately, B2 makes a vocalization, "nn nen" (line 16), which is a different phonation from those in lines 13 and 14 and sounds like a response to M2's utterance in line 15.

The above interaction suggests that B2 was focused on the prosodic features of M2's *!ain !ua* utterances, which not only reframe infant cooing into conversation but also employ metadiscursive practices that treat the infant's vocalization as communicating a message (Wilce, 1998). Mimicking the phonation and melodic contour of M2's utterances, B2 displayed how he heard it and, at the same time, reenacted M2's lived experience of (relational aspect of) emotion. Moreover, B2 reacted at the "transition relevant point" (Schegloff, 2007) of M2's utterances. These features suggest that, even in early infancy, children actively affiliate with caregivers' reframing through interpreting and reconstructing caregivers' discursive practices (Gratier et al., 2015; Gratier, 2020).⁵ For her part, M2 carefully monitored her infant's behaviors and playfully calibrated the features of her vocalization (e.g., repetition and modification of utterance) and other multimodal behaviors (e.g., gaze, facial expression,

⁵ A similar alternation between caregivers' appellations and infants' vocalizations was also demonstrated among the G!ui (a San group living in Botswana) (Takada, 2005, 2020) and the Nso (a group of agriculturalists living in Cameroon) (Demuth et al., 2011).

body posture, touch, distance to the infant) to retain B2's attention. These features seem to invite the infant's awareness that his own actions can themselves be objects of the caregiver's attention (Brown, 2012). B2 and M2 thereby mutually coordinated the key of their interaction to a playful mood. This enabled them to share a sense of passing time (Malloch, 1999) in their protoconversation, which is more bi-directional than that in Extract 1. That is, not only the mother reframes infant behaviors as having communicative and cultural meaning but also the infant actively affiliates with the mother's reframing.

Following the above interaction (38 s later), in Extract 2b, a non-maternal caregiver (Py) engages B2 in gymnastic behavior, which rekeys the infant's mood and brings a shift of participant framework.

Extract 2b (38 seconds after Extract 2a ended)

- 1 B2^{body}: moves both of his hands
- 2 Py^{body}: holds B2's left arm with her right hand while wiping her left hand on her left thigh → (to line 4)
- 3 Py: *mtce, n|ŋ n!!ao man*
what sit down INT
what ((are you doing)), hey, sit down
- 4 M2^{body}: applies lotion on her own right leg → (beyond this excerpt)
- 5 B2: * ((cry))
- 6 Py^{body}: * picks up B2, holds him in a standing posture, and makes him jump once → (to line 7)
- 7 B2: *anŋ*
- 8 Py^{body}: holds B2 in a standing posture
- 9 Py^{body}: + makes B2 jump and then holds B2 in a standing posture → (beyond this excerpt)
- 10 B2^{body}: + makes stepping movements



Fig 2-3 B2 vocalizes "anŋ", while shifting to a crouching position (line 7)

When B displays distress (line 1), Py, who has been observing B's movements, takes a hold of B's left arm with her right hand (line 2). She then says to B, "what ((are you doing)), hey, sit down" (line 3) while wiping her left hand on her left thigh (lines 2–4). Sitting beside Py, M2 applies lotion on her own right leg (line 4 and beyond). When B2 starts crying (line 5), Py picks up B2, holds him in a standing posture, and makes him jump once (lines 6 and 7). This leads to an observable change in B2's mood. That is, B2 stops fussing and vocalizes "anŋ," which indicates his comfort (line 7; Fig. 2–3). After holding B2 in a standing posture for a while (line 8), Py makes him jump again and continues to hold him in a standing posture (line 9 and beyond). She thus reframed the interaction into a playful activity. Note that although B2 can sustain the weight of his head while standing, he cannot yet sustain the weight of this entire body. Consequently, B2 gradually shifts to a crouching position. Observing this shift, Py immediately makes B2 jump again, which elicits B2's stepping movements (line 10). This allows Py and B2 to maintain the playful activity. They repeat this activity several times with minor variations.

In the above extract, the participant framework shifted from the M2–B2 dyad exchanging vocal utterances with Py observing (Extract 2a) to the Py–B2 dyad engaging in gymnastic behavior with M2 observing. Gymnastic behavior is a temporally extended haptic act that intensifies the sense of co-presence and the relevance of embodied responses (Cekaite, 2015; Cekaite and Holm Kvist, 2017; Cekaite and Bergnehr, 2018). Accordingly, Py carefully monitored B2's affective state, particularly his distressful behaviors and postural changes, and contingently reacted to them. This enforced B2's bodily responses, particularly stepping movements and comfortable vocalizations. These features make it possible for !Xun caregivers to reframe the interaction into a playful activity in accordance with !Xun cultural values and to achieve mutual understanding with the infant within the "intercorporeal framework for mutual engagement" (M. H. Goodwin and Cekaite, 2013: 136).

3.3. The changing participation framework of family interactions

As shown above, responding to infant distress often involves multiple caregivers (i.e., not only the mother, but also older siblings and other family members). Infants' bodily actions elicit caregivers' assessments to reframe the infants' bodily actions and strengthen caregivers' affective stance (e.g., M. H. Goodwin et al., 2012; Burdelski, 2013; M. H. Goodwin and Cekaite,

2018). Let us further examine this point in Extract 3 (divided into two parts), where three caregivers (the infant's parents and elder brother) attend to male infant B3, who is 20 weeks old and has a clogged nose. Each of the three caregivers responds to B3's actions in a different manner.

Extract 3a (B3 is a 20-week-old boy. M3 and F3 are B3's mother and father, respectively. Hk is B3's six-year-old elder brother.)

1 M3: *n|a |oa cu

sit NEG lay down

sit down, don't lay down.

M3^{body}: *pats B3's body softly twice

2 B3^{body}: *makes stepping movements

3 M3: +(tatu tatu xaza ko) n|lane=

name

n|lane

M3^{body}: +holds B3's body again and turns him toward Hk

4 Hk: =n|lane

name

n|lane

(3.2)

5 B3^{body}: slightly increases tension in his limbs

6 B3: ((sneeze))

7 B3^{body}: sways back a little

8 Hk: n|lane

name

n|lane

(2.0)

9 B3^{body}: \$ increases tension in his legs

10 M3: \$ h e e: [hh

11 F3: [hhh

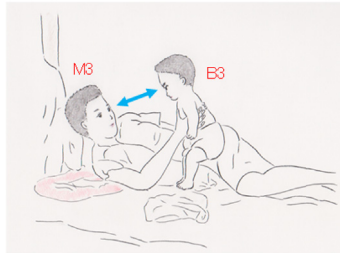


Fig 3-1 M3 holds B3's body in a standing posture, while lying down (line 3)

B3 is in a nesting situation in which M3 holds B3 in a standing posture while she is lying down. While supporting B3's buttocks with her left thigh, M3 then says to B3, "n|a |oa cu (sit down, don't lay down)" while patting B3's body softly twice (line 1). Simultaneously, B3 makes stepping movements (line 2). Following this, M3 utters something (unidentified) in Oshikwanyama⁶ and then calls B3's name, "n|lane," while holding B3's body and turning him toward Hk (line 3; Figs. 3–1). This sets up a frame of pseudo conversation and invites B3's elder brother, Hk, into their interaction. A moment later, Hk addresses B3 by his name (line 4).

B3 slightly increases tension in his limbs (line 5) and then sneezes, which sounds like a response cry (Goffman, 1981) (line 6). He then slightly sways backwards (line 7). Hk immediately responds to these potential signs of interaction trouble by calling B3's name again (line 8), thereby maintaining the frame of pseudo conversation. Subsequently, M3 produces an interjection while smiling. B3 then increases tension in his legs (lines 9 and 10). Simultaneously, F3 laughs (line 11). In these ways, both M3 and F3 assess the interplay between B3 and Hk as humorous and demonstrate their affiliative stance (Stivers et al., 2011) to B3 and Hk. Then M3 and F3 further invite Hk to interact with B3 (Extract 3b).

⁶ Oshikwanyama is the language of Ovakwanyama, a group of Ovawambo agropastoral people.

Extract 3b (right after Extract 3a ended)

- 12 B3: * .hh .hh
 B3^{body}: * increases tension in his limbs
- 13 M3: e:: hh +kx'a djun [(oa katchai)
 first call (future name)
He will soon call (Katchai)
- 15 B3^{body}: + moves his limbs and then loses his balance
- 16 F3: [(se) mdje, mdje, mdje
 who who who
who is it? who is it? who is it?
- 17 B3: [aa]
- 18 Hk: nlane
 name
 nlane
- 19 B3^{gaze}: looks at Hk → (to line 20)
 (2.6)
- 20 M3: e he: hh=%
- 21 B3^{gaze}: % looks at M3 → (beyond this excerpt)
- 22 Hk: =% nlane
 name
 nlane
 (2.0)
- 23 M3: e he

B3 breathes in while increasing tension in his limbs (line 12). M3 produces an exclamation, “e e::hh,” and says “kx'a djun [(oa katchai) (B3 will soon call (Katchai))” while still holding B3 in a standing posture (line 13). She probably expects B3 to say his relative's name soon, as his first word. F3 asks Hk, “(se) mdje, mdje, mdje (who is it? who is it? who is it?)” (line 16).

As M3 produces an utterance in line 13, B3 performs stepping movements (line 15). Then he loses his balance and produces a response cry, “aa” (line 17); seeing this potential sign of interaction trouble, Hk repeats B3's name (line 18), as calling B3 back to the frame of pseudo conversation. Being physically supported by M3, B3 looks at Hk (lines 19 and 20). While looking at B3, M3 produces an interjection and laughs (line 20). Following this, B3 looks at M3 (line 21 and beyond). Simultaneously, Hk again addresses B3 by name (line 22). Then M3 produces a short laugh (line 23).

In this extract, M3 set up a frame of pseudo conversation and invited Hk to it. Accepting the invitation, Hk regarded B3's sneeze and vocalization, which can also be a sign of distress, as a response to his address term by repeatedly calling B3's name. Both M3 and F3 produced positive assessments of their playful interplay. Later, F3 also invited Hk to address B3 by his name, and Hk accepted. M3 and F3 thereby not only introduced B3 into the frame of pseudo conversation but also provided Hk opportunities to urge the elder brother to care for his younger brother appropriately in their familial relationship. As this case demonstrates, a young infant in distress is often involved in the changing participation framework of family interactions, through which each interactant mutually adjusts his or her epistemic stance to their culturally distinctive value and morality (Ochs, 1979; Demuth et al., 2011; Takada and Kawashima, 2016; Holm Kvist, 2018).

3.4. Reframing an infant's persistent activity

Similar to their counterparts in other societies, around the age of six months !Xun infants start engaging in voluntary and goal-oriented actions, such as reaching, in response to the interactional conditions that caregivers create (Takada, 2020). These actions are sometimes not supported or accepted by the caregivers and thus involve and/or lead to infant crying or other displays of distress. Extract 4 (divided into three parts) demonstrates this. A young teenage mother, M4, is sitting on a plastic sheet laid on the sand. She holds a large cup, which contains a locally brewed beverage, in her right hand while

supporting the standing posture of her 23-week-old baby, B4, with her left hand. T1, M4's younger sister, also sits on the plastic sheet and touches B4's buttock to help keep her standing. The first two parts (Extracts 4a and 4b) are preliminary to the third part (Extracts 4c), in which B4's crying begins.

Extract 4a (B4 is a 23-week-old girl. M4 is B4's mother. T1 is M4's younger sister. At is the researcher/author)

1 B4^{body}: stretches out her left hand toward the cup

2 M4: & *kua*
INT

no

M4^{gaze}: & looks at B4

M4^{body}: & draws back the cup, away from B4

3 M4^{body}: moves the cup toward her face → (to line 6)

4 B4^{body}: stretches out her left hand toward the cup → (to line 5)

5 T1: *o nlan * nlan nla*
INT leave don't

oh, leave it. don't touch.

T1^{body}: * pats B4's left arm once

6 T1^{body}: grabs B4's left arm and lowers it → (to line 8)

7 T1^{body}: + grabs B4's right arm → (to line 8)

8 M4^{body}: + drinks the beverage and lowers the cup

9 M4^{body}: % brings the cup to her mouth and drinks the beverage

10 T1^{body}: % takes her hands away from B4's body

11 B4^{body}: % stretches out her left hand toward M4's shirt
→ (to line 14)

12 M4^{body}: * puts the cup on the plastic sheet and wipes her face with her right hand

M4^{gaze}: * looks at the cup → (to line 13)

13 B4^{body}: * wiggles her body

14 M4^{body}: + brings the cup toward her face and drinks the beverage

15 B4^{body}: + touches M4's shirt with her left hand and then grabs it with both hands → (to line 25)

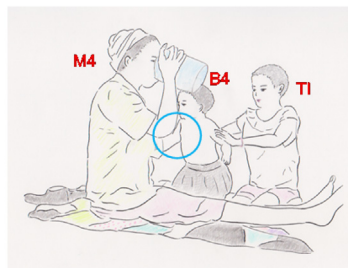


Fig. 4-1 M4 drinks a cup of beverage while grabbing B4's arm with her left hand. T1 supports B4 from behind (line 7)

When M4 attempts to drink the beverage, B4 stretches out her left hand towards the cup (line 1). Immediately M4 says “NO” to B4 while drawing back the cup and looking at B4's face (line 2). M4 brings the cup towards her face again (lines 3–6). Despite this clear rejection, B4 again stretches out her left hand towards the cup (lines 4 and 5). Then T1 adopts a disciplinary frame (Gordon, 2002), in which she directs B4 to keep her hand away from the cup. Simultaneously she pats B4's left arm once (line 5). She then grabs B4's left arm and lowers it (lines 6–8), and then she grabs B4's right arm too (lines 7 and 8). T1 thereby supports B4 from behind (Fig. 4-1). While M4 is drinking the beverage (lines 8 and 9), T1 takes her hands away from B4's body (line 10).

Although these actions did not change the frame of B4's reaching activity, B4 changes the object of reaching: B4 touches M4's shirt (line 11–14), which might be an attempt to gain M4's breast. Then M4 puts the cup on the plastic sheet and wipes her face with her right hand (line 12) while looking at the cup (lines 12 and 13). Even during this action, M4 still keeps holding B4's body with her left hand. B4 is wiggling her body, trying to maintain balance (line 13). While M4 drinks the beverage again (line 14), B4 touches M4's shirt and then grabs it (lines 15–25).

After seven lines, during which M4 hands the cup to T1 and produces B4 *!ain !ua* utterances (not shown), M4 engages B4 in gymnastic behavior (Extract 4b), attempting to change B4's frame of reaching activity.

Extract 4b (nine lines after Extract 4a ended)

- 24 M4^{body}: sucks on her own shirt once and makes B4 jump five times
 25 M4: ()
 26 M4^{body}: * holds B4's body with her right hand
 27 B4^{body}: * touches M4's shirt with her left hand
 28 M4^{body}: checks B4's skirt → (to line 29)
 29 B4^{body}: grabs M4's shirt with both of her hands
 30 M4^{body}: + strokes B4's body with her left hand
 31 B4^{body}: + brings M4's shirt to her mouth

While M4 is holding B4's body to support her standing posture, B4 continues trying to touch and grab M4's shirt. Meanwhile, M4 performs *lain* (line 24). Following this, she murmurs to B4 (line 25). Then she holds B4's body with her right hand (line 26), checks B4's skirt (lines 28 and 29), and strokes his body with her left hand (line 30). During these attempts to change B4's frame of reaching activity, B4 touches M4's shirt (line 27), grabs it (line 29), and brings it to her mouth (line 31). Extract 4c follows, in which B4 begins to cry.

Extract 4c (right after Extract 4b ended)

- 32 M4^{body}: straightens her disturbed shirt and then sucks it once
 33 M4^{body}: \$ gets to her knees and turns around → (to line 36)
 34 At: \$ *lil'a lain lua oha mdje*
 name soothe name be what
 what is lil'a's nurse name?
 35 M4: *ee?*
 INT
 what?
 36 At: *lain lua*
 soothe name
 nurse name
 37 M4^{body}: * lays B4 on the plastic sheet
 M4^{gaze}: * looks at B4 → (to line 39)
 38 M4: (*shoona kilu koa*)
 39 B4: + *eeee eee*
 B4^{body}: + moves her limbs → (beyond this excerpt)
 40 M4^{body}: + stands up and puts on a sling → (to line 41)
 41 B4: *.hhh \$* ((burst out crying)) → (beyond this excerpt)
 B4^{body}: \$ increases tension in her limbs
 42 M4: *nla-hŋ dc'ŋ oa*
 don't FOC cry FUT
 don't cry!



Fig 4-2 B4 bursts out crying as M4 is putting on a sling (line 41)

After straightening her shirt (line 32), M4 gets to her knees and turns around (lines 33–36). While having a short conversation with At about B4's nurse name (lines 34–38), she lays B4 on the plastic sheet (line 37) and looks at her (lines 37–39). This indicates that M4 is going to reframe the activity. However, B4 starts whimpering (line 39) and moving her limbs (line 39 and beyond). Listening to this sign of distress, M4 stands up and puts on a sling (lines 40 and 41). After taking a deep breath, B4 bursts out crying (line 41 and beyond; Fig. 4–2). While tightening the sling, M4 says to B4, “*nla-hŋ dc'ŋ oa* (don't cry!)” (line 42).

In Extract 4(a–c), the mother treated the infant's reaching activity as objectionable by attempting to reframe it in various ways. For example, when B4 stretched out her hand towards the cup, M4 immediately rejected this action by saying “NO” to B4 and drawing back the cup. These actions demonstrated M4's understanding of what B4 wanted to do (and not do) as displayed through her behaviors. She then assessed these behaviors in light of !Xun norms (e.g., a baby should not drink the beverage) and reacted to the infant by indicating what she should do (and should not do) through multimodal means (e.g., producing an utterance of rejection, drawing back the cup). M4's younger sister, T1, also affiliated with M4's reactions in multimodal ways (e.g., issuing negative directives, lowering B4's arm). Such triadic interactions are common in child-directed communication (Ochs et al., 2005), where infants are placed in various corporeal arrangements, including side-by-side and nested formations, in addition to face-to-face formations (e.g., De León, 2012, 2017; Takada and Kawashima, 2016). Here, M4 and T1 cooperated to regulate and stylize B4's behaviors in accordance with !Xun norms. However, B4 further tried to grab M4's shirt repeatedly. M4 then started performing *!ain*, singing a song, and stroking B4's body, in order to reframe B4's activity. Nevertheless, B4 kept showing interest in M4's shirt and, possibly, her breast. Then M4 laid B4 down on the plastic sheet and put on a sling, preparing to hold B4 on her back. B4 started crying, which can be seen as a “self-assertion” (Wilce, 1998: 104) of being distressed and demonstrating resistance to the situation. Nevertheless, M4 displayed her own strategy and timing to comfort B4. Regarding B4's crying as expressing inappropriate and problematic emotion (Ahn, 2016; Holm Kvist, 2018), M4 issued a negative directive (i.e., “don't cry!”). After M4 put B4 in the sling, B4 calmed down.

4. Conclusion: reframing infant distress and displaying caregiver's affective stance

The above analyses demonstrate the constellation of the following five bodily techniques used by !Xun caregivers to reframe infant distress (through crying, whimpering, etc.) and display the caregivers' affective stance while engaging infants in gymnastic behavior. First of all, !Xun caregivers are sensitive to the physical configuration of people around the infant. !Xun mothers, who form extremely close bonds with their infants (Takada, 2005, 2010, 2020), carefully arrange appropriate facing formations of their infants and other people. This facilitates the involvement of those people in the frame of family interactions and transforms them from mere observers into available caregivers.

Second, when faced with an infant in distress, caregivers actively work to rearrange the baby's corporeal positioning to reduce distress and ensure comfortable posture. Placing the infant in a standing posture is an effective way to promote “the education of attention” (Ingold, 2000: 37; C. Goodwin, 2007; De León, 2017) and elicit rhythmical leg movements from the infant. Moreover, repetitive bodily movements constitute a pleasant rhythm in caregiver–infant interaction.

Third, touch (i.e., establishing a haptic link) between caregiver and infant is the fundamental mode of caregiving via gymnastic behavior. Through tactile interactions, !Xun caregivers monitor infants' physical and affective states, convey their affective stance, and choreograph infants' physical movements (M. H. Goodwin and Cekaite, 2018; Cekaite and Bergnehr, 2018). Pragmatic reframing is performed during this process. Meanwhile, infants can reduce distress and attune their affective states with surrounding people by touching them or by allowing themselves to be touched (Cekaite, 2015). Additionally, touching during gymnastic behavior often evolves into suckling, which stimulates infants' sense of taste and smell.

Fourth, gymnastic behavior is strongly associated with gaze (Takada, 2005, 2020). Caregivers not only frequently and carefully look at the infant but also guide the direction and focus of the infant's gaze while engaging in gymnastic behavior. Thereby gaze increasingly becomes a method of social control (Kidwell, 2005), which contributes significantly to reframing an infant's crying and other signs of distress.

Fifth, vocal communication is frequently combined with gymnastic behavior. Giving *!ain !ua* utterances constitutes the major medium of pragmatic reframing, which associates infant behavior within the web of cultural meaning. Through participating in such normative expressions, an infant is socialized into locally appropriate patterns of attending to bodily sensation as a type of culturally mediated experience (Wilce, 1998: 105). Giving *!ain !ua* utterances elicits an infant's pleasant vocalizations as well. Accordingly, vocal communication facilitates coordination of the key of caregiver–child interaction. Moreover, the combination of vocal communication and gymnastic behavior creates a culturally distinct rhythm that embodies communicative musicality (Malloch, 1999; Trevarthen, 2001; Gratier and Apter-Danon, 2009; Cekaite and Holm Kvist, 2017; Gratier, 2020).

Taken together, gymnastic behaviors provide multimodal “action packages” (C. Goodwin, 2007; De León, 2017) and thereby enhance intersensoriality in caregiver–infant interactions. By three months old, the dominant mode of infant behavior shifts from reflexive general movement to voluntary behavior (Takada, 2020). From that point/age onward, namely, the period that we have focused on in this paper, caregivers involve the infant in a dialectic process. Infants discover the “affordances for participation” (Martin and Ewaldsson, 2012) in these interactions and employ their entire body to organize affective stances toward caregivers' actions (M. H. Goodwin et al., 2012).

In the dialectic process, caregivers often try to reframe and rekey infant crying and other displays of distress to more playful and amusing actions by manipulating the aforementioned senses. Indeed, play is a crucial frame to denote something different from what an action would denote in other situations (Bateson, 1972[1955]: 185–186). These strategies are particularly effective because infant actions are largely embedded in here-and-now situations where these senses are orchestrated (Ochs, 1979; Takada, 2012). Consequently, pragmatic reframing and rekeying often occur within a relatively short spatiotemporal range of interaction. This could be one reason !Xun infants and those of other San groups cry much less than their Western counterparts (Barr, 1990; Barr et al., 1991). Infants grow accustomed to pragmatic reframing and rekeying long before they are able to do so by using language. The recurrent affective social interaction between infants and caregivers

is a necessary condition for language socialization (Gratier, 2020). This also assists infants and caregivers in establishing their intimate intercorporeality (Merleau-Ponty, 2002), which directs our attention not only to the materiality of bodily existence but also to the duality of the body, being sensible and sensitive simultaneously (Cekaite and Holm Kvist, 2017; Cekaite and Bergnehr, 2018).

Additionally, the primary caregiver often involves other people in the frame of family interactions. Among the !Xun and other San groups, not just the mothers but a variety of other family members frequently engage infants in gymnastic behavior (Takada, 2020). Gymnastic behaviors thus situate the infant within the network of familial relationships long before they understand and engage with their situation using cognitive tools, such as language. The participation framework of interaction is always changing for other family members too. Interplay with the infant as a new family member thus reinforces the reorganization of their familial relationships and enhances the (re)socialization of each interactant into the family and other social identities.

As infants grow, their epistemic landscape for interaction gradually expands. Accordingly, infants become more persistent in maintaining the frame of their activity. In response, caregivers increasingly introduce knowledge beyond the here-and-now to their corporeal niches (Ochs et al., 2005)⁷ so that they facilitate negotiations to reframe infant activity.⁸ Such knowledge reflects !Xun social norms and morality which accentuate the importance to children's involvement in playful activities with close people without showing distress (Takada, 2005, 2020). In other words, by reframing infant behavior in a particular manner, caregivers display their alignment with a particular knowledge and value system shared among the !Xun. As Merleau-Ponty (2002) might argue, this reframing forges infant self-reflexivity, which boosts the development of the !Xun distinct intersubjectivity.

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Appendix

In the excerpts, each line includes the original !Xun utterance, word glosses, and the English translation. Interlinear gloss abbreviations are indicated as follows: FOC, focus; FUT, future; INT, interjection; NEG, negation; PAST, past; PL, plural; TOP, topicalization. Utterances are transcribed according to a modified version of the conventions developed in conversation analysis research. Symbols used for making the transcriptions are listed below [for details, see Schegloff (2007) and Mondada (2007)].

Transcription conventions

Symbol	Correspondence to features of talk
(())	Information important for the utterance is indicated in double parentheses.
=	Equal signs indicate run-on utterances or an utterance that has been interrupted by someone else.
(0.6)	Pause length is marked in parentheses, in tenths of a second.
[]	Overlap of utterances is marked by square brackets.
h	Audible laughter is indicated by the letter "h," and additional "h"s indicate sustained laughter.
<u>oh</u>	Stressed words have been underlined.
(yeah)	Single parentheses indicate that an utterance was unintelligible or made by an unidentifiable source.
*, +, %, and &	The part that starts with a sign indicates the part where the body movement or gaze direction continues.
→ (to line 20)	If the body movement or gaze direction continues to the following line(s), it is represented by an arrow and line number.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.pragma.2021.05.021>.

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⁷ Corporeal niches together with material niches (e.g., slings, the Kalahari sand, open space nearby the *cucashop*, etc.) constitute micro habitats (Ochs et al., 2005: 554–555).

⁸ M. H. Goodwin and Cekaite (2018: 77–78, 90–91) demonstrated further developed instances of pragmatic reframing from serious to playful interactions, which resemble gymnastic behavior, with older children in Swedish and US societies.

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Akira Takada is Associate Professor in the Graduate School of Asian and African Area Studies at Kyoto University, Japan. His academic interests include caregiver-child interaction, language socialization, and environmental perception. He has conducted intensive field research in Namibia, Botswana, and Japan. He has published a number of articles, including 'Pre-verbal infant-caregiver interaction' in A. Duranti, E. Ochs, and B. B. Schieffelin (Eds.), *The Handbook of Language Socialization* (Blackwell, 2012) and 'Socialization practices regarding shame in Japanese caregiver-child interactions' in *Frontiers in Psychology* 10, 1545. <https://doi.org/10.3389/fpsyg.2019.01545> (2019)